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NATIONAL EDUCATIONAL ASSOCIATION

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united states*

Proceedings: vol. 44

Journal

OF

Proceedings and Addresses

OF THE

FORTY-FOURTH ANNUAL MEETING

HELD AT

ASBURY PARK AND OCEAN GROVE, NEW JERSEY

JULY 3-7

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CONSTITUTION OF THE NATIONAL EDUCATIONAL ASSOCIATION

PREAMBLE

To elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States, we, whose names are subjoined, agree to adopt the following

CONSTITUTION

ARTICLE I—NAME

This Association shall be styled the NATIONAL EDUCATIONAL ASSOCIATION.

ARTICLE II—DEPARTMENTS

SECTION 1. It shall consist of eighteen departments: first, of Superintendence; second, of Normal Schools; third, of Elementary Education; fourth, of Higher Education; fifth, of Manual Training; sixth, of Art Education; seventh, of Kindergarten Education; eighth, of Music Education; ninth, of Secondary Education; tenth, of Business Education; eleventh, of Child Study; twelfth, of Physical Education; thirteenth, of Natural Science Instruction; fourteenth, of School Administration; fifteenth, the Library Department; sixteenth, of Special Education; seventeenth, of Indian Education; and eighteenth, the National Council of Education.

SEC. 2. Other departments may be organized in the manner prescribed in this constitution.

ARTICLE III—MEMBERSHIP

SECTION 1. There shall be three classes of members, namely, active, associate, and corresponding.

SEC. 2. Teachers and all who are actively associated with the management of educational institutions, including libraries and periodicals, may become active members. All others who pay an annual membership fee of two dollars may become associate members.

Eminent educators not residing in America may be elected by the Directory to be corresponding members. The number of corresponding members shall at no time exceed fifty.

SEC. 3. Any person eligible may become an active member upon application indorsed by two active members, and the payment of an enrollment fee of two dollars and the annual dues for the current year.

Active members only have the right to vote and to hold office in the general Association or in the several departments.

All active members must pay annual dues of two dollars, and will be entitled to the volume of *Proceedings* without "coupon" or other conditions. The annual membership fee shall be payable at the time of the annual convention, or by remittance to the Secretary

before September 1 of each year. Any active member may discontinue membership by giving written notice to the Secretary before September 1, and may restore the same only on payment of the enrollment fee of two dollars and the annual dues for the current year.

All life members and life directors shall be denominated active members, and shall enjoy all the powers and privileges of such members without the payment of annual dues.

Associate members may receive the volume of *Proceedings* in accordance with the usual "coupon" conditions, as printed on the membership certificate.

Corresponding members will be entitled to the volume of *Proceedings* without the payment of fees or other conditions.

SEC. 4. The names of active and corresponding members only will be printed in the volume of *Proceedings*, with their respective educational titles, offices, and addresses, the list to be revised annually by the Secretary of the Association.

ARTICLE IV—OFFICERS

SECTION 1. The officers of this Association shall consist of a President, twelve Vice-Presidents, a Secretary, a Treasurer, a Board of Directors, a Board of Trustees, and an Executive Committee, as hereinafter provided.

SEC. 2. The Board of Directors shall consist of the President of the National Educational Association, First Vice-President, Secretary, Treasurer, chairman of the Board of Trustees, and one additional member from each state, territory, or district, to be elected by the Association for the term of one year, or until their successors are chosen, and of all life directors elected previous to July 10, 1895.

All past Presidents of the Association now living (July 10, 1895), and all future Presidents at the close of their respective terms of office, and the United States Commissioner of Education, shall be life directors of the Association.

The President of the National Educational Association, First Vice-President, Treasurer, chairman of the Board of Trustees, and a member of the Association to be chosen annually by the Board of Directors, which member shall hold office for one year, shall constitute the Executive Committee.

SEC. 3. The elective officers of the Association, with the exception of the Secretary shall be chosen by the active members of the Association by ballot, unless otherwise ordered, on the third day of each session, a majority of the votes cast being necessary for choice. They shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided.

SEC. 4. Each department shall be administered by a president, vice-president, secretary, and such other officers as it shall deem necessary to conduct its affairs; but no person shall be elected to any office of the Association, or of any department, who is not, at the time of the election, an active member of the Association.

SEC. 5. The President shall preside at all meetings of the Association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence, the First Vice-President in order, who is present, shall preside; and in the absence of all Vice-Presidents, a *pro-tempore* chairman shall be appointed on nomination, the Secretary putting the question.

SEC. 6. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the Association and all meetings of the Board of Directors, and shall conduct such correspondence as the directors may assign, and shall have his records present at all meetings of the Association and of the Board of Directors. The secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department.

SEC. 7. The Treasurer shall receive, and under the direction of the Board of Trustees hold in safe-keeping, all moneys paid to the Association; shall expend the same only upon the order of said board; shall keep an exact account of his receipts and expendi-

tures, with vouchers for the latter, which accounts, ending the first day of July each year, he shall render to the Board of Trustees and, when approved by said board, he shall report the same to the Board of Directors. The Treasurer shall give such bond for the faithful discharge of his duties as may be required by the Board of Trustees; and he shall continue in office until the first meeting of the Board of Directors held prior to the annual meeting of the Association next succeeding that for which he is elected.

SEC. 8. The Board of Directors shall have power to fill all vacancies in their own body; shall have in charge the general interests of the Association, excepting those herein intrusted to the Board of Trustees; shall make all necessary arrangements for its meetings, and shall do all in its power to make it a useful and honorable institution. Upon the written application of twenty active members of the Association for permission to establish a new department, it may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as the others. The formation of such department shall in effect be a sufficient amendment to this constitution for the insertion of its name in Art. II, and the Secretary shall make the necessary alterations.

SEC. 9. The Board of Trustees shall consist of four members, elected by the Board of Directors for the term of four years, and the President of the Association, who shall be a member *ex officio* during his term of office. At the election of the trustees in 1886, one trustee shall be elected for one year, one for two years, one for three years, and one for four years; and annually thereafter, at the first meeting of the Board of Directors held prior to the annual meeting of the Association, one trustee shall be elected for the term of four years. All vacancies occurring in said Board of Trustees, whether by resignation or otherwise, shall be filled by the Board of Directors for the unexpired term; and the absence of a trustee from two successive annual meetings of the board shall forfeit his membership therein. The Board of Trustees thus elected shall constitute the body corporate of the Association, as provided in the certificate of incorporation under the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, dated the 24th day of February, 1886, at Washington D. C., and recorded in Liber No. 4, "Acts of Incorporation for the District of Columbia."

SEC. 10. It shall be the duty of the Board of Trustees to provide for safe-keeping and investment of all funds which the Association may receive from donations; and the income of such invested funds shall be used exclusively in paying the cost of publishing the annual volume of *Proceedings* of the Association, excepting when donors shall specify otherwise. It shall also be the duty of the board to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary of the Association acting under the authority of the Board of Directors; and, when practicable, the trustees shall invest all surplus funds exceeding one hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the Association for the previous year.

SEC. 11. The Board of Trustees shall elect the Secretary of the Association, who shall also be secretary of the Executive Committee, and shall fix the compensation and the term of office for a period not to exceed four years.

ARTICLE V—MEETINGS

SECTION 1. The annual meeting of the Association shall be held at such time and place as shall be determined by the Board of Directors.

SEC. 2. Special meetings may be called by the President at the request of five directors.

SEC. 3. Any department of the Association may hold a special meeting at such time and place as by its own regulations it shall appoint.

SEC. 4. The Board of Directors shall hold its regular meetings at the place and not less than two hours before the assembling of the Association.

SEC. 5. Special meetings may be held at such other times and places as the board or the President shall determine.

SEC. 6. Each new board shall organize at the session of its election. At its first meeting a committee on publication shall be appointed, which shall consist of the President and the Secretary of the Association for the previous year, and one member from each department.

ARTICLE VI—BY-LAWS

By-laws not inconsistent with this constitution may be adopted by a two-thirds vote of the Association.

ARTICLE VII—AMENDMENTS

This constitution may be altered or amended at a regular meeting by the unanimous vote of the members present; or by a two-thirds vote of the members present, provided that the alteration or amendment has been substantially proposed in writing at a previous meeting.

BY-LAWS

1. At the first session of each annual meeting of the Association there shall be appointed by the President a committee on resolutions; and at the third session of such meeting there shall be appointed a committee on nominations, consisting of one member from each state and territory represented, the same to be appointed by the President on the nomination of a majority of the active members from such state or territory present at the meeting called for the purpose of making such nomination; provided, however, that such appointment shall be made by the President without such nomination, when the active members in attendance from any state or territory shall fail to make a nomination.

The meetings of active members to nominate members of the nominating committee shall be held at 5:30 P. M. on the first day of the annual meeting of the Association, at such place as shall be announced in the general program.

2. The President and Secretary shall certify to the Board of Trustees all bills approved by the Board of Directors.

3. Each paying member of the Association shall be entitled to a copy of its *Proceedings*.

4. No paper, lecture, or address shall be read before the Association or any of its departments in the absence of its author, nor shall any such paper, lecture, or address be published in the volume of *Proceedings*, without the consent of the Association, upon approval of the Executive Committee.

5. It shall be the duty of the President, Secretary, and Treasurer of the Association to appoint annually some competent person to examine the securities of the Permanent Fund held by the Board of Trustees, and his certificate, showing the condition of the said fund, shall be attached to the report of the Board of Trustees.

ACT OF INCORPORATION

At a meeting of the Board of Directors of the National Educational Association, held at Saratoga Springs, N. Y., July 14, 1885, the following resolution was passed.

Resolved, That a committee of three be appointed to secure articles of incorporation for the National Educational Association, under United States or state laws, as speedily as may be.

N. A. Calkins, of New York; Thomas W. Bicknell, of Massachusetts, and Eli T. Tappan, of Ohio, were appointed such committee.

Under the authority of the resolution quoted above, and with the approval of the committee, and by competent legal advice, the chairman obtained a

CERTIFICATE OF INCORPORATION

We, the undersigned, Norman A. Calkins, John Eaton, and Zalmon Richards, citizens of the United States, and two of them citizens of the District of Columbia, do hereby associate ourselves together, pursuant to the provisions of the Act of General Incorporation, Class Third, of the Revised Statutes of the District of Columbia, under the name of the "National Educational Association," for the full period of twenty years, the purpose and objects of which are to elevate the character and advance the interests of the profession of teaching and to promote the cause of popular education in the United States. . . . To secure the full benefit of said act we do here execute this our certificate of incorporation as said act provides.

In witness whereof, we severally set our hands and seals this 24th day of February, 1886, at Washington, D. C.

NORMAN A. CALKINS. [L. S.]

JOHN EATON. [L. S.]

ZALMON RICHARDS. [L. S.]

Duly acknowledged before Michael P. Callan, Notary Public in and for the District of Columbia, and recorded in Liber No. 4, Acts of Incorporation for the District of Columbia.

CALENDAR OF MEETINGS

NATIONAL TEACHERS' ASSOCIATION

- | | |
|--|---|
| 1857—PHILADELPHIA, PA. (Organized.)
JAMES L. ENOS, Chairman.
W. E. SHELDON, Secretary. | 1864—OGDENSBURG, N. Y.
W. H. WELLS, President.
DAVID N. CAMP, Secretary.
Z. RICHARDS, Treasurer. |
| 1858—CINCINNATI, Ohio.
Z. RICHARDS, President.
J. W. BULKLEY, Secretary.
A. J. RICKOFF, Treasurer. | 1865—HARRISBURG, PA.
S. S. GREENE, President.
W. E. SHELDON, Secretary.
Z. RICHARDS, Treasurer. |
| 1859—WASHINGTON, D. C.
A. J. RICKOFF, President.
J. W. BULKLEY, Secretary.
C. S. PENNELL, Treasurer. | 1866—INDIANAPOLIS, IND.
J. P. WICKERSHAM, President.
S. H. WHITE, Secretary.
S. P. BATES, Treasurer. |
| 1860—BUFFALO, N. Y.
J. W. BULKLEY, President.
Z. RICHARDS, Secretary.
O. C. WIGHT, Treasurer. | 1867—No session. |
| 1861, 1862—No session. | 1868—NASHVILLE, TENN.
J. M. GREGORY, President.
L. VAN BOKKELEN, Secretary.
JAMES CRUIKSHANK, Treasurer. |
| 1863—CHICAGO, ILL.
JOHN D. PHILBRICK, President.
JAMES CRUIKSHANK, Secretary.
O. C. WIGHT, Treasurer. | 1869—TRENTON, N. J.
L. VAN BOKKELEN, President.
W. E. CROSBY, Secretary.
A. L. BARBER, Treasurer. |
| | 1870—CLEVELAND, Ohio.
DANIEL B. HAGAR, President.
A. P. MARBLE, Secretary.
W. E. CROSBY, Treasurer. |

NAME CHANGED TO

NATIONAL EDUCATIONAL ASSOCIATION

- | | |
|---|--|
| 1871—ST. LOUIS, MO.
J. L. PICKARD, President.
W. E. CROSBY, Secretary.
JOHN HANCOCK, Treasurer. | 1876—BALTIMORE, MD.
W. F. PHELPS, President.
W. D. HENKLE, Secretary.
A. P. MARBLE, Treasurer. |
| 1872—BOSTON, MASS.
E. E. WHITE, President.
S. H. WHITE, Secretary.
JOHN HANCOCK, Treasurer. | 1877—LOUISVILLE, KY.
M. A. NEWELL, President.
W. D. HENKLE, Secretary.
J. ORMOND WILSON, Treasurer. |
| 1873—ELMIRA, N. Y.
B. G. NORTHROP, President.
S. H. WHITE, Secretary.
JOHN HANCOCK, Treasurer. | 1878—No session. |
| 1874—DETROIT, MICH.
S. H. WHITE, President.
A. P. MARBLE, Secretary.
JOHN HANCOCK, Treasurer. | 1879—PHILADELPHIA, PA.
JOHN HANCOCK, President.
W. D. HENKLE, Secretary.
J. ORMOND WILSON, Treasurer. |
| 1875—MINNEAPOLIS, MINN.
W. T. HARRIS, President.
M. R. ABBOTT, Secretary.
A. P. MARBLE, Treasurer. | 1880—CHAUTAUQUA, N. Y.
J. ORMOND WILSON, President.
W. D. HENKLE, Secretary.
E. T. TAPPAN, Treasurer. |

- 1881—ATLANTA, GA.
JAMES H. SMART, President.
W. D. HENKLE, Secretary.
E. T. TAPPAN, Treasurer.
- 1882—SARATOGA SPRINGS, N. Y.
G. J. ORR, President.
W. E. SHELDON, Secretary.
H. S. TARBELL, Treasurer.
- 1883—SARATOGA SPRINGS, N. Y.
E. T. TAPPAN, President.
W. E. SHELDON, Secretary.
N. A. CALKINS, Treasurer.
- 1884—MADISON, WIS.
THOMAS W. BICKNELL, President.
H. S. TARBELL, Secretary.
N. A. CALKINS, Treasurer.
- 1885—SARATOGA SPRINGS, N. Y.
F. LOUIS SOLDAN, President.
W. E. SHELDON, Secretary.
N. A. CALKINS, Treasurer.
- 1886—TOPEKA, KANS.
N. A. CALKINS, President.
W. E. SHELDON, Secretary.
E. C. HEWETT, Treasurer.
- 1887—CHICAGO, ILL.
W. E. SHELDON, President.
J. H. CANFIELD, Secretary.
E. C. HEWETT, Treasurer.
- 1888—SAN FRANCISCO, CAL.
AARON GOVE, President.
J. H. CANFIELD, Secretary.
E. C. HEWETT, Treasurer.
- 1889—NASHVILLE, TENN.
ALBERT P. MARBLE, President.
J. H. CANFIELD, Secretary.
E. C. HEWETT, Treasurer.
- 1890—ST. PAUL, MINN.
J. H. CANFIELD, President.
W. R. GARRETT, Secretary.
E. C. HEWETT, Treasurer.
- 1891—TORONTO, ONT.
W. R. GARRETT, President.
E. H. COOK, Secretary.
J. M. GREENWOOD, Treasurer.
- 1892—SARATOGA SPRINGS, N. Y.
E. H. COOK, President.
R. W. STEVENSON, Secretary.
J. M. GREENWOOD, Treasurer.
- 1893—CHICAGO, ILL.
(International Congress of Education.)
ALBERT G. LANE, President.
IRWIN SHEPARD, Secretary.
J. M. GREENWOOD, Treasurer.
- 1894—ASBURY PARK, N. J.
ALBERT G. LANE, President.
IRWIN SHEPARD, Secretary.
J. M. GREENWOOD, Treasurer.
- 1895—DENVER, COLO.
NICHOLAS MURRAY BUTLER, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.
- 1896—BUFFALO, N. Y.
NEWTON C. DOUGHERTY, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.
- 1897—MILWAUKEE WIS.
CHARLES R. SKINNER, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.
- 1898—WASHINGTON, D. C.
J. M. GREENWOOD, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.
- 1899—LOS ANGELES, CAL.
E. ORAM LYTE, President.
IRWIN SHEPARD, Secretary.
I. C. MCNEILL, Treasurer.
- 1900—CHARLESTON, S. C.
OSCAR T. CORSON, President.
IRWIN SHEPARD, Secretary.
CARROLL G. PEARSE, Treasurer.
- 1901—DETROIT, MICH.
JAMES M. GREEN, President.
IRWIN SHEPARD, Secretary.
L. C. GREENLEE, Treasurer.
- 1902—MINNEAPOLIS, MINN.
WILLIAM M. BEARDSHEAR, President.
IRWIN SHEPARD, Secretary.
CHARLES H. KEYES, Treasurer.
- 1903—BOSTON, MASS.
CHARLES W. ELIOT, President.
IRWIN SHEPARD, Secretary.
W. M. DAVIDSON, Treasurer.
- 1904—ST. LOUIS, MO.
JOHN W. COOK, President.
IRWIN SHEPARD, Secretary.
MCHENRY RHOADS, Treasurer.
- 1905—ASBURY PARK AND OCEAN GROVE, N. J.
WILLIAM H. MAXWELL, President.
IRWIN SHEPARD, Secretary.
JAMES W. CRABTREE, Treasurer.

NATIONAL EDUCATIONAL ASSOCIATION

OFFICERS FOR 1904-1905

GENERAL ASSOCIATION

WILLIAM H. MAXWELL.....	<i>President</i>	New York, N. Y.
IRWIN SHEPARD.....	<i>Secretary</i>	Winona, Minn.
JAMES W. CRABTREE.....	<i>Treasurer</i>	Peru, Nebr.

VICE-PRESIDENTS

JOHN W. COOK, DeKalb, Ill.	E. H. MARK, Louisville, Ky.
C. P. CARY, Madison, Wis.	HENRY H. SWAIN, Dillon, Mont.
GEORGE B. COOK, Hot Springs, Ark.	A. J. MATTHEWS, Tempe, Ariz.
J. N. STUDY, Fort Wayne, Ind.	B. C. CALDWELL, Natchitoches, La.
J. M. H. FREDERICK, Lakewood, Ohio.	A. B. POLAND, Newark, N. J.
MISS ALICE M. ROBERTSON, Muskogee, Ind. T.	CHARLES D. McIVER, Greensboro, N. C.

BOARD OF TRUSTEES

(See Art. IV, sec. 9, of the Constitution.)

F. LOUIS SOLDAN.....	St. Louis, Mo.....	Term expires July, 1905
NICHOLAS MURRAY BUTLER.....	New York, N. Y.....	Term expires July, 1906
ALBERT G. LANE, <i>Chairman</i>	Chicago, Ill.....	Term expires July, 1907
NEWTON C. DOUGHERTY.....	Peoria, Ill.....	Term expires July, 1908
WILLIAM H. MAXWELL.....	New York, N. Y.....	<i>Ex officio</i>

EXECUTIVE COMMITTEE

(See Art. IV, secs. 2 and 11, of the Constitution.)

WILLIAM H. MAXWELL.....	<i>President</i>	New York, N. Y.
JOHN W. COOK.....	<i>First Vice-President</i>	DeKalb, Ill.
JAMES W. CRABTREE.....	<i>Treasurer</i>	Peru, Nebr.
ALBERT G. LANE.....	<i>Chairman of Board of Trustees</i>	Chicago, Ill.
W. T. HARRIS.....	<i>Member by election</i>	Washington, D. C.

IRWIN SHEPARD.....	<i>Secretary</i>	Winona, Minn.
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BOARD OF DIRECTORS

Directors ex officio

(See Art. IV, sec. 2, of the Constitution.)

WILLIAM H. MAXWELL, New York, N. Y.	JAMES W. CRABTREE, Peru, Nebr.
JOHN W. COOK, De Kalb, Ill.	ALBERT G. LANE, Chicago, Ill.
	IRWIN SHEPARD, Winona, Minn.

Life Directors

(See Art. IV, sec. 2, of the Constitution.)

BICKNELL, THOMAS W., Providence, R. I.	JEWETT, A. V., Abilene, Kans.
BOARD OF EDUCATION, Nashville, Tenn.	LANE, ALBERT G., Chicago, Ill.
BUTLER, NICHOLAS MURRAY, New York, N. Y.	LYTE, ELIPHALET ORAM, Millersville, Pa.
CANFIELD, JAMES H., New York, N. Y.	MARBLE, ALBERT P., New York, N. Y.
COOK, E. H., Boulder, Colo.	MARSHALL, T. MARCELLUS, Glenville, W. Va.
COOK, JOHN W., De Kalb, Ill.	PARKER, CHARLES I., South Chicago, Ill.
CORSON, OSCAR T., Columbus, Ohio.	PEHELS, W. F., St. Paul, Minn.

Life Directors—continued

DOUGHERTY, NEWTON C., Peoria, Ill.	PICKARD, JOSIAH L., Brunswick, Maine.
ELIOT, CHARLES W., Cambridge, Mass.	PIKE, JOSHUA, Jerseyville, Ill.
GOVE, AARON, Denver, Colo.	SKINNER, CHARLES R., Albany, N. Y.
GRAHAM, H. A., Mt. Pleasant, Mich.	SOLDAN, F. LOUIS, St. Louis, Mo.
GREEN, J. M., Trenton, N. J.	STRATTON, C. C., University Park, Ore.
GREENWOOD, J. M., Kansas City, Mo.	TAYLOR, A. R., Decatur, Ill.
HARRIS, W. T., Washington, D. C.	TEACHERS' INSTITUTE, Philadelphia, Pa.
HUNT, MRS. MARY H., Boston, Mass.	WHITE, CHARLES G., Lake Linden, Mich.
WILSON, J. ORMOND, Washington, D. C.	

Directors by Election*North Atlantic Division*

Maine.....	JOHN S. LOCKE.....	Saco
New Hampshire.....	JAMES E. KLOCK.....	Plymouth
Vermont.....	WALTER E. RANGER.....	Montpelier
Massachusetts.....	ALBERT E. WINSHIP.....	Boston
Rhode Island.....	WALTER BALLOU JACOBS.....	Providence
Connecticut.....	CHARLES H. KEYES.....	Hartford
New York.....	AUGUSTUS S. DOWNING.....	Albany
New Jersey.....	JOHN ENRIGHT.....	Freehold
Pennsylvania.....	JOHN W. LANSINGER.....	Millersville

South Atlantic Division

Delaware.....	GEORGE W. TWITMYER.....	Wilmington
Maryland.....	M. BATES STEPHENS.....	Baltimore
District of Columbia.....	ALEXANDER T. STUART.....	Washington
Virginia.....	JOSEPH L. JARMAN.....	Farmville
West Virginia.....	MISS LUCY ROBINSON.....	Wheeling
North Carolina.....	MISS LYDIA A. YATES.....	Wilmington
South Carolina.....	W. K. TATE.....	Charleston
Georgia.....	W. F. SLATON.....	Atlanta
Florida.....	MISS CLEM HAMPTON.....	Gainesville

South Central Division

Kentucky.....	S. L. FROGGE.....	Frankfort
Tennessee.....	D. J. JOHNS, JR.....	Nashville
Alabama.....	ISAAC W. HILL.....	Montgomery
Mississippi.....	ROBERT B. FULTON.....	University
Louisiana.....	WARREN EASTON.....	New Orleans
Texas.....	ALEXANDER HOGG.....	Fort Worth
Arkansas.....	J. H. HINEMON.....	Little Rock
Oklahoma.....	ANDREW R. HICKAM.....	Oklahoma City
Indian Territory.....	JOHN D. BENEDICT.....	Muskogee

North Central Division

Ohio.....	EDMUND D. LYON.....	Madisonville
Indiana.....	T. A. MOTT.....	Richmond
Illinois.....	J. A. MERCER.....	Peoria
Michigan.....	WILLIAM H. ELSON.....	Grand Rapids
Wisconsin.....	L. D. HARVEY.....	Menomonie
Iowa.....	A. V. STORM.....	Cherokee
Minnesota.....	W. F. KUNZE.....	Red Wing
Missouri.....	BEN BLEWETT.....	St. Louis
North Dakota.....	W. E. HOOVER.....	Park River
South Dakota.....	GEORGE W. NASH.....	Pierre
Nebraska.....	GEORGE L. TOWNE.....	Lincoln
Kansas.....	J. W. SPINDLER.....	Winfield

Western Division

Montana.....	ROBERT G. YOUNG.....	Butte
Wyoming.....	MISS ESTELLE REEL.....	Washington, D. C.
Colorado.....	JOHN F. KEATING.....	Pueblo
New Mexico.....	HUGH A. OWEN.....	Silver City

Directors by Election—continued

Arizona.....	A. J. MATTHEWS.....	Tempe
Utah.....	A. C. NELSON.....	Salt Lake City
Nevada.....	J. E. STUBBS.....	Reno
Idaho.....	MISS MAY L. SCOTT.....	Boise
Washington.....	FRANK B. COOPER.....	Seattle
Oregon.....	E. D. RESSLER.....	Monmouth
California.....	ARTHUR H. CHAMBERLAIN.....	Pasadena

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Alaska.....	MISS CASSIA PATTON.....	Sitka
Porto Rico.....	SAMUEL McCUNE LINDSAY.....	San Juan
Hawaii.....	ARTHUR F. GRIFFITHS.....	Honolulu
Philippine Islands.....	C. H. MAXSON.....	Iloilo, Panay

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MISS ANNA ELISE HARBAUGH.....	Secretary.....	St. Louis, Mo.

Elementary

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WILSON FARRAND.....	Secretary.....	Newark, N. J.

Higher

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LAWTON B. EVANS.....	First Vice-President.....	Augusta, Ga.
J. W. CARR.....	Second Vice-President.....	Anderson, Ind.
MISS EVANGELINE E. WHITNEY.....	Secretary.....	New York, N. Y.

Manual

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Art

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FRANK H. COLLINS.....	Vice-President.....	New York, N. Y.
MISS STELLA TRUEBLOOD.....	Secretary.....	St. Louis, Mo.

Music

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Mrs. MARIE BURT PARR.....	<i>Vice-President</i>	Cleveland, Ohio
P. C. HAYDEN.....	<i>Secretary</i>	Keokuk, Iowa

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JOHN ALFRED WHITE.....	<i>Secretary</i>	Moline, Ill.

Child Study

ELLSWORTH G. LANCASTER.....	<i>President</i>	Olivet, Mich.
D. P. MACMILLAN.....	<i>Vice-President</i>	Chicago, Ill.
Miss THEODATE L. SMITH.....	<i>Secretary</i>	Worcester, Mass.

Science

FRANK M. GILLEY.....	<i>President</i>	Chelsea, Mass.
ARTHUR G. CLEMENT.....	<i>Vice-President</i>	Albany, N. Y.
H. A. SENTER.....	<i>Secretary</i>	Omaha, Nebr.

Physical

E. HERMANN ARNOLD.....	<i>President</i>	New Haven, Conn.
Miss REBECCA STONEROD.....	<i>Vice-President</i>	Washington, D. C.
G. B. AFFLECK.....	<i>Secretary</i>	Cedar Falls, Iowa

School Administration

B. F. HUNSICKER.....	<i>President</i>	Reading, Pa.
GRAFTON D. CUSHING.....	<i>Vice-President</i>	Boston, Mass.
WILLIAM GEORGE BRUCE.....	<i>Secretary</i>	Milwaukee, Wis.
HARLAN P. FRENCH.....	<i>Chairman, Executive Committee</i>	Albany, N. Y.

Library

C. P. CARY.....	<i>President</i>	Madison, Wis.
J. N. WILKINSON.....	<i>Vice-President</i>	Emporia, Kans.
Miss MARY EILEEN AHERN.....	<i>Secretary</i>	Chicago, Ill.

Special Education

Miss MARGARET BANCROFT.....	<i>President</i>	Haddonfield, N. J.
J. H. FREEMAN.....	<i>Vice-President</i>	Jacksonville, Ill.
Miss ANNA E. SCHAFFER.....	<i>Secretary</i>	Madison, Wis.

Indian Education

W. A. MERCER.....	<i>President</i>	Carlisle, Pa.
R. A. COCHRAN.....	<i>Vice-President</i>	Talkai, Ariz.
Miss ESTELLE REEL.....	<i>Secretary</i>	Washington, D. C.

NATIONAL EDUCATIONAL ASSOCIATION

OFFICERS FOR 1905-1906

GENERAL ASSOCIATION

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IRWIN SHEPARD.....	<i>Secretary</i>	Winona, Minn.
JASPER N. WILKINSON.....	<i>Treasurer</i>	Emporia, Kans.

VICE-PRESIDENTS

WILLIAM H. MAXWELL, New York, N. Y.	D. B. JOHNSON, Rock Hill, S. C.
MISS N. CROPSEY, Indianapolis, Ind.	J. A. SHAWAN, Columbus, Ohio.
J. H. HINEMON, Little Rock, Ark.	H. O. WHEELER, Burlington, Vt.
ED. S. VAUGHT, Oklahoma City, Okla.	J. Y. JOYNER, Raleigh, N. C.
JOHN F. RIGGS, Des Moines, Iowa.	JOHN W. SPINDLER, Winfield, Kans.
JOSEPH O'CONNOR, San Francisco, Cal.	J. STANLEY BROWN, Joliet, Ill.

BOARD OF TRUSTEES

(See Art. IV, sec. 9, of the Constitution.)

NICHOLAS MURRAY BUTLER.....	New York, N. Y.....	Term expires July, 1906
ALBERT G. LANE, <i>Chairman</i>	Chicago, Ill.....	Term expires July, 1907
NEWTON C. DOUGHERTY.....	Peoria, Ill.....	Term expires July, 1908
JAMES M. GREENWOOD.....	Kansas City, Mo.....	Term expires July, 1908
NATHAN C. SCHAEFFER.....	Harrisburg, Pa.....	<i>Ex officio</i>

EXECUTIVE COMMITTEE

(See Art. IV, secs. 2 and 11, of the Constitution.)

NATHAN C. SCHAEFFER.....	<i>President</i>	Harrisburg, Pa.
WILLIAM H. MAXWELL.....	<i>First Vice-President</i>	New York, N. Y.
JASPER N. WILKINSON.....	<i>Treasurer</i>	Emporia, Kans.
ALBERT G. LANE.....	<i>Chairman of Board of Trustees</i>	Chicago, Ill.
W. T. HARRIS.....	<i>Member by election</i>	Washington, D. C.

IRWIN SHEPARD.....	<i>Secretary</i>	Winona, Minn.
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BOARD OF DIRECTORS

Directors ex officio

(See Art. IV, sec. 2, of the Constitution.)

NATHAN C. SCHAEFFER, Harrisburg, Pa.	JASPER N. WILKINSON, Emporia, Kans.
WILLIAM H. MAXWELL, New York, N. Y.	ALBERT G. LANE, Chicago, Ill.
IRWIN SHEPARD, Winona, Minn.	

Life Directors

(See Art. IV, sec. 2, of the Constitution.)

BICKNELL, THOMAS W., Providence, R. I.	LANE, ALBERT G., Chicago, Ill.
BOARD OF EDUCATION, Nashville, Tenn.	LYTE, ELIPHALET ORAM, Millersville, Pa.
BUTLER, NICHOLAS MURRAY, New York, N. Y.	MARBLE, ALBERT P., New York, N. Y.
CANFIELD, JAMES H., New York, N. Y.	MARSHALL, T. MARCELLUS, Glenville, W. Va.
COOK, E. H., Boulder, Colo.	MAXWELL, WILLIAM H., New York, N. Y.
COOK, JOHN W., De Kalb, Ill.	PARKER, CHARLES I., South Chicago, Ill.
CORSON, OSCAR T., Columbus, Ohio.	PHELPS, W. F., St. Paul, Minn.
DOUGHERTY, NEWTON C., Peoria, Ill.	PICKARD, JOSIAH L., Brunswick, Maine.
ELIOT, CHARLES W., Cambridge, Mass.	PIKE, JOSHUA, Jerseyville, Ill.
GOVE, AARON, Denver, Colo.	SKINNER, CHARLES R., Watertown, N. Y.

Life Directors—continued

GRAHAM, H. A., Mt. Pleasant, Mich.	SOLDAN, F. LOUIS, St. Louis, Mo.
GREEN, J. M., Trenton, N. J.	STRATTON, C. C., St. Johns, Oregon
GREENWOOD, J. M., Kansas City, Mo.	TAYLOR, A. R., Decatur, Ill.
HARRIS, W. T., Washington, D. C.,	TEACHERS' INSTITUTE, Philadelphia, Pa.
HUNT, MRS. MARY H., Boston, Mass.	WHITE, CHARLES G., Lake Linden, Mich.
JEWETT, A. V., Abilene, Kans.	WILSON, J. ORMOND, Washington, D. C.

Directors by Election

North Atlantic Division

Maine.....	JOHN S. LOCKE.....	Saco
New Hampshire.....	JAMES E. KLOCK.....	Plymouth
Vermont.....	ISAAC THOMAS.....	Burlington
Massachusetts.....	HENRY T. BAILEY.....	North Worcester
Rhode Island.....	WALTER BALLOU JACOBS.....	Providence
Connecticut.....	CHARLES H. KEYES.....	Hartford
New York.....	JAMES C. BYRNES.....	New York
New Jersey.....	JOHN ENRIGHT.....	Freehold
Pennsylvania.....	JOHN W. LANSINGER.....	Millersville

South Atlantic Division

Delaware.....	GEORGE W. TWITMYER.....	Wilmington
Maryland.....	M. BATES STEPHENS.....	Baltimore
District of Columbia.....	ALEXANDER T. STUART.....	Washington
Virginia.....	JOSEPH L. JARMAN.....	Farmville
West Virginia.....	MISS LUCY ROBINSON.....	Wheeling
North Carolina.....	J. I. FOUST.....	Greensboro
South Carolina.....	ROBERT P. PELL.....	Spartanburg
Georgia.....	WILLIAM M. SLATON.....	Atlanta
Florida.....	MISS CLEM HAMPTON.....	Tallahassee

South Central Division

Kentucky.....	W. H. BARTHOLOMEW.....	Louisville
Tennessee.....	EUGENE F. TURNER.....	Nashville
Alabama.....	ISAAC W. HILL.....	Montgomery
Mississippi.....	ROBERT B. FULTON.....	University
Louisiana.....	WARREN EASTON.....	New Orleans
Texas.....	L. E. WOLFE.....	San Antonio
Arkansas.....	GEORGE B. COOK.....	Hot Springs
Oklahoma.....	ANDREW R. HICKAM.....	Oklahoma City
Indian Territory.....	JOHN D. BENEDICT.....	Muskogee

North Central Division

Ohio.....	WELLS L. GRISWOLD.....	Youngstown
Indiana.....	T. A. MOTT.....	Richmond
Illinois.....	J. A. MERCER.....	Peoria
Michigan.....	WILLIAM H. ELSON.....	Grand Rapids
Wisconsin.....	L. D. HARVEY.....	Menomonie
Iowa.....	A. V. STORM.....	Cherokee
Minnesota.....	JOHN A. CRANSTON.....	St. Cloud
Missouri.....	W. J. HAWKINS.....	St. Louis
North Dakota.....	P. G. KNOWLTON.....	Fargo
South Dakota.....	M. A. LANGE.....	Pierre
Nebraska.....	GEORGE L. TOWNE.....	Lincoln
Kansas.....	L. D. WHITTEMORE.....	Topeka

Western Division

Montana.....	OSCAR J. CRAIG.....	Missoula
Wyoming.....	T. T. TYNAN.....	Cheyenne
Colorado.....	L. C. GREENLEE.....	Denver
New Mexico.....	C. M. LIGHT.....	Silver City

Directors by Election—continued

Arizona.....	A. J. MATTHEWS.....	Tempe
Utah.....	D. H. CHRISTENSON.....	Salt Lake City
Nevada.....	J. E. STUBBS.....	Reno
Idaho.....	MISS FRANCES MANN.....	Boise
Washington.....	EDWARD T. MATHES.....	Bellingham
Oregon.....	E. D. RESSLER.....	Monmouth
California.....	ARTHUR H. CHAMBERLAIN.....	Pasadena

Dependencies

Alaska.....	MISS CASSIA PATTON.....	Sitka
Porto Rico.....	FRANK H. BALL.....	San Juan
Hawaii.....	ARTHUR F. GRIFFITHS.....	Honolulu
Philippine Islands.....	C. H. MAXSON.....	Iloilo, Panay

DEPARTMENT OFFICERS

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AUGUSTUS S. DOWNING.....	<i>Vice-President</i>	Albany N. Y.
J. W. CARR.....	<i>Secretary</i>	Dayton, Ohio
Miss ANNA TOLMAN SMITH.....	<i>Executive Committee</i>	Washington, D. C.
HOWARD J. ROGERS.....	<i>Executive Committee</i>	Albany, N. Y.
JAMES M. GREENWOOD.....	<i>Executive Committee</i>	Kansas City, Mo.

Kindergarten

Miss MARY C. MAY.....	<i>President</i>	Salt Lake City, Utah
ELMER E. BROWN.....	<i>Vice-President</i>	Berkeley, Cal.
Miss MAY E. MURRAY.....	<i>Secretary</i>	Springfield, Mass.

Elementary

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CLARENCE F. CARROLL.....	<i>Vice-President</i>	Rochester, N. Y.
Mrs. JOSEPHINE HEERMANS.....	<i>Secretary</i>	Kansas City, Mo.

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WILSON FARRAND.....	<i>First Vice-President</i>	Newark, N. J.
EDWIN TWITMYER.....	<i>Second Vice-President</i>	Bellingham, Wash.
PHILO M. BUCK.....	<i>Secretary</i>	St. Louis, Mo.

Higher

WM. L. BRYAN.....	<i>President</i>	Bloomington, Ind.
C. ALPHONSO SMITH.....	<i>Vice-President</i>	Chapel Hill, N. C.
OSCAR J. CRAIG.....	<i>Secretary</i>	Missoula, Mont.

Normal

JOHN R. KIRK.....	<i>President</i>	Kirkville, Mo.
D. B. JOHNSON.....	<i>Vice-President</i>	Rock Hill, S. C.
Miss MARY ALICE WHITNEY.....	<i>Secretary</i>	Emporia, Kans.

Superintendence

J. W. CARR.....	<i>President</i>	Dayton, Ohio
J. H. PHILLIPS.....	<i>First Vice-President</i>	Birmingham, Ala.
Miss IDA C. BENDER.....	<i>Second Vice-President</i>	Buffalo, N. Y.
Miss ELLA C. SULLIVAN.....	<i>Secretary</i>	Chicago, Ill.

Manual

FRANK M. LEAVITT.....	<i>President</i>	Roxbury, Mass.
CHARLES R. BATES.....	<i>Vice-President</i>	Port Deposit, Md.
OSCAR L. McMURRY.....	<i>Secretary</i>	Chicago, Ill.

Art

EUGENE C. COLBY.....	<i>President</i>	Albany, N. Y.
MISS CLARA A. WILSON.....	<i>Vice-President</i>	Davenport, Iowa
MISS HELEN E. LUCAS.....	<i>Secretary</i>	Rochester, N. Y.

Music

HAMLIN E. COGSWELL.....	<i>President</i>	Mansfield, Pa.
MRS. FRANCES E. CLARK.....	<i>Vice-President</i>	Milwaukee, Wis.
P. C. HAYDEN.....	<i>Secretary</i>	Keokuk, Iowa

Business

H. M. ROWE.....	<i>President</i>	Baltimore, Md.
JAMES T. YOUNG.....	<i>First Vice-President</i>	Philadelphia, Pa.
HORACE G. HEALEY.....	<i>Secretary</i>	Brooklyn, N. Y.

Child Study

EDWIN G. DEXTER.....	<i>President</i>	Urbana, Ill.
HENRY H. GODDARD.....	<i>Vice-President</i>	West Chester, Pa.
CHARLES W. WADDLE.....	<i>Secretary</i>	Austin, Tex.

Science

H. A. SENTER.....	<i>President</i>	Omaha, Nebr.
IRVING O. PALMER.....	<i>Vice-President</i>	Newtonville, Mass.
E. R. WHITNEY.....	<i>Secretary</i>	Binghamton, N. Y.

Physical

E. HERMANN ARNOLD.....	<i>President</i>	New Haven, Conn.
MISS REBECCA STONEROD.....	<i>Vice-President</i>	Washington, D. C.
MISS MAY G. LONG.....	<i>Secretary</i>	Mason City, Iowa

School Administration

B. F. HUNSICKER.....	<i>President</i>	Reading, Pa.
GRAFTON D. CUSHING.....	<i>Vice-President</i>	Boston, Mass.
WILLIAM GEORGE BRUCE.....	<i>Secretary</i>	Milwaukee, Wis.
HARLAN P. FRENCH.....	<i>Chairman, Executive Committee</i>	Albany, N. Y.

Library

J. N. WILKINSON.....	<i>President</i>	Emporia, Kans.
EDWIN WHITE GAILLARD.....	<i>Vice-President</i>	New York, N. Y.
MISS GRACE SALISBURY.....	<i>Secretary</i>	Whitewater, Wis.

Special Education

MISS ANNA E. SCHAFER.....	<i>President</i>	Madison, Wis.
S. M. GREEN.....	<i>Vice-President</i>	St. Louis, Mo.
E. R. JOHNSTONE.....	<i>Secretary</i>	Vineland, N. J.

Indian Education

(Vacant).....	<i>President</i>	_____
R. A. COCHRAN.....	<i>Vice-President</i>	Mt. Pleasant, Mich.
MISS ESTELLE REEL.....	<i>Secretary</i>	Washington, D. C.

TREASURER'S REPORT

TO THE

NATIONAL EDUCATIONAL ASSOCIATION

JULY 1, 1904 TO JUNE 30, 1905

FOR THE MEETING AT ST. LOUIS, AND FOR THE ENSUING YEAR

J. W. Crabtree, Treasurer, in Acct. with the National Educational Association

BALANCE ON HAND JULY 1, 1904

Cash received from Treasurer Rhoads as per last annual report.	\$ 3,514.29
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RECEIPTS

From transportation lines:

Account of Minneapolis meeting:

Minneapolis, St. Paul & Sault Ste. Marie.....	\$	1.95
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Account of Boston meeting:

Boston & Maine Railroad.....	\$ 485.00	
New York, New Haven & Hartford Railroad.....	2,020.00	
New York Central & Hudson River Railroad.....	543.00	
Eastern Steamship Co.....	366.00	
Nashville, Chattanooga & St. Louis Railroad.....	3.90	
Erie Railroad.....	4.00	
	3,421.90	

Total from transportation lines.....		\$ 3,423.85
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From Board of Trustees:

Interest on Permanent Fund.....		5,534.90
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From annual meeting (St. Louis):

Advance memberships.....		\$4,448.00
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Registration bureau:

Former active memberships.....	\$ 908.00	
New active memberships.....	850.00	
Associate memberships.....	3,088.00	
	4,846.00	
		9,294.00

From memberships Milwaukee meeting of Department of Superintendence.....

606.00

From Secretary's office during the year:

Memberships.....	\$7,082.00†	
Enrollments.....	762.00†	
Exchange.....	37.34	
Sale of back volumes.....	480.85	
Sale of special reports.....	101.70	
Miscellaneous.....	9.50	
	9,373.30	

From royalty, sale of reports of Committees of Ten and Fifteen.....

69.20

From interest on deposit in First National Bank, Chicago.....

110.41

Total receipts for the year.....		\$31,925.77
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†These amounts include \$904.00 enrollment fees and advanced membership dues for Asbury Park meeting.

DISBURSEMENTS

Board of Trustees:	
Premium on bonds.....	\$190.00
Accrued interest.....	42.22
Foreclosure suits.....	142.22
Bank fees.....	211.50
Bank expenses.....	25.50
	<u>\$611.44</u>
Executive Committee expenses:	
President.....	\$104.44
Vice-President.....	22.05
Treasurer.....	222.78
Chairman Board of Trustees.....	109.28
Member by election.....	14.50
	<u>473.05</u>
General Secretary's office:	
Salary of Secretary.....	\$4,000.00
Postage.....	1,632.67
Telegrams.....	100.56
Freight and express.....	57.38
Clerical services.....	1,509.85
Exchange.....	40.43
Stationery and office supplies.....	149.12
Traveling.....	612.59
Office rent.....	600.00
Miscellaneous (refunds, etc.).....	16.10
	<u>8,718.70</u>
Printing:	
Volume of <i>Proceedings</i>	\$6,278.96
Reprints from volume.....	271.50
Executive Committee bulletins.....	1,265.52
Miscellaneous (letterheads, blanks, envelopes, programs, etc.).....	357.20
	<u>8,173.18</u>
Express and freight:	
Distribution of volumes.....	\$2,249.11
Miscellaneous.....	92.38
	<u>2,341.49</u>
Special appropriations:	
Department of Superintendence.....	\$203.31
Committee on Educational Doctrine.....	5.70
Committee on Key Notation.....	200.00
Committee on Salary, Tenure, and Pensions.....	2,609.23
Committee on Courses of Study in Rural Schools.....	357.43
Committee on Taxation.....	663.72
	<u>4,039.39</u>
Annual Convention:	
Department expenses.....	\$423.85
State directors and managers.....	460.96
Clerical services:	
Stenographers and typewriters.....	\$308.68
Registration.....	681.75
Assistants at headquarters.....	118.95
	<u>1,109.38</u>
Printing:	
Programs.....	\$405.00
Miscellaneous.....	143.75
	<u>548.75</u>
Stationery.....	55.50
Conference of Department presidents, Chicago.....	802.67
Miscellaneous.....	53.50
	<u>3,544.61</u>
Unclassified disbursements:	
For examining securities, bonds of Treasurer, Secretary, and auditing accounts	\$105.00
Miscellaneous.....	425.19
	<u>530.19</u>
Total disbursements for the year.....	<u>\$28,432.05</u>

GENERAL SUMMARY

Total receipts.....	\$31,925.77
Total disbursements.....	28,432.05
	<u>\$3,493.72</u>
Balance in treasury, June 30, 1905.....	
	JAMES W. CRABTREE, Treasurer.

ASBURY PARK, N. J., July 3, 1905.

The undersigned, trustees of the National Educational Association, have this day examined and approved the accounts of Mr. James W. Crabtree, Treasurer, with all statements of receipts and vouchers for disbursements.

(Signed)

ALBERT G. LANE, *Chairman*.
 NEWTON C. DOUGHERTY.
 F. LOUIS SOLDAN.
 WILLIAM H. MAXWELL.

CHICAGO, September 5, 1905.

Executive Committee, National Educational Association of the United States.

GENTLEMEN: In accordance with instructions received from Mr. A. G. Lane, chairman of the Board of Trustees, we have examined the books and accounts of the National Educational Association of the United States, as kept by the Secretary, Dr. Irwin Shepard, and the Treasurer, Mr. J. W. Crabtree.

We have verified the Treasurer's report, submitted at the meeting of the Association at Asbury Park and Ocean Grove, N. J., and we certify both reports to be in accordance with the books.

We are pleased to be able to report that the books are correctly kept, and are, in our opinion, well suited to the needs of the Association.

Yours respectfully,

THE INTERNATIONAL AUDIT COMPANY,

By JOHN McLAREN, *President*.

ROBERT NELSON,

Certified Public Accountant, Manager.

NINETEENTH ANNUAL REPORT OF THE BOARD OF TRUSTEES

To the Board of Directors of the National Educational Association:

The Board of Trustees presents the following report of the Permanent Fund of the National Educational Association and its income for the year ending June 30, 1905:

Permanent Fund, July 1, 1904:

Mortgages on real estate.....	\$69,500	
Kansas bonds.....	10,100	
Illinois bonds.....	53,500	
Cash on hand for investment.....	13,900	
Total.....		\$147,000

Permanent Fund, July 1, 1905:

Mortgages on real estate.....	\$61,500	
Kansas.....	10,000	
Illinois bonds.....	57,000	
St. Louis Terminal Railroad bonds.....	15,000	
Cash on hand for investment.....	3,500	
Total.....		\$147,000

INVESTMENTS

Investment, July 1, 1904..... \$133,100

Paid during the year:

Mortgage, 726 and 728 West Adams Street, Chicago.....	\$1,000	
Eudora City, Kans., Bond No. 13.....	100	
Lemont, Ill., Bond No. 14.....	500	
Chicago improvement bonds.....	6,000	
First Universalist Church, Englewood, Chicago.....	7,000	14,600
Balance of investments.....		\$118,500

Investments during the year:

St. Louis Terminal Railroad bonds.....	15,000	
Chicago drainage bonds.....	10,000	25,000

Total investment, July 1, 1905..... \$143,500

INCOME STATEMENT

Receipts from interest:

City of Eudora, Kans.....	\$ 48.00
Hodgeman county, Kans.....	60.00
Ness county, Kans.....	60.00
Morgan Park, Ill.....	157.50
Lemont, Ill.....	187.50
First mortgage, 1919 Wabash avenue, Chicago.....	250.00
First mortgage, 5136 Hibbard avenue, Chicago.....	250.00
First mortgage, 5603 Madison avenue, Chicago.....	250.00
First mortgage, First Universalist Church.....	199.38
First mortgage, 726 and 728 West Adams street, Chicago.....	450.00
Chicago improvement bonds.....	240.00
First mortgage, 312 North La Salle street, Chicago.....	250.00
First mortgage, 1201 Irving Park boulevard, Chicago.....	75.89
First mortgage, 5239 and 5241 Cornell avenue, Chicago.....	475.75
5526-5528 Jefferson avenue, Chicago.....	275.00
2268 Kenmore avenue, Chicago.....	125.00
Chicago drainage bonds.....	2,000.00
Interest on bank deposits.....	180.88

Total interest transferred to J. W. Crabtree, Treasurer..... \$5,534.90

STATEMENT OF SECURITIES BELONGING TO THE PERMANENT FUND OF THE NATIONAL EDUCATIONAL ASSOCIATION, JUNE 30, 1905

In the custody of A. G. Lane, Chairman, Board of Trustees:

KANSAS COUNTY, MUNICIPAL, AND SCHOOL BONDS

County	Kind of Bond	Amount	Rate of Interest	Interest Payable	Bond Due
Garfield*.....	School District 24.....	\$ 800	6%	Jan. and July	January, 1910
Grant*.....	County.....	2,000	6%	Jan. and July	February, 1920
Lane*.....	County.....	3,000	6%	Jan. and July	July 1, 1918
Reno*.....	City of South Hutchinson.	1,000	7%	Feb. and Aug.	April, 1908
Seward*.....	With Bentley & Hatfield, Wichita, Kans.....	1,000	..	Judgm't obtained	.....
	Total.....	\$7,800			

In the custody of the First Trust and Savings Banks, Chicago:

KANSAS COUNTY, MUNICIPAL, AND SCHOOL BONDS

County	Kind of Bond	Amount	Rate of Interest	Interest Payable	Bond Due
Douglas.....	Eudora City.....	\$ 700	6%	March	{ One due each year, March 1 July 1, 1919 July, 1903
Hodgeman.....	County.....	1,000	6%	January and July	
Ness†.....	School District 70.....	500	6%	January and July	
	Total.....	\$2,200			

ILLINOIS MUNICIPAL AND SCHOOL BONDS

Bond	Amount	Rate of Interest	Interest Payable	Bond Due
Village of Morgan Park, Ill.....	\$ 2,500	4½%	May and Nov.	Nov. 1, 1911
Village of Morgan Park, Ill.....	1,000	4½%	January and July	July, 1913
Lemont, Ill., School Nos. 16, 18, 20, 22, 24, 30, 32	3,500	5%	June and Dec.	\$500 yearly Dec. 1
Chicago drainage bonds.....	50,000	4%	Dec. and June	December, 1917
	\$57,000			

CHICAGO REAL ESTATE

First Mortgages	Amount	Rate of Interest	Interest Payable	Mortgage Due
1919 Wabash avenue (Thomas).....	\$ 5,000	5%	May and Nov. 1	May 1, 1908
5136 Hibbard avenue (Ritchie).....	5,000	5%	May and Nov. 1	November 1, 1908
5603 Madison avenue (Lewis).....	5,000	5%	July and Jan. 1	July 1, 1909
4672 Lake avenue (Hord)†.....	5,000	5%	March and Sept.	March, 1909
312 La Salle street (Leonard).....	5,000	5%	April and October	October, 1906
1201 Irving Park boulevard (Wadhams).....	5,000	5%	January and July	July, 1906
726-28 W. Adams street (Barker).....	9,000	4½%	Feb. and Aug.	February 1, 1907
5526-28 Jefferson avenue (Wallace)‡.....	1,000	5%	April and October	October 1, 1904
5526-28 Jefferson avenue (Wallace)‡.....	10,000	5%	April and October	October 1, 1907
2268 Kenmore avenue (Dodge).....	2,500	5%	May and Nov.	November 15, 1907
5239 Cornell avenue (Dickinson).....	11,000	4½%	January and July	January, 1909
	\$61,500			

RAILROAD BONDS

Bond	Amount	Rate of Interest	Interest Payable	Bond Due
Terminal Railroad Association of St. Louis, Nos. 16311-25.....	\$15,000	4%	January and July	January, 1953

Approved by the Board of Trustees and ordered transmitted to the Board of Directors.

ALBERT G. LANE, *Chairman*.

WILLIAM H. MAXWELL.

NEWTON C. DOUGHERTY.

F. LOUIS SOLDAN.

REPORT OF EXAMINATION OF SECURITIES

CHICAGO, June 19, 1905.

I have this day examined the securities named in the foregoing statement made by A. G. Lane, chairman of the Board of Trustees, and Louis Boisot, trust officer of the First Trust and Savings Bank in Chicago, and find all the bonds and securities in their possession, or in the hands of attorneys for collection, as shown in their statements.

(Signed) CARROLL G. PEARSE.

*In default in payment of interest.

†In the hands of Citizens State Bank of Ness City, Kans., for the purpose of exchange for new bond.

‡In the hands of James Frake, of Chicago, for foreclosure.

JOURNAL OF PROCEEDINGS
OF THE
FORTY-FOURTH ANNUAL CONVENTION
OF THE
NATIONAL EDUCATIONAL ASSOCIATION

ASBURY PARK AND OCEAN GROVE, N. J., JULY 3-7, 1905

SUNDAY SERVICES

Special Sunday services were held in advance of the opening of the convention in the Ocean Grove Auditorium, July 2, 1905, under the auspices of the National Educational Association; President William H. Maxwell presiding.

Morning service at 10:30 A. M.; Bishop James N. FitzGerald, D.D., conducting. Sermon by Rev. Newell Dwight Hillis, of Plymouth Church, Brooklyn, N. Y.

Evening service at 8 P. M.; Rev. A. E. Ballard, D.D., conducting. Sermon by Rev. Russell H. Conwell, of Baptist Temple, Philadelphia, Pa.

Music for both services was furnished by the Auditorium Choir and Ocean Grove Festival Orchestra, under the direction of Mr. Tali Esen Morgan, director of music, Ocean Grove.

The exercises were arranged and the preachers secured by Dr. James M. Green, of Trenton, N. J., acting by request of President William H. Maxwell.

OPENING SESSION.—MONDAY, JULY 3

The forty-fourth annual convention of the National Educational Association was called to order by President William H. Maxwell, of New York city, at 8 P. M., in the Auditorium at Ocean Grove, N. J.

Various selections by the Ocean Grove Festival Orchestra had been rendered while the audience was assembling.

The music at all general sessions was under the direction of Mr. Tali Esen Morgan, and was furnished by the Ocean Grove Festival Chorus and the Ocean Grove Festival Orchestra, and several eminent soloists under the leadership of Mr. Morgan. Mr. J. H. Von Nardroff presided at the Auditorium organ.

The exercises were opened with prayer by Bishop James N. FitzGerald, D.D., of Ocean Grove.

Dr. James M. Green, principal of the State Normal School at Trenton, N. J., delivered an address of welcome on behalf of Hon. Edward C. Stokes, governor of New Jersey, who was absent on account of illness.

A response to the address of welcome was made by Albert G. Lane, district superintendent of schools, Chicago, Ill., who was President of the National Educational Association at the Asbury Park convention in July, 1894.

A musical solo, "The Lord Worketh Wonders," by Handel, was sung by Julian Walker, accompanied by the Ocean Grove Festival Orchestra.

The annual address of the President of the Association was delivered by President William H. Maxwell, of New York city, on the subject, "Education for Efficiency."

A musical solo, "The Two Grenadiers," by Schumann, was sung by Julian Walker.

Dr. W. T. Harris, United States Commissioner of Education, presented an address on "The Future of Teachers' Salaries," which was followed by an address on "The Uses of Educational Museums," by Frederick J. V. Skiff, director of the Field Columbian Museum, Chicago, Ill. A discussion of the subject followed by J. W. Carr, superintendent of schools, Anderson, Ind.

The Committee on Resolutions was then announced, as follows:

COMMITTEE ON RESOLUTIONS

Eliphalet Oram Lyte, *Chairman*, principal of State Normal School, Millersville, Pa.
 Charles J. Baxter, state superintendent of schools, Trenton, N. J.
 Edwin G. Cooley, superintendent of schools, Chicago, Ill.
 Frank B. Cooper, superintendent of schools, Seattle, Wash.
 Charles D. McIver, president of State Normal and Industrial College, Greensboro, N. C.
 Miss Anna Tolman Smith, Bureau of Education, Washington, D. C.
 Miss Harriet Emerson, principal of Central Grammar School, Springfield, Mass.
 O. J. Kern, county superintendent of schools, Rockford, Ill.
 Edward J. Goodwin, second assistant commissioner of education, Albany, N. Y.
 William L. Bryan, president of Indiana University, Bloomington, Ind.

The convention then adjourned to meet at 2:30 P. M. Tuesday, July 4.

SECOND SESSION.—TUESDAY, JULY 4

The convention was called to order at 2:30 P. M., in the Ocean Grove Auditorium, by President William H. Maxwell.

Prayer was offered by Rev. A. E. Ballard, D.D., of Ocean Grove, N. J.

An overture, "America," was rendered by the Ocean Grove Festival Orchestra.

The first address of the session was on "The Fundamentals in Education," by Hon. George B. McClellan, mayor of the city of New York.

An address on "The Nation's Educational Purpose" was delivered by Hon. Andrew S. Draper, state commissioner of education for New York, Albany, N. Y.

The Ocean Grove Festival Chorus and Orchestra rendered the musical selection "Great God of Nations," by Wagner.

In the absence of President Edwin A. Alderman, of the University of Virginia, who was appointed to speak on "American Idealism," Dr. James H. Canfield, of Columbia University, supplied President Alderman's place and addressed the convention on the same subject. Mr. Canfield was not willing to have the stenographer's report of his address published in the volume of *Proceedings*, since it was delivered without time for due preparation, and simply to fill out the program for the afternoon, at the request of President Maxwell, when it was known that President Alderman would not be present.

The national anthem, "America," was sung by the chorus and audience.

The convention adjourned to Wednesday evening, July 5, at 8 P. M.

THIRD SESSION.—WEDNESDAY, JULY 5

The convention assembled in the Ocean Grove Auditorium at 8 P. M., and was called to order by President Maxwell.

Prayer was offered by Rev. John Leroy Taylor, pastor of the First Presbyterian Church, Asbury Park.

A musical solo, "The Serenade," by Berlioz, was sung by William Harper.

The topic "Child Labor and Compulsory Education" was discussed as follows:

a) "The School Aspect," by George H. Martin, secretary of State Board of Education for Massachusetts, Boston, Mass.

b) "The Legal Aspect," by Franklin H. Giddings, professor of sociology, Columbia University, New York city.

William Harper again sang a solo, "Honor and Arms," by Handel.

The second topic of the evening was "The Immigrant Child," presented by Miss Julia Richmond, district superintendent of schools, New York city.

The following Committee on Nominations was announced by the Secretary, having been appointed by the President in accordance with By-Law No. 1:

MEMBERS OF THE NOMINATING COMMITTEE

JAMES L. HAYS, New Jersey, *Chairman*

Alabama	I. W. Hill	Montana	S. D. Largent
Arizona	A. J. Matthews	Nebraska	J. W. Searson
Arkansas	George B. Cook	Nevada	(Vacant)
California	Richard D. Faulkner	New Hampshire	J. C. Kirtland, Jr.
Colorado	Z. X. Snyder	New Jersey	James L. Hays
Connecticut	Charles H. Keyes	New Mexico	Hiram Hadley
Delaware	Arthur R. Spaid	New York	Gustave Straubermüller
District of Columbia	Hosmer M. Johnson	North Carolina	J. Y. Joyner
Florida	W. B. Dickenson	North Dakota	W. M. Kern
Georgia	W. M. Slaton	Ohio	Edmund D. Lyon
Idaho	(Vacant)	Oklahoma	E. S. Vaught
Illinois	David Felmley	Oregon	(Vacant)
Indiana	H. B. Brown	Pennsylvania	E. O. Lyte
Indian Territory	Miss Mary F. Russell	Rhode Island	Charles E. Dennis, Jr.
Iowa	John F. Riggs	South Carolina	D. B. Johnson
Kansas	Jasper N. Wilkinson	South Dakota	George M. Smith
Kentucky	E. H. Mark	Tennessee	R. B. Lees
Louisiana	Miss Marion Brown	Texas	R. B. Cousins
Maine	John S. Locke	Utah	A. C. Nelson
Maryland	Albert S. Cook	Vermont	W. D. Hatch
Massachusetts	Charles H. Ames	Virginia	Dudley R. Cowles
Michigan	E. E. Scribner	Washington	(Vacant)
Minnesota	J. W. Olsen	West Virginia	Miss Lucy Robinson
Mississippi	C. E. Saunders	Wisconsin	William George Bruce
Missouri	J. M. Greenwood	Wyoming	Charles H. Nellor
	Porto Rico		Frank H. Ball

After announcements the convention adjourned.

BUSINESS SESSION.—THURSDAY, JULY 6

MINUTES OF THE ANNUAL MEETING OF THE ACTIVE MEMBERS OF THE NATIONAL EDUCATIONAL ASSOCIATION

The meeting was called to order by President William H. Maxwell, at 12 M., in the First Methodist Episcopal Church.

PRESIDENT MAXWELL: The first business is the reading of the minutes of the last annual meeting.

On motion, the reading of the minutes was dispensed with, and the same were approved as printed in the annual volume of *Proceedings* of the St. Louis meeting.

PRESIDENT MAXWELL: The next business is the annual report of the Treasurer of the Association.

Copies of the report were distributed to the members present.

On motion, the report of the Treasurer was accepted and approved, and ordered printed in the annual volume of *Proceedings*.

PRESIDENT MAXWELL: The next item of business is the report of the chairman of the Board of Trustees.

ALBERT G. LANE, chairman of the Board of Trustees: Printed copies of the report have been distributed to the members present. I wish to call your attention to the statement of securities at the end of the report. The permanent fund having been increased to approximately \$150,000 required more time and attention than it was possible for the chairman of the Board of Trustees to give it; consequently, at the annual meeting of the Board of Trustees last year, they voted to make the First Trust and Savings Bank, which is a part of the First National Bank of Chicago, the trust company in charge of the fund. You

will see by this statement that only those delinquent bonds in Kansas which are in process of collection are in the possession of the chairman of the Board of Trustees, while the active securities are all in the hands of the First Trust and Savings Bank of Chicago. That bank transacts all the business for a commission of one-eighth of one per cent., and has the custody of the bonds. Superintendent Carroll G. Pearse, of Milwaukee, was appointed examiner of securities for the current year; his certificate follows the report.

I call attention to the footnote under "Mortgages on Chicago Real Estate." Steps were taken for foreclosure of the Hord note and the Wallace notes because the property had been sold to other parties. There were some second mortgages, and we thought best to protect our interests by foreclosure.

PRESIDENT MAXWELL: Does any member of the Association desire to ask Chairman Lane any question with regard to the report?

T. A. Mott, of Indiana, moved that the report be approved as printed, and that it be incorporated in the printed volume of *Proceedings*; seconded; carried without opposing vote.

PRESIDENT MAXWELL: The report of the Committee on Nominations is next in order.

James L. Hays, of New Jersey, chairman of the Committee on Nominations, read the report.

REPORT OF COMMITTEE ON NOMINATIONS

To the President and Members of the National Educational Association:

On behalf of the members of the Committee on Nominations, I beg leave to report the following nominations for officers of the Association for the year 1905-6, as follows:

For—

<i>President</i>	NATHAN C. SCHAEFFER.....	Pennsylvania
<i>First Vice-President</i>	WILLIAM H. MAXWELL.....	New York
<i>Second Vice-President</i>	MISS N. CROPSEY.....	Indiana
<i>Third Vice-President</i>	J. H. HINEMON.....	Arkansas
<i>Fourth Vice-President</i>	E. S. VAUGHT.....	Oklahoma
<i>Fifth Vice-President</i>	JOHN F. RIGGS.....	Iowa
<i>Sixth Vice-President</i>	JOSEPH O'CONNOR.....	California
<i>Seventh Vice-President</i>	D. B. JOHNSON.....	South Carolina
<i>Eighth Vice-President</i>	J. A. SHAWAN.....	Ohio
<i>Ninth Vice-President</i>	H. O. WHEELER.....	Vermont
<i>Tenth Vice-President</i>	J. Y. JOYNER.....	North Carolina
<i>Eleventh Vice-President</i>	JOHN W. SPINDLER.....	Kansas
<i>Twelfth Vice-President</i>	J. STANLEY BROWN.....	Illinois
<i>Treasurer</i>	JASPER M. WILKINSON.....	Kansas

DIRECTORS

Alabama.....	ISAAC W. HILL.....	Montgomery
Arizona.....	A. J. MATTHEWS.....	Tempe
Arkansas.....	GEORGE B. COOK.....	Hot Springs
California.....	ARTHUR H. CHAMBERLAIN.....	Pasadena
Colorado.....	L. C. GREENLEE.....	Denver
Connecticut.....	CHARLES H. KEYES.....	Hartford
Delaware.....	GEORGE W. TWITMYER.....	Wilmington
District of Columbia.....	No nomination.....	
Florida.....	MISS CLEM HAMPTON.....	Tallahassee
Georgia.....	WILLIAM M. SLATON.....	Atlanta
Idaho.....	MISS FRANCES MANN.....	Boise
Illinois.....	J. A. MERCER.....	Peoria
Indiana.....	T. A. MOTT.....	Richmond
Indian Territory.....	JOHN D. BENEDICT.....	Muskogee
Iowa.....	A. V. STORM.....	Cherokee
Kansas.....	L. D. WHITTEMORE.....	Topeka
Kentucky.....	W. H. BARTHOLOMEW.....	Louisville
Louisiana.....	WARREN EASTON.....	New Orleans
Maine.....	JOHN S. LOCKE.....	Saco

REPORT OF COMMITTEE ON NOMINATIONS—DIRECTORS (*continued*)

Maryland.....	M. BATES STEPHENS.....	Baltimore
Massachusetts.....	HENRY T. BAILEY.....	Worcester
Michigan.....	W. H. ELSON.....	Grand Rapids
Minnesota.....	JOHN A. CRANSTON.....	St. Cloud
Mississippi.....	ROBERT B. FULTON.....	University
Missouri.....	W. J. HAWKINS.....	St. Louis
Montana.....	OSCAR J. CRAIG.....	Missoula
Nebraska.....	GEORGE L. TOWNE.....	Lincoln
Nevada.....	No nomination.....	
New Hampshire.....	No nomination.....	
New Jersey.....	JOHN ENRIGHT.....	Freehold
New Mexico.....	C. M. LIGHT.....	Silver City
New York.....	JAMES C. BYRNES.....	New York
North Carolina.....	J. I. FOUST.....	Greensburg
North Dakota.....	P. G. KNOWLTON.....	Fargo
Ohio.....	WELLS L. GRISWOLD.....	Youngstown
Oklahoma.....	ANDREW R. HICKAM.....	Oklahoma City
Oregon.....	No nomination.....	
Pennsylvania.....	J. W. LANSINGER.....	Millersville
Rhode Island.....	WALTER BALLOU JACOBS.....	Providence
South Carolina.....	ROBERT P. PELL.....	Spartanburg
South Dakota.....	M. A. LANGE.....	Pierre
Tennessee.....	E. F. TURNER.....	Nashville
Texas.....	L. E. WOLFE.....	San Antonio
Utah.....	D. B. CHRISTENSON.....	Salt Lake City
Virginia.....	J. L. JARMAN.....	Farmville
West Virginia.....	MISS LUCY ROBINSON.....	Wheeling
Wisconsin.....	L. D. HARVEY.....	Menomonie
Wyoming.....	T. T. TYNAN.....	Cheyenne
Washington.....	E. T. MATHES.....	Bellingham
Vermont.....	ISAAC THOMAS.....	Burlington

Respectfully submitted,

(Signed) { JAMES L. HAYS, *Chairman*.
E. H. MARK, *Secretary*.

Andrew S. Draper, of New York, moved that the report be received and that the Secretary be instructed to cast the ballot of the members present for the nominees named in the report; seconded by J. H. Phillips, of Alabama; carried by unanimous vote.

THE SECRETARY: The ballot is so cast.

PRESIDENT MAXWELL: I have pleasure in announcing that Superintendent Nathan C. Schaeffer, of Pennsylvania, has been elected your President for the ensuing year, and that the other ladies and gentlemen mentioned in this report have all been elected to the respective offices for which they were nominated.

MR. DRAPER: I feel disposed to say a word in this connection. I do not expect to express the feelings or the thought of anyone besides myself. I feel that the Association is to be congratulated upon electing to the presidency the distinguished, scholarly, long-experienced head of the public educational system of the state of Pennsylvania; but I do not mean by that remark to be understood as feeling otherwise than that I should be glad enough at any time in this Association to vote for that other distinguished man who has been mentioned in connection with the office of President, and who is so deserving of popular commendation and of public support, Mr. Charles D. McIver, of North Carolina. But time sets all things even.

PRESIDENT MAXWELL: Commissioner Draper has expressed what is in the hearts of everyone of us.

The next business in order is the report of the Board of Trustees and the Board of Directors on reincorporation, as provided by resolutions passed by the active members at the last annual meeting.

The Secretary announced that the report of the Board of Trustees to the Board of

Directors, dated April 20, 1905 (for copy of report see minutes of Board of Directors), had been transmitted to the members of the latter body by mail, and that sixty-five directors responded, all voting to approve the report of the Board of Trustees, except two directors, who cast qualified affirmative votes; also that on May 25 a circular letter was sent to all active members, inclosing a copy of the adopted report of the Board of Trustees, a copy of the proposed bill of incorporation and of the proposed by-laws, and giving notice that the report would be presented for adoption at this meeting, in accordance with the directions in the resolutions passed at the meeting, June 30, 1904.

The Secretary also reported that the Board of Directors, at an adjourned meeting on July 4, had voted to recommend certain changes in sec. 7 of the proposed bill, and that this section had been printed on a separate slip in a form embodying the proposed amendments.

These slips, with copies of the original proposed bill, of the proposed by-laws, and of the report of the trustees, were distributed to the members present.

Dr. F. Louis Soldan was then recognized by the chair as the member authorized by the Board of Directors and the Board of Trustees to present the report and recommendations of those boards, and to explain the proposed bill for reincorporation, and the amendments to sec. 7 recommended by the Board of Directors, as well as all other matters connected with the subject. This he proceeded to do by reporting, as a matter of information, the adoption by the Board of Directors of the following resolution:

Resolved, That the Board of Directors approve and adopt the recommendations of the Board of Trustees that application be made to Congress for a special act in the form herewith submitted, or in the amended form herewith submitted, to incorporate an association to be known as the "National Education Association of the United States," to succeed and continue the present association.

Resolved, That the Board of Directors recommend the following resolution to the Association for adoption:

He then moved the adoption of the resolutions offered by the Board of Directors, which motion was duly seconded, as follows:

Resolved, That this Association authorizes and requests the Board of Trustees to make application to Congress for a special act, in the following form, to incorporate an association to be known as the "National Education Association of the United States," to succeed and continue the National Educational Association.

A PROPOSED BILL TO INCORPORATE THE NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

SECTION 1. That the following named persons, who are now the officers and directors and trustees of the National Educational Association, a corporation organized in the year one thousand eight hundred and eighty six, under the Act of General Incorporation of the Revised Statutes of the District of Columbia:

(Names of officers to be entered.)

and such other persons as now are or may hereafter be associated with them as officers or members of said Association, are hereby incorporated and declared to be a body corporate by the name of the "National Education Association of the United States," and by that name shall be known and have perpetual succession with the powers, limitations, and restrictions herein contained.

SEC. 2. That the purpose and object of the said corporation shall be to elevate the character and advance the interests of the profession of teaching, and to promote the cause of education, in the United States. This corporation shall include the National Council of Education and the following departments, and such others as may hereafter be created by organization or consolidation, to wit: the Departments, first, of Superintendence; second, of Normal Schools; third, of Elementary Education; fourth, of Higher Education; fifth, of Manual Training; sixth, of Art Education; seventh, of Kindergarten Education; eighth, of Music Education; ninth, of Secondary Education; tenth, of Business Education; eleventh, of Child Study; twelfth, of Physical Education

thirteenth, of Natural Science Instruction; fourteenth, of School Administration; fifteenth, the Library Department; sixteenth, of Special Education; seventeenth, of Indian Education; and the number and names of these departments may be changed at the pleasure of the corporation, as provided in its By-Laws.

SEC. 3. That the said corporation shall further have power to have and to use a common seal, and to alter and change the same at its pleasure, to sue or be sued in any court of the United States, or other court of competent jurisdiction; to make by-laws not inconsistent with the provisions of this act or of the constitution of the United States; to take or receive, whether by gift, grant, devise, bequest, or purchase, any real or personal estate, and to hold, grant, convey, hire, or lease the same for the purposes of its incorporation; and to accept and administer any trust of real or personal estate for any educational purpose within the objects of the corporation.

SEC. 4. That all real property of the corporation within the District of Columbia, which shall be used by the corporation for the educational or other purposes of the corporation as aforesaid, other than the purposes of producing income, and all personal property and funds of the corporation held, used, or invested for educational purposes aforesaid, or to produce income to be used for such purposes, shall be exempt from taxation; *provided*, however, that this exemption shall not apply to any property of the corporation which shall not be used for, or the income of which shall not be applied to, the educational purposes of the corporation; and, *provided further*, that the corporation shall annually file, with the Commissioner of Education of the United States, a report in writing, stating in detail the property, real and personal, held by the corporation, and the expenditure or other use or disposition of the same, or the income thereof, during the preceding year.

SEC. 5. That the membership of the said corporation shall consist of three classes of members—viz., active, associate, and corresponding—whose qualifications, terms of membership, rights, and obligations shall be prescribed by the By-Laws of the corporation.

SEC. 6. That the officers of the said corporation shall be a President, twelve Vice-Presidents, a Secretary, a Treasurer, a Board of Directors, an Executive Committee, and a Board of Trustees.

The Board of Directors shall consist of the President, the First Vice-President, the Secretary, the Treasurer, the chairman of the Board of Trustees, and one additional member from each state, territory, or district, to be elected by the active members for the term of one year, or until their successors are chosen, and of all life directors of the National Educational Association. The United States Commissioner of Education, and all former Presidents of the said Association now living, and all future Presidents of the Association hereby incorporated, at the close of their respective terms of office, shall be members of the Board of Directors for life. The Board of Directors shall have power to fill all vacancies in their own body; shall have in charge the general interests of the corporation, excepting those herein intrusted to the Board of Trustees; and shall possess such other powers as shall be conferred upon them by the By-Laws of the corporation.

The Executive Committee shall consist of five members, as follows: the President of the Association, the First Vice-President, the Treasurer, the Chairman of the Board of Trustees, and a member of the Association, to be chosen annually by the Board of Directors to serve one year. The said committee shall have authority to represent, and to act for, the Board of Directors in the intervals between the meetings of that body, to the extent of carrying out the legislation adopted by the Board of Directors under such general directions as may be given by said board.

The Board of Trustees shall consist of four members, elected by the Board of Directors for the term of four years, and the President of the Association, who shall be a member *ex officio*, during his term of office. At the first meeting of the Board of Directors, held during the annual meeting of the Association at which they were elected, they shall elect one trustee for the term of four years. All vacancies occurring in said Board of Trustees, whether by resignation or otherwise, shall be filled by the Board of Directors for the unexpired term; and the absence of a trustee from two successive annual meetings of the board shall forfeit his membership.

SEC. 7. That the funds of the corporation shall be in charge of the Board of Trustees, who shall provide for the safekeeping and investment of all funds and property of whatever kind, including that which the corporation may receive by donation, bequest, or devise; and the income of all such funds and property shall be used only to meet the cost of maintaining the organization of the Association and of publishing its annual volume of *Proceedings*, excepting when the donors shall specify otherwise, or the Board of Trustees shall otherwise direct. It shall also be the duty of the board to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary of the Association acting under authority of the Board of Directors. When

practicable, the Board of Trustees shall invest all surplus funds exceeding five hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the Association for the previous year, and providing for the fixed expenses and for all appropriations made by the Board of Directors for the ensuing year.

The Board of Trustees shall elect the Secretary of the Association, who shall also be secretary of the Executive Committee, and shall fix the compensation and the term of his office for a period not to exceed four years.

SEC. 8. That the principal office of the said corporation shall be in the city of Washington, District of Columbia, provided that the meetings of the corporation, its officers, committees, and departments, may be held, and that its business may be transacted, and an office or offices may be maintained, elsewhere, within the United States, as may be determined by the Board of Directors, or otherwise in accordance with the By-Laws.

SEC. 9. That the Charter, Constitution, and By-Laws of the National Educational Association shall continue in full force and effect until the next annual meeting of the Association appointed to be held thereunder, and until new By-Laws shall be adopted; and that the present officers, directors, and trustees of said Association shall continue to hold office and perform their respective duties as such, until the expiration of the terms for which they were severally elected or appointed, and until their successors are elected. That at such annual meeting the members of the National Educational Association, then present, shall organize and proceed to adopt By-Laws, to elect officers to succeed those whose terms have expired or are about to expire, and generally to organize the "National Education Association of the United States;" and that the Board of Trustees of the corporation hereby incorporated shall thereupon receive, take over, and enter into possession, custody, and management of all property, real and personal, of the corporation heretofore known as the National Educational Association, incorporated as aforesaid, under the Revised Statutes of the District of Columbia, and all its rights, contracts, claims, and property of every kind and nature whatsoever; and the several officers, directors and trustees of such last-named Association, or any other person having charge of any of the securities, funds, books, or property thereof, real or personal, shall on demand deliver the same to the proper officers, directors, or trustees of the corporation hereby created.

SEC. 10. That the rights of creditors of the said existing corporation, known as the National Educational Association, shall not in any manner be impaired by the passage of this act, or the transfer of the property heretofore mentioned, nor shall any liability or obligation, or the payment of any sum due or to become due, or any claim or demand, in any manner, or for any cause existing against the said existing corporation, be released or impaired; and the corporation hereby incorporated is declared to succeed to the obligations and liabilities, and to be held liable to pay and discharge all of the debts, liabilities, and contracts, of the said corporation so existing, to the same effect as if such new corporation had itself incurred the obligation or liability to pay such debt or damages, and no action or proceeding before any court or tribunal shall be deemed to have abated or been discontinued by reason of this act.

SEC. 11. That Congress may from time to time alter, repeal, or modify this act of incorporation, but no contract or individual right made or acquired shall thereby be divested or impaired.

Dr. Soldan then called attention to the amendment to Sec. 7 of the Proposed Bill, which had been distributed to the members on printed slips, as follows:

AMENDMENT TO SEC. 7 OF THE PROPOSED CHARTER RECOMMENDED BY THE BOARD OF DIRECTORS OF THE NATIONAL EDUCATIONAL ASSOCIATION

SEC. 7. That the invested fund now known as the "Permanent Fund of the National Educational Association," when transferred to the corporation hereby created, shall be held by such corporation as a Permanent Fund and shall be in charge of the Board of Trustees, who shall provide for the safekeeping and investment of such fund, and of all other funds which the corporation may receive by donation, bequest, or devise. No part of the principal of such Permanent Fund or its accretions shall be expended, except by a two-thirds vote of the active members of the Association, upon the recommendation of the Board of Trustees, after such recommendation has been approved by vote of the Board of Directors, and after printed notice of the proposed expenditure has been mailed to all active members of the Association. The income of the Permanent Fund shall be used only to meet the cost of maintaining the organization of the Association and of publishing its annual volume of *Proceedings*, unless the terms of the donation, bequest, or devise shall otherwise specify, or the Board of Directors shall otherwise order. It shall also be the duty of the Board of Trustees to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary

of the Association acting under the authority of the Board of Directors. When practicable, the Board of Trustees shall invest as part of the Permanent Fund all surplus funds exceeding five hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the Association for the previous year, and providing for the fixed expenses and for all appropriations made by the Board of Directors for the ensuing year.

The Board of Trustees shall elect the Secretary of the Association, who shall also be secretary of the Executive Committee, and shall fix the compensation and the term of his office for a period not to exceed four years.

F. LOUIS SOLDAN, of St. Louis.—I shall be as brief in the presentation of this matter as the importance of the subject permits. You all know the reasons which led to the presentation before the house of the matter of the reincorporation of the Association. You know that the present articles of incorporation of the National Educational Association expire by limitation in February next. This in itself shows the absolute necessity of definite action today, so that the corporate existence of this society may not lapse. The Board of Trustees, acting as a committee under resolutions passed at the last annual meeting, prepared articles of incorporation following closely the lines of the old constitution, embodying, with one exception to be mentioned later, nothing that was not contained in the constitution which has been in force for many years. The one exception, referred to the disposition of the income of the Association: a disposition which, in the new draft, reserves the income from the permanent fund for two definite purposes, unless different purposes were indicated by the donors of the money for the permanent fund, or by a vote of certain of the bodies of the Association. Otherwise, the articles of incorporation—I refer now to the draft which was sent to your homes—is the same in substance as the old constitution. I beg to direct your attention to sec. 7 of the proposed bill of incorporation, because it is by all means the most important section in the document. The first draft of the articles of incorporation was adopted by vote, first by the Board of Trustees, then by the Board of Directors with but two dissenting qualified votes. When the matter, however, was discussed in the meeting of the Board of Directors on July 3, it seemed as if an improvement were possible in two directions—an improvement which, while it is advocated by the Board of Directors, is submitted to the members for their own consideration and approval. You have, therefore, two propositions before you, both backed by the recommendation of the Board of Directors. The first is the proposition to adopt the articles of incorporation as contained in the document sent to your homes, printed on the larger one of the two papers now before you. The second proposition, recommended by the Board of Directors unanimously, is to adopt the proposed amendment printed on the smaller paper now in your hands and make it a part, by substitution, of the original proposition for incorporation.

Now, in regard to the amendment, and the reasons which gave rise to its adoption in the Board of Directors: The amendment touches two points. It touches the so-called permanent fund; it touches the income from that permanent fund. It appeared in the discussion before the Board of Directors that the expression “permanent fund” was simply one that had become current by use in discussions, by headlines in the report of the Treasurer or Board of Trustees but which had absolutely no legal existence. There was in the hands of the Board of Directors, neither in the old constitution nor in the articles of incorporation as first prepared, any safeguard which made that fund permanent in law as it had been, or has been, permanent in name. And the clear-cut issue which the first part of the proposed amendment raises is: Does the Association desire to have this fund made a permanent fund by law or not?

The proposition to make the fund a permanent fund in law, then, is before you. If it is your preference that this fund should remain subject to drafts at any time, vote against the amendment. If your feeling is that the fund should remain a permanent fund, then the amendment should be adopted.

A word in regard to the form of the amendment: The form of the amendment, as first suggested, was to provide in express terms that this fund should never be drawn upon; that the income alone should be used. The attorney for the Association very

properly stated to the Board of Directors that such a provision could not be legally made. You cannot tie up a fund for an indefinite number of years and indefinitely against all possible demands. Therefore, the form finally adopted and recommended to you by the Board of Directors is different from the first draft. The form adopted makes it possible to spend part of the permanent fund; but it places restrictions in the article which makes the fund absolutely safe. It can be spent only when there is a concurrence of the three governing bodies of the Association: the Board of Trustees, the Board of Directors, and the active members.

The second proposition refers to the income. The amendment differs from the original draft in one respect. It retains the two features that the income may be used for the purposes of maintaining the organization of the Association; a wise provision, which allows any reasonable purpose to be included in the maintenance of the organization of the Association. It also provides that this income shall be used, and the income only, for the expense of printing the annual volume. The second provision of the original was "except the Board of Trustees shall decide otherwise." In discussing this second provision before the Board of Directors, it seemed as if it placed an unwise limit on the expenditure of the income of the Association, and assigns, perhaps, too much responsibility and power to the Board of Trustees. It was thought that the Board of Directors, a body which is in more constant touch with the current and shifting sentiment of the Association should have a voice in the spending of the income; hence, instead of the phrase in the original draft "unless decided otherwise by the Board of Trustees," the amendment puts the words, "unless decided otherwise by the Board of Directors."

I want to put in a nutshell the two propositions: first, the proposition of the amendment is to tie up the permanent fund and make it permanent; second to allow a more liberal use, if necessary, of the income of the Association.

I should not have occupied your time if it had not been for the request of the Board of Directors that I should present this matter to the governing body of the Association.

ALBERT G. LANE, of Chicago.—I think this body is perfectly clear in regard to the wisdom of the action proposed by the Board of Trustees and the Board of Directors for the reincorporation of the Association, as well as in regard to the amendments proposed to sec. 7; and I, therefore, move that the amended form of sec. 7 of the proposed bill as recommended by the Board of Directors, and as explained by Dr. Soldan, be substituted for sec. 7 in the original "Proposed Bill".

The motion was seconded as stated to the house by the chairman.

MISS MARGARET HALEY, of Chicago—I have a point of order to make. It is in writing and I will file it with the Secretary when I have read it. It is to the effect that the report of the Board of Trustees recommending an act of Congress providing for a new association to take over this Association at some time in the future is out of order. It is not within the powers of the Board of Trustees, as provided in the resolution. I do not understand how this matter came before the Association. For that reason I am unable to state whether it is a report of the Board of Trustees approved by the Board of Directors, or a report of the Board of Directors.

PRESIDENT MAXWELL: What is before us now is a motion adopting the report of the Board of Directors.

MISS HALEY: It is out of order for the following reasons: . . . (The statement of reasons was read at length, and a copy filed with the Secretary.)

PRESIDENT MAXWELL: The chair understands that a point of order is made by Miss Haley. It is the duty of the chair to rule upon points of order. You will not expect me to go into an argument in reply to this elaborate document at this time. I shall simply rule the point of order not well taken.

MISS HALEY: I appeal from the decision of the chair.

PRESIDENT MAXWELL: Miss Haley appeals from the decision of the chair. The question now before you is: Shall the chair be sustained? It should be remembered that only active members have a right to vote.

The question was put to vote and carried in the affirmative, and the chair was sustained.

S. Y. GILLAN, of Wisconsin: I rise to a point of information in respect to this proposed legislation. In case Congress, for any reason, should fail to pass this proposed bill, what would become of this Association at the date of the expiration of its present charter in February, 1906? I have several other questions that I want to ask; but I believe a question of information is in order at any time, and I call for a reply.

PRESIDENT MAXWELL: I shall ask the counsel of the Board of Directors and the Board of Trustees, Mr. John B. Pine, of New York, to answer the question.

MR. PINE: During the past winter the Board of Trustees secured the passage by Congress of an amendment to the General Act of Incorporation of the District of Columbia, which will make it possible, in case the special charter is not passed before February 24 next, to continue the existence of the corporation by filing a certificate, executed by the President and Secretary of the Association, with the consent of two-thirds of the Board of Directors. In case the charter should not be passed by the day named, it is the intention of the Board of Directors, as I understand it, to file such a certificate. By that means the present corporate existence will be continued, and opportunity will be given at a later session to secure the enactment of the bill for incorporation by Congress.

MR. GILLAN: I see no objection then to taking that step at the present time, and continue the present corporate existence of this body for another twenty years.

But another question, more important, is this: If Congress should amend this Proposed Bill so as to make it unsatisfactory to this Association, would not this Association then be obliged to reorganize, and to transfer its property and the rights which it now holds, to the new organization which will be created, and on the terms therein prescribed, however unsatisfactory they might be?

MR. PINE: The charter cannot become effective until it has been formally accepted by the Association, and should the bill passed by Congress be amended in any particular unsatisfactory to the Association, it will then be within your power to refuse to reorganize under it, and you can then proceed to adopt the other form of reorganization.

MR. GILLAN: The next point is this: Under the Proposed Act of incorporation all members are made members of the incorporation. That is, it will include associate members as well as active members.

PRESIDENT MAXWELL: To what clause do you refer?

MR. PINE: He refers to the first clause of the Proposed Bill. (Reads it.)

All members, under any title, are members of the corporation, but it does not follow that all members shall have a voice in its affairs. The Association is able to limit the control to active members only. There has been in the Association, I think, for a number of years a misapprehension as to what can constitute a corporate body. This is indicated by the peculiar phrase which appears in your constitution to the effect that the Board of Trustees shall constitute the body corporate. The corporation at the present moment consists of all persons who are included in its membership. The management, however, is in the hands of the active members, the Board of Directors, and the Board of Trustees. In that respect the new charter will effect no change. The management and control will still continue to be vested in the active members, the directors, and the trustees.

MR. GILLAN: Immediately the act is passed, the associate members would be members of the body corporate. Then they could not be disfranchised without a vote of the members of the body corporate, the members voting against themselves. Whether the franchise could be limited later or not, it certainly could not be immediately on the organization of this Association, and every member of a corporate body has a vote in that body, and he cannot be deprived of that vote unless by act of the body of which he is a member.

Another question for information: This Proposed Bill permits the Association to adopt by-laws, but it is silent in regard to amending the by-laws, and no mention is made

of a constitution. Presumably it is assumed that this act itself would be the constitution. Would not the bill itself, if enacted by Congress, be the constitution of the Association, and thus be placed beyond the possibility of amendment except by a further act of Congress? It can adopt by-laws, but there is no mention of a power to amend them.

MR. PINE: The proposed charter, which embodies all the matter contained in your present constitution, will, if enacted, become the new constitution of the Association, and, therefore, no constitution is provided for in terms, the act itself being the constitution. The provision of the constitution as to the adoption of by-laws and the regulation of the affairs of the Association carries with it, as a matter of course, the right to amend the by-laws as may be desired from time to time. It is true, if this act is passed by Congress, it can, like any other act, be amended only by that body. It will be competent for the Association at any time to request such amendment; but it will not be in the power of the Association to make changes in the act. The very fact that such permanency will be secured is one of the reasons why it is recommended that the charter be placed in the form of an act of Congress, in order that the fundamental law of the Association may be placed upon the most lasting foundation possible, and that all the present members may have the assurance that the Association will be perpetuated in accordance with its present policy. This consideration of permanency has been one of the reasons which largely influenced the Board of Trustees in recommending this action. The passage of the act will also secure for the Association the recognition of its national character, which can be obtained in no other way. The course of procedure which has been pursued is precisely that which was adopted by the trustees of the Carnegie Institution. A similar method has been pursued by other educational bodies of a national character.

MISS HALEY: I rise to a question of privilege. I wish to ask the attorney to state to the house what provision, or section of existing provisions, of law as to the incorporation of the Association requires any change in the terms of the existing constitution and by-laws of the Association in order to continue the corporate existence of this Association. I should like further to ask the attorney, in case there is no change necessary in the existing constitution or the rules of this body, if the authority is extended to the trustees to recommend any change in these resolutions.

MR. PINE: I think the first question is answered by the terms of the first resolution, which not only authorized the Board of Trustees to recommend changes, but made it their duty to do so. They were charged with the solemn duty of protecting the interests of the Association to the best of their ability, and in that spirit they have endeavored to carry out the direct and expressed wishes of the resolutions adopted by the Association.

As to the provisions of the general law, I need only say that it was legally impossible to take the steps necessary to continue the existence of this Association at the time the resolutions were passed. That law was found to be so vague and defective, and so peculiar, as to render impossible the continuation in any form of the existence of the Association under that statute; and consequently, as I explained, the Board of Trustees applied to Congress, and secured the amendment to the general act which has now made it possible for your Board of Directors to continue the corporate existence of the Association. Both the second and third resolutions plainly contemplate the recommendation of any change in the constitution which the Board of Trustees may deem advisable, and the Secretary has strictly complied with the third resolution as to notice.

MISS HALEY: A point of order: The Board of Trustees was not authorized to take the action recommended; and if the attorney says they were, then I want to ask him if the amendment to the law which he proposed was not approved in March, 1905, and the recommendation of the Board of Trustees to the Board of Directors was not made April 20, and sent out to the active members on May 25. Therefore, the power was resident in the Board of Trustees at the time they made these recommendations to make the change under the law, even if the attorney's opinion is right that they could not have made the change under the law before its amendment.

MR. PINE: The lady is correct as to her dates.

MISS HALEY: I want to enter my protest on the records of the minutes of this meeting against the action of the Board of Trustees in recommending on April 20 to the Board of Directors

PRESIDENT MAXWELL: The chair must rule the protest at this time out of order. The question is on the discussion of Mr. Lane's motion, which is the only question before the house.

MR. GILLAN: I have one more question of information: What is meant by the National Council which sec. 2 proposes to include in this new corporation to be created by act of Congress? Does it mean the present sixty members, with their power practically to perpetuate themselves, as provided by their present constitution, and their power to amend their own constitution? Does it mean that sixty? If not, what does it mean. I have all these questions in writing, and expect to file them with the Secretary.

MR. PINE: The gentleman's question is already answered, so far as it can be answered now. It is impossible for me to foresee what by-laws this Association may adopt a year or two hence. It will be for this body to determine what the powers of the National Council shall be, and how its members shall be elected. It has been suggested and recommended by the trustees and Board of Directors, in the documents which they have laid before you, that the duties of the Council shall be as stated in the proposed by-laws. These by-laws do not come up for action now, and, with all due respect, it seems to me that the gentleman's question is out of order at this time.

MISS HALEY: Another question for information: It is on sec. 2 of the Proposed Bill, second sentence. The original constitution has the same seventeen departments, and the eighteenth department of this organization is the National Council. In our present constitution the National Council is a department of the National Educational Association, subject to the Association as any other department is subject to it. I should like to ask a ruling of the the chair on this part of the report of the Board of Trustees, which says: "The restatement of the constitution in terms suitable for a charter such as is now proposed has necessarily involved changes in terms and phraseology we ask you to note particularly that it has not been the intention of the Board of Trustees or their counsel to make any change in any part of a substantial character." I should like to ask a ruling of the chair as to whether the dropping of the National Council as a department, and the placing of the Council in the position it holds here, is a substantial change, or whether it comes under the heading of what the trustees have called "changes in terms and phraseology."

PRESIDENT MAXWELL: The chair will answer that no substantial change is intended or made. The National Council remains as it is at present, until changed by the by-laws of the National Educational Association.

MISS HALEY: Then I wish to protest against the intentions, if I have no power to protest against the language. If it was not the intention of the Board of Trustees to make this change, yet they have made it. This is a substantial change, as I am advised by counsel.

PRESIDENT MAXWELL: The question is upon Mr. Lane's motion. Will Mr. Lane please restate his motion?

MR. LANE: The motion was to substitute the amended form of sec. 7 for the same section as it appears in the original printed copy of the proposed bill.

PRESIDENT MAXWELL: All in favor of that motion will say "aye"; opposed, "no." The motion was carried.

PRESIDENT MAXWELL: The question is now upon the original motion, as amended. The motion reads as follows:

Resolved, That this Association authorizes and requests the Board of Trustees to make application to Congress for a special act, in the following form, to incorporate an association to be known as the "NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES," to succeed and continue the National Educational Association.

This is the motion placed before you by Dr. Soldan, on authority of the Board of Directors, and amended on motion of Mr. Lane, as follows:

A PROPOSED BILL TO INCORPORATE THE NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

SECTION 1. That the following named persons, who are now the officers and directors and trustees of the National Educational Association, a corporation organized in the year one thousand eight hundred and eighty-six, under the Act of General Incorporation of the Revised Statutes of the District of Columbia:

(Names of officers to be entered.)

and such other persons as now are or may hereafter be associated with them as officers or members of said Association, are hereby incorporated and declared to be a body corporate by the name of the "National Education Association of the United States," and by that name shall be known and have perpetual succession with the powers, limitations, and restrictions herein contained.

SEC. 2. That the purpose and object of the said corporation shall be to elevate the character and advance the interests of the profession of teaching, and to promote the cause of education, in the United States. This corporation shall include the National Council of Education and the following departments, and such others as may hereafter be created by organization or consolidation, to wit: the Departments, first, of Superintendence; second, Normal Schools; third, of Elementary Education; fourth, of Higher Education; fifth, of Manual Training; sixth, of Art Education; seventh, of Kindergarten Education; eighth, of Music Education; ninth, of Secondary Education; tenth, of Business Education; eleventh, of Child Study; twelfth, of Physical Education; thirteenth, of Natural Science Instruction; fourteenth, of School Administration; fifteenth, the Library Department; sixteenth, of Special Education; seventeenth, of Indian Education; and the number and names of these departments may be changed at the pleasure of the corporation, as provided in its By-Laws.

SEC. 3. That the said corporation shall further have power to have and to use a common seal, and to alter and change the same at its pleasure, to use or to be used in any court of the United States, or other court of competent jurisdiction; to make by-laws not inconsistent with the provisions of this act or of the constitution of the United States; to take or receive, whether by gift, grant, devise, bequest, or purchase, any real or personal estate, and to hold, grant, convey, hire, or lease the same for the purposes of its incorporation; and to accept and administer any trust of real or personal estate for any educational purpose within the objects of the corporation.

SEC. 4. That all real property of the corporation within the District of Columbia, which shall be used by the corporation for the educational or other purposes of the corporation as aforesaid, other than the purposes of producing income, and all personal property and funds of the corporation held, used, or invested for educational purposes aforesaid, or to produce income to be used for such purposes, shall be exempt from taxation; *provided*, however, that this exemption shall not apply to any property of the corporation which shall not be used for, or the income of which shall not be applied to the educational purposes of the corporation; and, *provided further*, that the corporation shall annually file, with the Commissioner of Education of the United States, a report in writing, stating in detail the property, real and personal, held by the corporation, and the expenditure or other use or disposition of the same, or the income thereof, during the preceding year.

SEC. 5. That the membership of the said corporation shall consist of three classes of members—viz., active, associate, and corresponding—whose qualifications, terms of membership, rights, and obligations shall be prescribed by the By-Laws of the corporation.

SEC. 6. That the officers of the said corporation shall be a President, twelve Vice-Presidents, a Secretary, a Treasurer, a Board of Directors, and Executive Committee, and a Board of Trustees.

The Board of Directors shall consist of the President, the First Vice-President, the Secretary, the Treasurer, the chairman of the Board of Trustees, and one additional member from each state, territory, or district, to be elected by the active members for the term of one year, or until their successors are chosen, and of all life directors of the National Educational Association. The United States Commissioner of Education, and all former Presidents of the said Association now living, and all future Presidents of the Association hereby incorporated, at the close of their respective terms of office, shall be members of the Board of Directors for life. The Board of Directors shall have power

to fill all vacancies in their own body; shall have in charge the general interests of the corporation, excepting those herein intrusted to the Board of Trustees; and shall possess such other powers as shall be conferred upon them by the By-Laws of the corporation.

The Executive Committee shall consist of five members, as follows: the President of the Association, the First Vice-President, the Treasurer, the Chairman of the Board of Trustees, and a member of the Association, to be chosen annually by the Board of Directors, to serve one year. The said committee shall have authority to represent, and to act for, the Board of Directors in the intervals between the meetings of that body, to the extent of carrying out the legislation adopted by the Board of Directors under such general directions as may be given by said board.

The Board of Trustees shall consist of four members, elected by the Board of Directors for the term of four years, and the President of the Association, who shall be a member *ex officio*, during his term of office. At the first meeting of the Board of Directors, held during the annual meeting of the Association at which they were elected, they shall elect one trustee for the term of four years. All vacancies occurring in said Board of Trustees, whether by resignation or otherwise, shall be filled by the Board of Directors for the unexpired term; and the absence of a trustee from two successive annual meetings of the board shall forfeit his membership.

SEC. 7. That the invested fund now known as the "Permanent Fund of the National Educational Association," when transferred to the corporation hereby created, shall be held by such corporation as a Permanent Fund and shall be in charge of the Board of Trustees, who shall provide for the safekeeping and investment of such fund, and of all other funds which the corporation may receive by donation, bequest, or devise. No part of the principal of such Permanent Fund or its accretions shall be expended, except by a two-thirds vote of the active members of the Association, upon the recommendation of the Board of Trustees, after such recommendation has been approved by vote of the Board of Directors, and after printed notice of the proposed expenditure has been mailed to all active members of the Association. The income of the Permanent Fund shall be used only to meet the cost of maintaining the organization of the Association and of publishing its annual volume of *Proceedings*, unless the terms of the donation, bequest, or devise shall otherwise specify, or the Board of Directors shall otherwise order. It shall also be the duty of the Board of Trustees to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary of the Association acting under the authority of the Board of Directors. When practicable, the Board of Trustees shall invest, as part of the Permanent Fund all surplus funds exceeding five hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the Association for the previous year, and providing for the fixed expenses and for all appropriations made by the Board of Directors for the ensuing year.

The Board of Trustees shall elect the Secretary of the Association, who shall also be secretary of the Executive Committee, and shall fix the compensation and the term of his office for a period not to exceed four years.

SEC. 8. That the principal office of the said corporation shall be in the city of Washington, District of Columbia, provided that the meetings of the corporation, its officers, committees, and departments, may be held, and that its business may be transacted, and an office or offices may be maintained, elsewhere, within the United States, as may be determined by the Board of Directors, or otherwise in accordance with the By-Laws.

SEC. 9. That the Charter, Constitution, and By-Laws of the National Educational Association shall continue in full force and effect until the next annual meeting of the Association appointed to be held thereunder, and until new By-Laws shall be adopted; and that the present officers, directors, and trustees of said Association shall continue to hold office and perform their respective duties as such, until the expiration of the terms for which they were severally elected or appointed, and until their successors are elected. That at such annual meeting the members of the National Educational Association, then present, shall organize and proceed to adopt By-Laws, to elect officers to succeed those whose terms have expired or are about to expire, and generally to organize the "National Education Association of the United States;" and that the Board of Trustees of the corporation hereby incorporated shall thereupon receive, take over, and enter into possession, custody, and management of all property, real and personal, of the corporation heretofore known as the National Educational Association, incorporated as aforesaid, under the Revised Statutes of the District of Columbia, and all its rights, contracts, claims, and property of every kind and nature whatsoever; and the several officers, directors and trustees of such last-named Association, or any other person having charge of any of the securities, funds, books, or property thereof, real or personal, shall on demand deliver the same to the proper officers, directors, or trustees of the corporation hereby created.

SEC. 10. That the rights of creditors of the said existing corporation, known as the National Educational Association, shall not in any manner be impaired by the passage of this act, or the transfer of the property heretofore mentioned, not shall any liability or obligation, or the payment of any sum due or to become due, or any claim or demand, in any manner, or for any cause existing against the said existing corporation, be released or impaired; and the corporation hereby incorporated is declared to succeed to the obligations and liabilities, and to be held liable to pay and discharge all of the debts, liabilities, and contracts, of the said corporation so existing, to the same effect as if such new corporation had itself incurred the obligation or liability to pay such debt or damages, and no action or proceeding before any court or tribunal shall be deemed to have abated or been discontinued by reason of this act.

SEC. 11. That Congress may from time to time alter, repeal, or modify this act of incorporation, but no contract or individual right made or acquired shall thereby be divested or impaired.

MR. GILLAN: I offer a substitute, as follows:

Be it *resolved*, That this Association do continue its corporate existence for the term of twenty years from and after the date limited by law for expiration of its present corporate existence, under the laws enacted by Congress for the District of Columbia; that the Board of Trustees and the proper officers of this Association be, and the same are hereby, directed to take, or cause to be taken, the necessary action to continue the corporate existence of this Association for the term of twenty years, as provided by laws enacted by Congress for the District of Columbia.

Mr. Gillan's motion was seconded. A motion was then made and seconded that Mr. Gillan's substitute be laid on the table; this motion was carried.

PRESIDENT MAXWELL: The question is now upon the original motion submitted by Dr. Soldan on behalf of the Board of Directors.

The motion was put to vote and carried.

PRESIDENT MAXWELL: The next order of business is the consideration of proposed amendments to the by-laws, offered at St. Louis in 1904. The Secretary will please read these proposed amendments, which are printed in full in the official program.

(The Secretary read from the minutes of last year the proposed amendments.)

PRESIDENT MAXWELL: These amendments to the by-laws are before you. What is your pleasure?

On motion, the first amendment was laid on the table.

PRESIDENT MAXWELL: The second amendment is before you. What is your pleasure?

On motion, the second amendment was laid on the table.

MR. GILLAN: I rise to offer an amendment, to be laid over under the rules until next year, and I do this on the assumption that it is barely possible that Congress may not pass this Act, and that we may find ourselves next year, as the attorney has said, operating under the same old constitution; therefore, I offer the following amendment to the constitution and by-laws, to be laid over in due course and acted upon next year.

I shall pass it to the Secretary, without reading, if you please, because it is identical, with the exception of a few words, with the resolution adopted last year, cutting out the provision for the election of Vice-President; otherwise it is identical, as follows:

Resolved, That sec. 2, Art. IV of the Constitution be amended by adding the following words to the first paragraph:

The active members from any state, territory, or district, in attendance at the meeting for electing a member of the Committee on Nominations, may elect the additional member of the Board of Directors for such state, territory, or district.

Resolved, That the By-Laws be amended by inserting the following paragraphs immediately after the first paragraph of By-Law No. 1:

"The Committee on Nominations shall meet on the second day of each annual session and nominate candidates for President, Treasurer, and a director for each state, territory, or district whose members shall not have reported the election of a director as provided in sec. 2, Art. IV, of the Constitution; and the Committee on Nominations shall report to the active members at their meeting the following day a list of the nominations.

"When the vote is taken by the Committee on Nominations for candidates for Presi-

dent, and Treasurer, the committee shall report the persons having the highest number of votes, not exceeding two persons, as candidates for each office. But if, after two formal ballots, any person shall receive a two-thirds majority of the votes cast by the Committee on Nominations for any one of the aforesaid offices, then the person receiving such two-thirds majority shall be reported as the only candidate for such office."

PRESIDENT MAXWELL: The proposed amendment will be printed in the minutes of this meeting.

MR. GILLAN: I offer the following resolution:

Resolved, That the Secretary be, and he is hereby, authorized and instructed to print and publish all proposed amendments to the constitution and by-laws, offered at this meeting, in the official program or bulletin or other announcement of the meeting of 1906, and to mail a copy of the same to each active member not less than one month before the date of such meeting.

The motion to adopt the resolution was seconded and carried.

ALBERT G. LANE, of Chicago: I wish to give notice at this time and to submit the proposed by-laws, which were drafted and printed in connection with the Proposed Bill for reincorporation, for consideration at the annual meeting next year in the following form:

PROPOSED BY-LAWS

ARTICLE I—MEMBERSHIP

ACTIVE MEMBERS

SECTION 1. Teachers and all who are actively associated with the management of educational institutions, including libraries and educational publications, may become active members.

SEC. 2. Any eligible person may become an active member upon application indorsed by two active members, and the payment of an enrollment fee of two dollars and the annual dues for the current year.

SEC. 3. Active members only shall have the right to vote and to hold office in the Association, in the National Council of Education, or in the several departments.

SEC. 4. All active members shall pay annual dues of two dollars, and shall be entitled to the volume of *Proceedings* without "coupon" or other conditions.

SEC. 5. The annual membership fee shall be payable at the time of the annual convention, or by remittance to the Secretary before September 1 of each year.

SEC. 6. Any active member may discontinue membership by giving written notice to the Secretary before September 1 in any year, and may restore the same only on payment of the enrollment fee of two dollars and the annual dues for the current year. A written application for active membership shall constitute an agreement to continue such membership and pay annual dues, unless written notice of discontinuance is sent to the Secretary before September 1 of the fiscal year for which such discontinuance shall apply.

CORRESPONDING MEMBERS

SEC. 7. Eminent educators not residing in America may be elected by the Board of Directors to be corresponding members. The number of corresponding members shall at no time exceed fifty.

SEC. 8. Corresponding members shall be entitled to the volume of *Proceedings* without the payment of fees or other conditions.

ASSOCIATE MEMBERS

SEC. 9. Any person on paying an annual membership fee of two dollars may become an associate member.

SEC. 10. Associate members may receive the volume of *Proceedings* in accordance with the usual "coupon" conditions, as printed on the membership certificate.

LIFE MEMBERS

SEC. 11. All life members and life directors shall be denominated active members, and shall enjoy all the powers and privileges of such members without the payment of annual dues.

ROLL OF MEMBERS

SEC. 12. The names of active, life, and corresponding members only shall be printed in the annual *Yearbook*, with their respective educational titles, offices, and addresses; and the list shall be revised annually by the Secretary of the Association.

ARTICLE II—OFFICERS AND COMMITTEES

SECTION 1. The President, Vice-Presidents, directors, and Treasurer shall be chosen by the active members of the Association by ballot, unless otherwise ordered, on the third day of each annual session, a majority of the votes cast being necessary to a choice. They shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen, except as hereinafter provided.

COMMITTEE ON RESOLUTIONS

SEC. 2. At the first session of each annual meeting of the Association the President shall appoint a Committee on Resolutions.

COMMITTEE ON NOMINATIONS

SEC. 3. At the third session of each annual meeting of the Association there shall be appointed by the President a Committee on Nominations, consisting of one member from each state and territory represented. Such a committee shall be appointed by the President on the nomination of a majority of the active members from such state or territory present at the meeting called for the purpose of making such nomination; *provided*, however, that such appointment shall be made by the President without such nomination, when the active members in attendance from any state or territory shall fail to make a nomination.

SEC. 4. The meetings of the active members of the several states to nominate members of the nominating committee shall be held at 5:30 P. M. on the first day of the annual meeting of the Association, at such places as shall be announced in the general program.

ARTICLE III—DUTIES OF OFFICERS

THE PRESIDENT

SECTION 1. The President shall preside at all meetings of the Association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence the first Vice-President in order, who is present, shall preside; and in the absence of all the Vice-Presidents, a *pro tempore* chairman shall be appointed on nomination, the Secretary putting the question.

THE SECRETARY

SEC. 2. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the Association and of all meetings of the Board of Directors, and shall conduct such correspondence and transact such other business of the Association as the directors or Executive Committee may assign, and shall have his records present at all meetings of the Association and the Board of Directors.

THE TREASURER

SEC. 3. The Treasurer shall receive, and under the direction of the Board of Trustees hold in safekeeping, the current income of the Association; shall expend the same only upon order of said board; shall keep an exact account of his receipts and expenditures, with vouchers for the latter; which accounts, ending the first day of July in each year, he shall render to the Board of Trustees and, when approved by said board, he shall report to the Board of Directors. The Treasurer shall give such bond for the faithful discharge of his duties as may be required by the Board of Trustees; and he shall continue in office until the first meeting of the Board of Directors held prior to the annual meeting of the Association next succeeding that at which he is elected, and until his successor has been elected and has qualified.

AUDITOR OF ACCOUNTS

SEC. 4. It shall be the duty of the President, Secretary, and Treasurer of the Association to appoint annually some competent person to examine the securities of the Permanent Fund held by the Board of Trustees, and his certificate, showing the condition of the said fund, shall be attached to the annual report of the Board of Trustees.

CERTIFICATION OF BILLS

SEC. 5. The President and Secretary shall certify to the Board of Trustees all bills approved by the Board of Directors.

ARTICLE IV—THE BOARD OF DIRECTORS

SECTION 1. The Board of Directors shall hold its regular annual meeting at the place of the annual convention, and not less than two hours before the assembling of the Association.

SEC. 2. Special meetings may be held at such other times and places as the board or the President shall determine.

SEC. 3. Each new board shall organize at the session of its election.

ARTICLE V—THE NATIONAL COUNCIL OF EDUCATION

OBJECTS AND DUTIES

SECTION 1. The National Council of Education shall have for its object the consideration and discussion of educational questions of public and professional interest; the proposal to the Board of Directors, from time to time, of suitable subjects for investigation and research, and the recommendation of the amount of appropriations that should be made for such purposes; the appointment and general supervision of such special committees of investigation and research as may be provided for and authorized by the Board of Directors of the Association; the consideration, discussion, and recommendation to the Board of Directors for disposition of all reports by such special committees of research as may have been appointed on its recommendation or by its authority; the annual preparation and presentation to the Association at its annual convention of a report on "Educational Progress during the Past Year;" and in other ways shall use its best efforts to further the objects of the Association and to promote the cause of education in general.

MEMBERSHIP OF THE COUNCIL

SEC. 2. The Council shall consist of sixty members, selected from the membership of the Association. Any member of the Association identified with educational work is eligible to membership in the Council.

SEC. 3. The Board of Directors shall annually elect five members, and the Council shall elect five members, each member to serve for six years, or until his successor is elected.

SEC. 4. The annual election of members of the Council shall be held in connection with the annual meetings of the Association. If the Board of Directors shall fail, for any reason, to fill its quota of members annually, the vacancy or vacancies shall be filled by the Council.

SEC. 5. The absence of a member from two consecutive annual meetings of the Council shall be considered equivalent to resignation of membership, and the Council shall fill vacancies caused by absence from the Council as herein defined, as well as vacancies caused by death or resignation, for the unexpired term. All persons who have belonged to the Council shall, on the expiration of their membership, become honorary members, with the privilege of attending its regular sessions and participating in its discussions. No state shall be represented in the Council by more than eight members.

BY-LAWS OF THE COUNCIL

SEC. 6. The Council may establish by-laws for its government not inconsistent with the Act of Incorporation or of the By-Laws of the Association, provided such by-laws shall be submitted to and approved by the Board of Directors of the Association before they shall become operative.

ARTICLE VI—DEPARTMENTS

SECTION 1. A department shall consist of those members of the Association who are especially interested in the consideration of a particular group of educational problems. Each department shall be administered by a president, vice-president, secretary, and such other officers as it shall deem necessary to conduct its affairs.

SEC. 2. Each department shall hold its annual meeting at the time of the annual convention of the Association, except the Department of Superintendence, which may hold its annual meeting in February of each year, or at such other time as may be determined by the officers of said department.

SEC. 3. The objects of the annual department meetings shall be the discussion of questions pertaining to their respective fields of educational work. The programs of

these meetings shall be organized and conducted by the respective presidents, in conference with, and under the general direction of, the President of the Association. Each department shall be limited to two sessions, with formal programs, at the time of the annual convention, except that a third session for business or informal round-table conference may be held at the discretion of the department officers.

SEC. 4. Upon the written request of twenty active members of the Association for permission to establish a new department, the Board of Directors may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as the departments named in the Act of Incorporation.

SEC. 5. The secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department in attendance at the annual convention.

ARTICLE VII—MEETINGS

SECTION 1. The annual meeting of the Association shall be held at such time and place as shall be determined by the Board of Directors.

SEC. 2. Special meetings may be called by the President at the request of five directors.

SEC. 3. Any department of the Association may hold a special meeting at such time and place as by its own regulations it shall appoint.

SEC. 4. No paper, lecture, or address shall be read before the Association, or any of its departments, in the absence of its author, nor shall any such paper, lecture, or address be published in the volume of *Proceedings*, without the consent of the Association, upon the approval of the Executive Committee.

ARTICLE VIII—AMENDMENTS

SECTION 1. These by-laws may be altered or amended at any annual meeting by the unanimous vote of the members present; or by a two-thirds vote of the members present, provided that the substance of the alteration or amendment has been proposed in writing at a previous annual meeting.

PRESIDENT MAXWELL: These proposed by-laws will be duly printed in the minutes of this meeting, and will be considered at the next annual meeting.

Is there any other business to come before this meeting? If not, a motion to adjourn is in order.

A motion to adjourn was made, and seconded, and carried; and the annual meeting was declared adjourned.

(Signed) IRWIN SHEPARD, *Secretary*.

Approved:

(Signed) WILLIAM H. MAXWELL, *President*.

FOURTH SESSION.—THURSDAY EVENING, JULY 6

The convention was called to order by President Maxwell, at 8 P. M.

Prayer was offered by Rev. James W. Marshall, pastor of St. Paul's Church, Ocean Grove, N. J.

A musical solo, "Lend Me Your Aid," by Gounod, was sung by Daniel Beddoe.

Lorenzo D. Harvey, superintendent of schools, Menomonie, Wis., delivered an address on "Manual Training in the Grades."

The topic, "The Practical Utility of Manual and Technical Training," was presented in an address by William Barclay Parsons, former chief engineer, New York City Rapid Transit Commission, New York.

Following this address, Daniel Beddoe sang "Prize Song," by Wagner.

The last address of the evening was presented by Frank A. Vanderlip, vice-president of the National City Bank, New York city, on the subject, "The Economic Importance of Trade Schools."

J. M. H. Frederick, superintendent of schools, Lakewood, Ohio, led in a discussion of the subjects presented.

The convention adjourned to Friday afternoon, July 7.

FIFTH SESSION.—FRIDAY AFTERNOON, JULY 7

The convention assembled for its closing session in the Ocean Grove Auditorium at 2:30 P. M. The Auditorium was filled to its utmost capacity long before the hour of opening, in anticipation of the arrival of President Theodore Roosevelt, who was to be present and deliver the closing address of the convention.

President Maxwell had appointed a former President of the Association, Dr. James M. Green, of Trenton, N. J., a committee of one, to take charge of all arrangements for receiving President Roosevelt and his party. Dr. Green secured, as an escort of honor for the President, the Third Regiment of New Jersey Infantry of the National Guard, Colonel John A. Mather of Camden, commanding, and the Second Troop of Cavalry of Red Bank, Captain Edwin Field, commanding.

The President arrived in Asbury Park from Oyster Bay, N. Y., at 2 P. M., accompanied by Private Secretary William Loeb, Jr., Surgeon Charles F. Stokes, U. S. navy, and others. He was met by the receiving party, consisting of a special committee as follows: J. M. Green, Trenton, N. J.; Newton C. Dougherty, Peoria, Ill.; Howard J. Rogers, Albany, N. Y.; F. Louis Soldan, St. Louis, Mo.; Lawton, B. Evans, Augusta, Ga.; the Executive Committee of the National Education Association: William H. Maxwell, President; John W. Cook, First Vice-President; James W. Crabtree, Treasurer; Albert G. Lane, Chairman of Trustees; William T. Harris, U. S. Commissioner of Education; Irwin Shepard, Secretary; state and local representatives: Edward Casper Stokes, governor of New Jersey; United States Senators John Kean and John F. Dryden; Congressmen Benjamin F. Howell and Richard Wayne Parker; State Senator Oliver H. Brown; State Director John Enright; Frank L. Ten Broeck, mayor of Asbury Park; Bishop James N. Fitzgerald and Rev. A. E. Ballard, president and vice-president of the Ocean Grove Association; James L. Hays, president of the State Board of Education of New York; T. Frank Appleby and R. A. Tusting, president and secretary of the Local National Educational Association Committee of Asbury Park and Ocean Grove.

After greetings, the President's party and the receiving party proceeded in carriages, under escort, to the Ocean Grove Auditorium. On entering the Auditorium, a most enthusiastic and impressive greeting met the President from the twelve thousand teachers assembled.

After the greeting, the convention was called to order by President William H. Maxwell. The exercises were opened with prayer by Hon. Nathan C. Schaeffer, state superintendent of public schools for Pennsylvania, President-elect of the Association, who invoked divine blessing in the following words:

O Lord our God, Thou art our Father, and we, Thy children, approach Thy throne of grace, beseeching Thee to grant us Thy favor and mercy. Make us mindful of all that Thou hast done for us. Make us duly thankful for health and strength, for life and light; for the goodly land in which we dwell, for its homes, its schools, its churches, its libraries, and for all other blessings that we enjoy.

We invoke a special blessing upon Thy servant, the President of these United States. Bless him in all his efforts to establish peace and justice among the nations of the earth. Give him wisdom from on high to guide him in the discharge of all his duties. Bless the governor of this commonwealth and all others in authority. Make us a righteous as well as a prosperous people. Grant that it may be our aim as a body of teachers, not merely to banish ignorance and illiteracy from the earth, but also to spread the light of Thy gospel and the news of salvation among all the children of men.

Hear us in these our prayers, answer us in love and mercy, and save us thru riches of grace in Christ, our Redeemer, Amen.

President Maxwell then introduced President Roosevelt in the simple announcement: "Members of the National Educational Association, the President of the United States."

The great audience rose and greeted the President with another impressive and long-continued welcome.

The President then addressed the convention.

Following the address of President Roosevelt, John R. Kirk, president of the State Normal School at Kirksville, Mo., was introduced and responded to the President. He closed by offering a resolution of thanks by the convention assembled to President Roosevelt for his eloquent and inspiring address.

Miss Katherine D. Blake, principal of Public School No. 6, New York city, seconded the resolution of Mr. Kirk, and spoke impressively at some length on the obligation under which President Roosevelt had placed the teachers of the country by his words and deeds. She most happily expressed the spirit and thought of the audience when, in seconding the resolution of thanks to President Roosevelt, she characterized him as "the best-loved man in all the great round world."

The resolution was passed by a unanimous rising vote of twelve thousand teachers amid cheers and waving salutes.

President Maxwell then addressed President Roosevelt as follows:

Mr. President, your words here will be the inspiration of every teacher who has heard your voice today. They will be an inspiration to all of the teachers of America wherever those teachers may be sojourning today. Treasured in the volume of our *Proceedings*, they will be an inspiration to generations of teachers yet unborn; and passing thru the minds and hearts of the teachers of America, they will serve to form the character of millions of American citizens in the future. As you leave here, the best wishes of the teachers of America go with you; their prayers will follow you for success, for happiness, and for God's blessing on your work for this nation.

Following this, the "Hallelujah Chorus" was sung by the Ocean Grove Festival Chorus, supported by the Ocean Grove Festival Orchestra, under the leadership of Mr. Tali Esen Morgan.

After the President and his party withdrew from the Auditorium, the Committee on Resolutions presented its report thru its chairman, Dr. Eliphalet Oram Lyte, of the First Pennsylvania State Normal School, as follows:

NATIONAL EDUCATIONAL ASSOCIATION

ASBURY PARK AND OCEAN GROVE, N. J., JULY 7, 1905

DECLARATION

The National Educational Association, now holding its forty-fourth annual convention in Asbury Park and Ocean Grove, and representing the teachers and friends of education throuthout the country, makes the following declaration of principles:

1. The Bureau of Education continues to render invaluable service to the nation. It is the judgment of the Association that the powers of the bureau should be enlarged, and that liberal appropriations should be made to it by Congress in order to enable it to widen its usefulness.
2. The National Educational Association notes with approval that the qualifications demanded of teachers in the public schools, and especially in city public schools, are increasing annually, and particularly that in many localities special preparation is demanded of teachers. The idea that anyone with a fair education can teach school is gradually giving way to the correct notion that teachers must make special preparation for the vocation of teaching. The higher standard demanded of teachers must lead logically to higher salaries for teachers, and constant efforts should be made by all persons interested in education to secure for teachers adequate compensation for their work.
3. The rapid establishment of township or rural high schools is one of the most gratifying evidences of the progress of education. We believe that this movement should be encouraged until the children of rural communities enjoy the benefits of public education to an extent approximating as nearly as practicable the education furnished in urban communities.
4. The Association heartily approves of the efforts now being made to determine

the proper place of industrial education in the public schools. We believe that the time is rapidly approaching when industrial education should be introduced into all schools, and should be made to harmonize with the occupations of the community. These courses, when introduced, should include instruction in agricultural as well as manual training. Wherever the conditions justify their establishment, schools that show the application of the branches of knowledge to practical life should be established.

5. The National Educational Association strongly recommends the increasing utilization of urban school buildings for free vacation schools and for free evening schools and lecture courses for adults and for children who have been obliged to leave the day school prematurely.

6. It is the duty of the state to provide for the education of every child within its borders, and to see that all children obtain the rudiments of an education. The constitutional provision that all persons must contribute to the support of the public schools logically carries with it the implied provision that no persons should be permitted to defeat the purposes of the public-school law by forcing their children at an early age to become bread-winners.

7. The national government should provide schools for the children of all persons living in territory under the immediate control of the government. The attention of Congress is specially directed to the need of adequate legislation to provide schools for the children of citizens of the United States living on naval reservations.

8. The association regrets the revival in some quarters of the idea that the common school is a place for teaching nothing but reading, spelling, writing, and ciphering; and takes this occasion to declare that the ultimate object of popular education is to teach the children how to live righteously, healthily, and happily, and that to accomplish this object it is essential that every school inculcate the love of truth, justice, purity, and beauty thru the study of biography, history, ethics, natural history, music, drawing, and manual arts.

9. The National Educational Association wishes to record its approval of the increasing appreciation among educators of the fact that the building of character is the real aim of the schools and the ultimate reason for the expenditure of millions for their maintenance. There are in the minds of the children and youth of today a tendency toward a disregard for constituted authority; a lack of respect for age and superior wisdom; a weak appreciation of the demands of duty; a disposition to follow pleasure and interest rather than obligation and order. This condition demands the earnest thought and action of our leaders of opinion, and places important obligations upon school authorities.

10. The National Educational Association wishes to congratulate the secondary schools and colleges of the country that are making the effort to remove the taint of professionalism that has crept into student sports. This taint can be removed only by leading students, alumni, and school faculties to recognize that inter-school games should be played for sportsmanship and not merely for victory.

11. The National Educational Association observes with great satisfaction the tendency of cities and towns to replace large school committees or boards, which have exercised thru subcommittees executive functions, by small boards which determine general policies, but intrust all executive functions to salaried experts.

12. Local taxation, supplemented by state taxation, presents the best means for the support of the public schools, and for securing that deep interest in them which is necessary to their greatest efficiency. State aid should be granted only as supplementary to local taxation, and not as a substitute for it.

13. We cannot too often repeat that close, intelligent, judicious supervision is necessary for all grades of schools.

14. A free democracy cannot long continue without the assistance of a system of

state-supported schools administered by agents chosen by the people, and responsible to the people for its ideals, its conduct, and its results.

ELIPHALET ORAM LYTE, of Pennsylvania, *Chairman*;
 CHARLES J. BAXTER, of New Jersey;
 EDWIN G. COOLEY, of Illinois;
 FRANK B. COOPER, of Washington;
 CHARLES D. McIVER, of North Carolina;
 MISS ANNA TOLMAN SMITH, of District of Columbia;
 MISS HARRIET EMERSON, of Massachusetts;
 O. J. KERN, of Illinois;
 EDWARD J. GOODWIN, of New York;
 WILLIAM L. BRYAN, of Indiana;

Committee on Resolutions.

The declaration as presented was then adopted by a unanimous vote of the convention.

Following this action, a resolution of thanks was presented by Chairman Lyte, and, on motion, was also adopted, as follows:

Resolved, That the thanks of the National Educational Association are due, and are hereby most cordially tendered, to the residents of Asbury Park and Ocean Grove, whose open-hearted, refined hospitality will long be remembered; to the newspapers that have fully recorded the proceedings of the Association from day to day; to the railroads and other transportation companies, whose hearty and well-directed co-operation in bringing the large membership to these beautiful twin cities by the sea was essential to the success of this meeting and to the educators of Asbury Park and Ocean Grove and the state of New Jersey, who have so successfully borne the burden of preparing for the great body of teachers and friends of education that have assembled here this week. This Association desires to refer particularly to the services of Hon. James L. Hays, president of the State Board of Education of New Jersey, and his associates on the Board; Hon. Charles J. Baxter, state superintendent of public instruction; Dr. J. M. Green, principal of the State Normal School, Trenton, N. J.; Mr. T. Frank Appleby, Chairman of the General Local Committee; Mr. R. A. Tusting, secretary, and their associates; Dr. Fred S. Shepherd, superintendent of schools of Asbury Park; Miss Lidie M. Doren, superintendent of schools of Ocean Grove; Professor John Enright, superintendent of schools of Monmouth county; and Professor H. Brewster Willis, superintendent of schools of Middlesex county; to the teachers and school officers who have contributed in many ways to the success of this meeting; to Mr. Tali Esen Morgan, director of music, Ocean Grove, to the eminent soloists who took part in the public exercises of the general meeting, and to the Ocean Grove Festival Chorus and the Ocean Grove Festival Orchestra, for the exceptionally fine music rendered by them; to President James N. Fitzgerald, Vice-President A. E. Ballard, and other officers of the Ocean Grove Auditorium Association, for the use of the Auditorium and for other courtesies extended; and to all others who have co-operated with them in making arrangements for this meeting and in carrying their carefully prepared plans to successful completion.

Resolved, That the thanks of the Association are also due, and are hereby tendered, to Hon. Edward Casper Stokes, governor of the state of New Jersey, and his official associates, and to the military department of the state, represented by the Third Regiment of Infantry, Colonel John A. Mather, of Camden, commanding, and the Second Troup of Cavalry of Red Bank, Captain Field commanding, for having furnished an escort to the President of the United States, and for appropriately and generously providing for the care and comfort of the chief executive of the nation during his visit to the convention.

The chairman of the committee then presented the following special resolution, moving its adoption, and asking the Secretary to put the question to vote:

Resolved, That the thanks of the Association be tendered to the retiring President, Superintendent William H. Maxwell, of New York city, and to the retiring Treasurer, President James W. Crabtree, of Nebraska, for the faithful and efficient services which they have rendered to the Association during the past year.

The motion was carried by a rising vote of the convention, with hearty applause.

PRESIDENT MAXWELL: Members of the National Educational Association: I thank you for this hearty expression of your esteem and good-will. I should like you to believe

that from the day you elected me your President until this moment I have spared no pains, I have given my best thought and energy, to carry out your purposes and to make this meeting the success I believe it has been. Anything, however, which I did would have availed but little, had I not had the cordial support and encouragement of a host of helpers. The local committee in Asbury Park and Ocean Grove spared neither trouble nor expense to provide for your comfort and to illustrate the proverbial hospitality of New Jersey. Mr. Tali Esen Morgan, with his chorus and orchestra, provided such music as has seldom been heard in a convention of teachers. The presidents of departments made, possibly, the most interesting and instructive programs ever presented in the history of the Association, and secured most valuable discussions. Where so many have done so much, it seems invidious to single out particular individuals for special remark. And yet, in view of their pre-eminent services, I am sure you will pardon me if I refer particularly to two gentlemen. One is Dr. James M. Green, principal of the New Jersey State Normal School, who took charge of the Sunday services and of the reception of President Roosevelt. How well he performed these duties you have all seen. The other is our honored secretary, Dr. Irwin Shepard. I risk nothing in saying that, as a rule, the members of this Association know little, indeed can know but little, of the invaluable services rendered by Dr. Shepard. It has been my great privilege to work with him for the past year, and therefore I can speak from intimate knowledge. I have learned to know him and to appreciate him, and I have no hesitation in saying that the success of these enormous conventions is largely due to him. With admirable patience, with a loyalty that never falters, with a complete knowledge of our history and our traditions, with an unsurpassed mastery of detail, with high ideals of the work our Association should do, Mr. Shepard devotes his life to your service. As I put aside the cares of office, I pause for a moment to thank our Secretary that he made them so light, and to wish for him and his prosperity and happiness.

There now remains for me but one more duty to perform—the pleasant duty of introducing to you my successor in the office of President, Dr. Nathan C. Schaeffer, of Pennsylvania, to whom I now present the official gavel of authority as President of the National Educational Association.

PRESIDENT-ELECT NATHAN C. SCHAEFFER: Members of the National Educational Association: Twenty-five years ago, while on my wedding trip, I attended for the first time the National Educational Association. The meeting impressed me as the most earnest body of educators upon the face of the globe, and this impression has grown stronger year by year. The presidency of the National Educational Association is the highest compliment which the teachers of America can bestow, and I shall return to my summer home at Mount Gretna, not only with feelings of profound gratitude and appreciation, but also with the conviction that the National Educational Association has given me the finest possible gift to take with me to my silver wedding tomorrow. Words fail to express my feeling of obligation for the honor conferred. It shall be my ambition to make the next meeting of the Association redound to the highest and best interests of the children of America, and to this end I ask your assistance, your sympathy, and your active support. I now pass the gavel back to you, President Maxwell, in order that you may close the meeting, which has been so eminently successful thru your efforts and guidance.

The President then declared the Forty-fourth Annual Convention of the National Educational Association adjourned *sine die*.

IRWIN SHEPARD, *Secretary*.

MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS FOR 1904-1905

ASBURY PARK, N. J., JULY 3, 1905

The annual meeting of the Board of Directors was called to order in the basement room of the Public Library at 4:30 P. M., July 3, by President William H. Maxwell.

The following directors responded to roll-call:

A. J. Matthews, Arizona; S. L. Frogge, Kentucky; E. F. Turner, Tennessee; M. Bates Stephens, Maryland; Isaac W. Hill, Alabama; J. H. Hinemon, Arkansas; E. O. Lyte, Pennsylvania; J. W. Crabtree, Nebraska; A. H. Chamberlain, California; John S. Locke, Maine; N. C. Dougherty, Illinois; L. C. Greenlee, Colorado; W. H. Elson, Michigan; George L. Towne, Nebraska; A. E. Winship, Massachusetts; T. A. Mott, Indiana; Ben Blewett, Missouri; Charles H. Keyes, Connecticut; John Enright, New Jersey; Edmund D. Lyon, Ohio; A. S. Downing, New York; James H. Canfield, New York; F. Louis Soldan, Missouri; Walter Ballou Jacobs, Rhode Island; A. P. Marble, New York; R. B. Lees, representing Board of Education of Nashville, Tennessee; A. G. Lane, Illinois; W. H. Maxwell, New York; Irwin Shepard, Minnesota; John D. Benedict, Indian Territory; A. C. Nelson, Utah; Oscar J. Craig, Montana; Lydia A. Yates, North Carolina; Marion Brown, Louisiana; L. D. Harvey, Wisconsin; Lucy Robinson, West Virginia; Clem Hampton, Florida; A. V. Storm, Iowa; J. A. Mercer, Illinois; J. W. Spindler, Kansas; Andrew R. Hickam, Oklahoma.

Present, forty-one directors.

On motion, the reading of the minutes of the last meeting, held in St. Louis, Mo., June 30, 1905, was dispensed with, and they were approved as printed in the volume of *Proceedings* of the St. Louis meeting.

The Secretary read communications from absent directors tendering their resignations and nominating successors for appointment by the board, as follows:

Director James E. Klock, of New Hampshire, nominating H. C. Morrison.
Director W. F. Kunze, of Minnesota, nominating J. A. Cranston.
Director Warren Easton, of Louisiana, nominating Miss Marion Brown.
Director Robert G. Young, of Montana, nominating Oscar J. Craig.
Director D. J. Johns, Jr., of Tennessee, nominating E. F. Turner.
Director W. K. Tate, of South Carolina, nominating E. B. Wallace.
Director John F. Keating, of Colorado, nominating L. C. Greenlee.

On motion, the resignations of the several directors were accepted, and the Secretary was instructed to cast the ballot of the directors present for the election of the respective nominees. The Secretary reported the ballot so cast, and the president announced the several nominees duly elected as members of the Board of Directors.

The next subject for consideration was announced as the Report of the Board of Trustees to the Board of Directors on the subject of Reincorporation, in accordance with the resolution on that subject passed by the active members at their annual meeting, June 30, 1905.

The Secretary reported that the Board of Trustees had completed their report, that it was transmitted by mail on April 20, 1905, to the members of the Board of Directors, and that sixty-three directors had replied casting votes of unqualified approval, and two others had cast votes of qualified approval, of the plan for reincorporation proposed in the following report of the Board of Trustees:

NATIONAL EDUCATIONAL ASSOCIATION

SECRETARY'S OFFICE, WINONA, MINN., April 20, 1905.

REPORT OF THE BOARD OF TRUSTEES

To the Board of Directors of the National Educational Association:

Pursuant to the authorization and request contained in the resolutions adopted by the Association on June 30 last, with respect to the continuance of the corporate existence of the Association, your Board of Trustees have taken legal advice and have carefully considered what steps are necessary to protect the interests of the Association, in view of the expiration, by limitation, of its present charter in February, 1906.

We are advised by our counsel, Mr. John B. Pine, of New York, and are unanimously of the opinion, that the most desirable means of perpetuating the existence of the Association is by a charter granted by a special act of Congress. The advantages of such a charter, briefly stated, are that it is national in its scope, and accords with and emphasizes the national character and dignity of the Association; that it places the Association upon the most permanent basis possible, as it is perpetual in its operation; and that by means of such a charter the interests of the Association can best be protected and its funds most carefully safeguarded.

Other associations of like character, such as the Carnegie Institution and the General Education Board, have within recent years been incorporated by act of Congress, and it seems not improbable that an application for a charter, if presented by this Association, will receive favorable consideration.

Reincorporation of the Association by act of Congress will necessarily involve the creation of a new corporation, but it is proposed that such new corporation shall be known as the "NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES," and shall in all except a technical sense be the same association as the present one, with the same officers and with like objects and form of government. Taking the present constitution and by-laws as a basis, a charter has been prepared, in the form of a bill to be submitted to Congress, which embodies all the fundamental provisions of the constitution, and a set of proposed by-laws has been drafted, which includes the present by-laws, and also those provisions of the constitution which relate merely to matters of procedure.

The restatement of the constitution, in terms suitable for a charter, such as that now proposed, has necessarily involved changes in terms and phraseology; and under the provisions of the resolutions first mentioned, it therefore becomes our duty to submit our recommendations to the Board of Directors and to the Association. We ask you to note particularly that it has not been the intention of the Trustees or their counsel to make any change in any particular of a substantial character; they have endeavored, on the contrary, to preserve and perpetuate, in the most desirable form, all the essential features of the present constitution and by-laws unaltered.

In order that the recommendations of the trustees may be perfectly understood, and that the details of the proposed charter and by-laws may receive the closest scrutiny, copies of the same are submitted, herewith, to each director, with a request for an expression of his opinion. If a majority of the replies are favorable, copies of the documents will be sent to all the active members of the Association, so that they may be prepared to vote, at the next annual meeting of the Association, upon a proposition to apply to Congress for a charter, in the form herewith presented.

Respectfully submitted,

ALBERT G. LANE, *Chairman*,
NICHOLAS MURRAY BUTLER,
F. LOUIS SOLDAN,
NEWTON C. DOUGHERTY,
WILLIAM H. MAXWELL,
Board of Trustees.

Copies of the Report of the Board of Trustees and of the Proposed Act of Incorporation by Congress were distributed to the directors, but the report was not read, as all had received copies by mail and were familiar with the text.

(For full text of Proposed Bill see page 34; of proposed By-Laws, see page 37.)

Mr. John B. Pine, of New York city, attorney and counsel employed by the Board of Trustees, was present and explained the various provisions of the proposed bill, answering numerous questions asked by the directors.

Three questions were raised regarding the provisions of sec. 7 of the bill, and were discussed at length, viz.:

1. Does the Proposed Bill provide for, and establish with sufficient definiteness, a "permanent fund"?
2. Should the income from the "permanent fund" be solely under the control of the Board of Trustees?
3. Should provisions be made under which the "permanent fund" may be drawn upon under certain circumstances?

After somewhat extended discussion, the Proposed Bill of incorporation was referred back to the trustees, with the request that they report at a special meeting, to be held July 4, at 9 A. M., such amendments as will carry into effect the changes suggested in the discussion.

The board adjourned at 5:20 P. M., to meet at 9:30 A. M., July 4.

ADJOURNED MEETING OF BOARD OF DIRECTORS

ASBURY PARK, N. J., JULY 4

The Board of Directors met in adjourned session at 9 A. M., and was called to order by President Maxwell. The following directors responded to roll-call:

A. C. Nelson, Utah; J. W. Crabtree, Nebraska; Ben Blewett, Missouri; A. V. Storm, Iowa; J. A. Mercer, Illinois; J. H. Hinemon, Arkansas; S. L. Frogge, Kentucky; L. C. Greenlee, Colorado; E. F. Turner, Tennessee; F. L. Soldan, Missouri; James H. Canfield, New York; Albert G. Lane, Illinois; Hiram Hadley, New Mexico; A. E. Winship, Massachusetts; L. D. Harvey, Wisconsin; Irwin Shepard, Minnesota; William H. Maxwell, New York; W. T. Harris, District of Columbia; John W. Cook, Illinois; John S. Locke, Maine; A. J. Matthews, Arizona; A. S. Downing, New York; J. M. Greenwood, Missouri; N. C. Dougherty, Illinois; George F. Towne, Nebraska; Charles H. Keyes, Connecticut; Lydia A. Yates, North Carolina; Marion Brown, Louisiana; Andrew R. Hickam, Oklahoma; E. O. Lyte, Pennsylvania; Oscar J. Craig, Montana; T. A. Mott, Indiana.

Present, thirty-two directors.

A letter of resignation as director was read from Hugh A. Owen, director for New Mexico. The resignation was accepted, and, on motion of Director A. E. Winship, of Massachusetts, Hiram Hadley, the newly appointed territorial superintendent of public instruction of New Mexico, was elected director for that territory.

The business of the previous meeting was resumed. Trustee F. Louis Soldan reported, as a result of the conference of the trustees with their counsel, Mr. Pine, that a satisfactory adjustment of the points in question had been reached in accordance with the following amended form of sec. 7 of the Proposed Bill:

PROPOSED AMENDMENT TO SECTION SEVEN OF THE PROPOSED CHARTER RECOMMENDED BY THE BOARD OF DIRECTORS, N. E. A.

SEC. 7. That the invested fund now known as the "Permanent Fund of the National Educational Association," when transferred to the corporation hereby created, shall be held by such corporation as a Permanent Fund, and shall be in charge of the Board of Trustees, who shall provide for the safekeeping and investment of such fund, and of all other funds which the corporation may receive by donation, bequest, or devise. No part of the principal of such permanent fund or its accretions shall be expended except by a two-thirds vote of the active members of the Association, upon the recommendation of the Board of Trustees, after such recommendation has been approved by vote of the Board of Directors, and after printed notice of the proposed expenditure has been mailed to all active members of the Association. The income of the Permanent Fund shall be used only to meet the cost of maintaining the organization of the Association and of publishing its annual volume of *Proceedings*, unless the terms of the donation, bequest, or devise shall otherwise specify, or the Board of Directors shall otherwise order. It shall also be the duty of the Board of Trustees to issue orders on the Treasurer for the payment of all bills approved by the Board of Directors, or by the President and Secretary of the Association acting under the authority of the Board of Directors. When practicable, the Board of Trustees, shall invest as part of the Permanent Fund all surplus funds exceeding five hundred dollars that shall remain in the hands of the Treasurer after paying the expenses of the Association for the previous year and providing for the fixed expenses and for all appropriations made by the Board of Directors for the ensuing year.

The Board of Trustees shall elect the Secretary of the Association, who shall also be secretary of the Executive Committee, and shall fix the compensation and term of his office for a period not to exceed four years.

Director Soldan moved the adoption of the amended form of sec. 7; seconded by Director Keyes, of Massachusetts.

After discussion, the motion of Director Soldan was adopted.

On motion of Director James H. Canfield, of New York, seconded by Director A. S. Downing, of New York, the following resolutions were unanimously passed:

Resolved, That the Board of Directors approve and adopt the recommendations of the Board of Trustees that application be made to Congress for a special act, in the form herewith submitted, or in the amended form herewith submitted, to incorporate an association to be known as the "NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES," to succeed and continue the present association; and

Resolved, That the Board of Directors recommend the following resolution to the Association for adoption:

Resolved, That this Association authorizes and requests the Board of Trustees to make application to Congress for a special act, in the following form, to incorporate an Association to be known as the "NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES," to succeed and continue the National Educational Association.

On motion of Director Downing, Director F. Louis Soldan, of Missouri, was appointed as the representative of the Board of Directors at the annual meeting of the active members on July 6, and was authorized to state to the active members that it was the unanimous vote of the Board of Directors that the amended form of sec. 7 of the Proposed Bill should be adopted instead of the form as proposed in the original bill.

Director A. E. Winship, of Massachusetts, moved that the thanks of the Board of Directors be extended to Mr. John B. Pine for his valuable assistance and counsel; seconded by Director W. T. Harris, of the District of Columbia. The motion was unanimously carried.

The annual report of the Treasurer of the Association, James W. Crabtree, of Nebraska, was then presented, and printed copies of the same were distributed to the directors present.

On motion of Director Keyes, of Connecticut, the Treasurer's report was received and approved, and ordered printed in the annual volume of *Proceedings*.

The report of the Board of Trustees was presented by Chairman Albert G. Lane, of Chicago, and printed copies were distributed to the directors present.

Chairman Lane explained the action of the Board of Trustees, by which the First Trust and Savings Bank of Chicago had been selected as the custodian of the securities belonging to the "permanent fund," excepting certain Kansas bonds which were held in the possession of the chairman of the Board of Trustees for the purpose of collecting interest in default. Chairman Lane made an encouraging report on the prospect of securing final payment of the face value of all Kansas bonds. This he illustrated by the statement that the authorities of the city of South Hutchinson had, a number of years ago, proposed to pay 25 per cent. of the face of the bond held by the National Educational Association; three years later they offered 50 per cent.; subsequently they offered 60 per cent.; and recently they have offered to settle by payment of the face of the bond, and the trustees recommend the acceptance of the proposal. The land values in Kansas are so good today that people with a knowledge of the conditions give assurance that the Association will recover at least the face value of all its bonds.

Director James M. Greenwood, of Missouri, moved that the report be received and adopted, and printed in the volume of *Proceedings*; seconded and carried.

A communication was received from C. D. Fleming, principal of Grammar School No. 1, Brooklyn, N. Y., transmitting to the Board of Directors thru President William H. Maxwell a formal application for the organization of a new department of the Association, to be called the Department of Discipline and Government.

The Secretary reported that the application did not bear the required number of signatures of active members of the Association to constitute a petition in regular form for a new department, as provided by the constitution.

On motion of Director Downing, the application was received and placed on file.

A communication was received from Superintendent L. D. Harvey, of Wisconsin, chairman of the Committee on Industrial Education in Schools for Rural Communities, transmitting the recommendation on behalf of that committee, that the work of the committee be continued, and that the Board of Directors make the necessary appropriation to carry on that work and to print the reports.

On motion of Director Canfield, the communication with its recommendations was referred to the National Council of Education for the consideration and recommendation of the Committee on Investigations and Appropriations.

A communication was received from Lewis C. Monin, dean of the Armour Institute of Technology, Chicago, Ill., transmitting a formal petition for the organization of a new department of the National Educational Association, to be known as the Department of Technical Education.

On motion of Director Crabtree, the petition was referred to the Executive Committee of the Association, with power to act.

Director W. T. Harris, chairman of the Committee on the Louisiana Purchase Exposition, appointed by the Board of Directors at its meeting in Detroit, July 9, 1901, submitted the following report: •

REPORT OF COMMITTEE ON LOUISIANA PURCHASE EXPOSITION

To the Board of Directors of the National Educational Association:

I have the honor to call your attention to the action of this Board of Directors at the Detroit meeting on July 9, 1901, in response to an invitation from the committee on education of the Louisiana Purchase Exposition.

It was resolved to appoint an advisory board of twenty-one members to act in co-operation with the said education committee of the Louisiana Purchase Exposition, as that committee may request; this advisory board to have power to fill vacancies, and to add to their numbers. Said committee was duly appointed with the following members:

W. T. Harris, of District of Columbia, <i>Chairman</i> .	William R. Harper, of Illinois.
Edwin A. Alderman, of Louisiana.	Arthur T. Hadley, of Connecticut.
Newton C. Dougherty, of Illinois.	Daniel C. Gilman, of Maryland.
Nicholas Murray Butler, of New York.	J. G. Schurman, of New York.
William H. Maxwell, of New York.	David Starr Jordan, of California.
James MacAlister, of Pennsylvania.	James M. Greenwood, of Missouri.
Calvin M. Woodward, of Missouri.	Charles M. Jordan, of Minnesota.
Halsey C. Ives, of Missouri.	Lewis H. Jones, of Michigan.
Aaron Gove, of Colorado.	W. T. Carrington, of Missouri.
Andrew S. Draper, of Illinois.	F. Louis Soldan, of Missouri.

Carroll G. Pearce, of Nebraska.

At a meeting of said committee held at Detroit to nominate a suitable person to act as director of the department of education and social science, the committee chose by ballot Mr. Howard J. Rogers as their nominee, and appointed a subcommittee of three, to act as executive committee at St. Louis, to whom further questions might be referred by said committee on education of the Exposition, said subcommittee consisting of F. Louis Soldan, N. C. Dougherty, and C. M. Woodward.

As the objects of this committee have been accomplished, it makes this final report of its action, and asks respectfully to be discharged.

(Signed) W. T. HARRIS, *Chairman*.

On motion, the report was received and the committee discharged.

The secretary reported a communication from Professor Calvin Thomas, chairman of the Advisory Committee on the Universal System of Key Notation, in which Chairman Thomas reported that the expenses of publishing the report had exceeded the estimates, and that there remained an unpaid proportion of expenses amounting to \$90.31, which, under the action of the Board of Directors a year ago, would properly fall to the share of

the National Educational Association. Professor Thomas requested that an amount be appropriated sufficient to cover the extra expense.

On motion of Director Ben Blewett, of Missouri, \$90.31 was appropriated to meet the extra expenses of the Committee on Key Notation.

A communication was received from R. Fulton Cutting, president of the Association for Improving the Condition of the Poor in New York city, transmitting a proposition by Mrs. Emily E. Williamson, of New Jersey, to offer two prizes (one of two hundred dollars and one of one hundred dollars), to be given under the direction of the National Educational Association for the best form of reports on the condition of the poor, adaptable to the needs of the small cities, the large cities, and state superintendents.

After discussion commending the purpose and spirit of the communication, a resolution was passed instructing the Secretary to reply to the courteous proposition of Mr. Cutting and Mrs. Williamson, and to state that, in the judgment of the Board of Directors, the subject was more properly one for the consideration of the school authorities of the city of New York than for the National Educational Association.

A communication from Mrs. Charles C. Darling, secretary of the Public Educational Association, was received and referred to Director E. Oram Lyte, chairman of the Committee on Resolutions of the general Association.

On motion, the Board of Directors adjourned *sine die*.

IRWIN SHEPARD, *Secretary*.

MINUTES OF THE MEETING OF THE NEW BOARD OF DIRECTORS FOR 1905-1906

ASBURY PARK, N. J., JULY 6, 1905

The new Board of Directors of the National Educational Association met in the basement room of the Public Library of Asbury Park at 4:30 P. M., July 6, 1905.

The meeting was called to order by President-elect Nathan C. Schaeffer. The following directors responded to roll-call:

William H. Maxwell, New York; Representative of the Board of Education, Nashville, Tenn.; James H. Canfield, New York; John W. Cook, Illinois; J. M. Greenwood, Missouri; Oscar T. Corson, Ohio; Albert G. Lane, Illinois; E. Oram Lyte, Pennsylvania; F. Louis Soldan, Missouri; N. C. Schaeffer, Pennsylvania; J. N. Wilkinson, Kansas; I. W. Hill, Alabama; George B. Cook, Arkansas; A. H. Chamberlain, California; L. C. Greenlee, Colorado; Charles H. Keyes, Connecticut; Miss Clem Hampton, Florida; Miss Frances Mann, Idaho; T. A. Mott, Indiana; A. V. Storm, Iowa; L. D. Whittemore, Kansas; Henry T. Bailey, Massachusetts; George L. Towne, Nebraska; John Enright, New Jersey; James C. Byrnes, New York; Wells L. Griswold, Ohio; Andrew R. Hickam, Oklahoma; J. W. Lansinger, Pennsylvania; W. B. Jacobs, Rhode Island; M. A. Lange, South Dakota; E. F. Turner, Tennessee; L. E. Wolfe, Texas; D. H. Christenson, Utah; Miss Lucy Robinson, West Virginia; L. D. Harvey, Wisconsin; T. T. Tynan, Wyoming; E. T. Mathes, Washington; W. T. Harris, District of Columbia; Robert B. Fulton, Mississippi; Irwin Shepard, Minnesota.

Present, forty directors.

Director James H. Canfield, of New York, presented the following preamble and resolution, and moved their adoption; seconded by Director Lane, and carried by unanimous vote:

WHEREAS, By a resolution of the Association, adopted at the annual meeting of active members, held on July 6, 1905, the Board of Trustees was authorized and requested to make application to Congress for a special act to incorporate an association to be known as the "NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES," to succeed and continue the "NATIONAL EDUCATIONAL ASSOCIATION," in a form approved by the Association; and

WHEREAS, It may prove impracticable for the trustees to secure the passage of such special act before the date of the expiration of the present charter of the Association, namely, February 24, 1906;

Resolved, Providing it shall prove impracticable for the trustees to procure the passage of such special act before the date mentioned, or, if for any reason it shall seem to the trustees necessary to protect the interests of the Association:

First, That the President and Secretary be, and they hereby are, authorized, upon the request of the trustees, to execute a certificate, under the general incorporation law of the District of Columbia, as amended March 3, 1905, extending the corporate existence of the Association, and making the same perpetual, or to continue until the passage of a special act incorporating the National Association of the United States.

Second, That the Board of Directors consent that the corporate existence of the Association be continued and made perpetual.

The next order of business being the election of a member of the Board of Trustees for four years, to succeed Trustee F. Louis Soldan, of Missouri, whose term of office had expired, Director Keyes, of Connecticut, nominated Trustee Soldan for re-election.

Mr. Soldan expressed his thanks for the nomination, but requested that he be not elected to serve longer as a member of the Board of Trustees. It being the unanimous wish of the Board of Directors that Mr. Soldan should continue on the Board of Trustees,

the Secretary was instructed to cast the unanimous ballot of the Board of Directors for his re-election. The ballot was so cast, and Mr. Soldan was declared re-elected.

Mr. Soldan then resigned the office to which he had been re-elected, and urged that his resignation be accepted. On motion, the resignation was accepted.

Director L. E. Wolfe, of Texas, placed in nomination Superintendent James M. Greenwood, of Missouri, as a member of the Board of Trustees for the ensuing four years.

On motion, the Secretary was instructed to cast the ballot of the Board of Directors for Mr. Greenwood's election. The ballot was so cast, and Mr. Greenwood was declared elected as a member of the Board of Trustees to fill the vacancy occasioned by the resignation of Trustee Soldan.

On motion of Director Mott, of Indiana, Dr. W. T. Harris was unanimously elected to succeed himself as member of the Executive Committee for the period of one year.

On motion, the chair was instructed to appoint a committee on Nominations, of three members. The chair appointed as such committee Directors J. N. Wilkinson, of Kansas; J. M. Greenwood, of Missouri; John W. Cook, of Illinois.

A recess of five minutes was then taken to enable the directors present to sign a petition in pursuance of the resolution of Director Canfield, adopted at the opening of the meeting. The petition read as follows:

We, the undersigned, directors of the National Educational Association, do hereby consent and request that the corporate existence of the Association be constituted and made perpetual under and pursuant to the provisions of the act of general incorporation of the revised statutes of the District of Columbia, sec. 202, as amended March 3, 1905.

It being understood that this consent and request shall not be used unless it shall prove impracticable for the trustees to procure the passage of a special act of Congress for reincorporation before the expiration of the present charter.

All of the directors present, forty in number, signed the petition.

The Board of Directors was called to order for the resumption of business. On motion of Director Soldan, action of the Board of Trustees in the employment of counsel to advise concerning the reincorporation of the Association was approved, and the board was authorized to employ counsel for the future to the extent that they might deem it necessary to protect the interests of the Association.

The next order of business being the selection of a place of meeting for the forty-fifth annual convention in 1906, the board received invitations from Portland, Oregon; San Francisco, Cal.; Denver, Colo.; and Salt Lake City, Utah. These invitations were presented in brief addresses by representatives of the respective cities.

Director William H. Maxwell, of New York, moved that the invitations be referred to the Executive Committee, with full power to select the place of meeting, and to make all necessary arrangements with the authorities of the city selected and with the transportation companies; seconded by Director John W. Cook, of Illinois; unanimously carried.

The Committee on Nominations to fill vacancies in the National Council reported as follows: .

To the Board of Directors of the National Educational Association:

Your Committee on Nominations of members to fill vacancies in the National Council of Education nominates the following, all for re-election for the term of six years; namely:

W. H. Bartholomew, of Kentucky, term to expire in 1911.

Frank A. Fitzpatrick, of Massachusetts, term to expire 1911.

I. C. McNeill, of Wisconsin, term to expire 1911.

E. Oram Lyte, of Pennsylvania, term to expire 1911.

James M. Greenwood, of Missouri, term to expire 1911.

Respectfully submitted,

(Signed) J. N. WILKINSON,
JOHN W. COOK,
Committee.

On motion of Director A. G. Lane, of Illinois, the Secretary was instructed to cast the ballot of the members of the Board of Directors for the nominees. The ballot was so cast, and the nominees were declared elected as members of the Council for the term of six years.

An application for the establishment of a new department of the Association, to be known as the Department of Teachers' Interests, was presented in a communication and petition signed by many active members of the Association, more than the required number of twenty signatures being attached.

On motion of Director F. Louis Soldan, of Missouri, seconded by Director T. A. Mott, of Indiana, the petition was referred to the Executive Committee, with instructions to report with recommendations at the next meeting.

On behalf of Miss Mary E. Bancroft, president of the Department of Special Education, Miss Mary R. Campbell presented a verbal request to the Board of Directors for an appropriation to the amount of \$85 for certain expenses incurred in preparing the Asbury Park Auditorium for the meetings and exhibits of that department.

On motion of Director Charles H. Keyes, of Connecticut, Miss Campbell's request was referred to the Executive Committee, with power to act.

Director James M. Greenwood, chairman of the Committee on Investigations and Appropriations of the National Council, presented a report of that committee to the National Council on certain applications for appropriations which had been considered by the committee, and recommended by the Council.

REPORT OF THE COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

To the National Council of Education:

The Committee on Investigations and Appropriations begs leave to submit the following report on such matters as have been regularly brought before it for consideration:

1. The Committee on Industrial Education presented the following request:

"Application for the appointment of a committee of investigation, and for recommendation of an appropriation for the expenses of the same.

"On behalf of the Committee of Five on Industrial Education, appointed by the Council July 7, 1903, whose report is submitted at this meeting, I respectfully ask the Council to appoint a committee to continue the work already begun by the Committee of Five, and to recommend to the Board of Directors that such an appropriation be made as may be necessary to carry on the work of the committee and print its reports.

"It is the judgment of the Committee of Five that if the Council should deem it wise to appoint the committee asked for, it should be authorized to continue its work for at least three years, and to make at least one report each year.

"The following are some of the reasons for the appointment of such a committee:

"The report of the Committee of Five made at this meeting does not attempt to deal with details, but in a general way sets forth the reasons for industrial education in rural schools, the necessity for the organization of a new type of secondary schools in which the industrial phase of educational effort is made prominent; and indicates in brief outline what may be attempted in the way of industrial education at the present time, in existing types of schools.

"Further work is necessary to put into available and authoritative form the results of experiments in this field in this and other countries; to give such detail of successful experiments as may be useful in other localities than where the experiment is in operation; and to present plans of organization for the development of industrial education in rural communities.

"The United States Department of Agriculture is deeply interested in this subject, and it is believed that the proposed committee, representing the National Educational Association, could in a variety of ways co-operate with this department, thus combining for a single purpose technical knowledge and training, and practical acquaintance with educational conditions and possibilities in rural communities.

"The Patrons of Husbandry, the Farmers' Institutes, and other organizations and agencies are also interested in industrial education, and it is believed they would welcome the co-operation of a committee of the National Educational Association representing that body and its interests in industrial education.

"Such a committee and the Bureau of Education could co-operate in a variety of ways, which would prove valuable to those interested in the organization and administration of this phase of educational work."

(Signed) "L. D. HARVEY."

"MENOMONIE, WIS.,

"May 3, 1905."

On motion, an appropriation of not more than three hundred dollars (\$300), or so much thereof as may be necessary, was recommended for the working expenses of this committee during the next year.

2. On motion, the committee recommends that two thousand copies of the Report of the Committee on Taxation, as Related to Public Education, or more copies of these if there be a demand, be printed and distributed by the secretary to active members, one copy each, on application only, and copies sold to others at cost and carriage price; that ten thousand copies of the Report of the Committee on Industrial Education in Rural Schools, or more copies if there be a demand, be printed and distributed by the Secretary on the same conditions; and that three thousand copies of the Report of the Committee on Salaries, Tenure, and Pensions of Public-School Teachers be printed and distributed by the secretary under the conditions outlined above.

3. No other requests having been presented, and no one appearing in the interest of any other matter, the committee adjourned.

Respectfully submitted,

J. M. GREENWOOD, *Chairman.*

FRANK A. FITZPATRICK, *Secretary.*

On motion of Director T. A. Mott, of Indiana, an appropriation not to exceed \$300 was allowed for the expenses of the Committee on Industrial Education in Schools for Rural Communities for the ensuing year, for the continuation of the work of the committee, as outlined in the application of Chairman Harvey.

Chairman Greenwood also reported a recommendation of the Committee on Investigations and Appropriations, to the effect that an appropriation not to exceed \$300 should be made for printing a report by the Committee on Public Schools and Public Libraries, providing such report should be formulated and prepared for publication during the current year.

Chairman Greenwood then presented the following letter from President Charles W. Eliot, which letter had been received by the Committee on Investigations and Appropriations too late to be considered either by the committee or by the Council.

CAMBRIDGE, MASS., July 1, 1905.

To the National Council of Education:

The committee appointed in 1903 to report to the Council on an investigation proposed by President Baker, of the University of Colorado, concerning the culture element and the economy of time in education, did not succeed in presenting any report at St. Louis in 1904. There were differences of opinion in the committee which had been developed in correspondence; and only two members of the committee attended the St. Louis meeting. The Council continued the same Committee of Five, and requested a report from them at the meeting of July, 1905.

The committee has been obliged to do its work chiefly by correspondence; altho three members of the committee, Messrs. Baker, Goodwin, and Eliot, met in New York early in December last to discuss the results of the correspondence.

Among the topics which President Baker had suggested for investigation, there were three which seemed to the committee to afford opportunity for promising inquiries. The first of these topics was: "The value of a college training for young men who are going into business." Your committee was unanimously of the opinion that the Council might wisely pass a resolution requesting the Commissioner of Education at Washington to investigate that subject by ascertaining at several of the business centers of the country the number of college-bred men who hold high places in industries, commerce, and finance.

Your committee also advise the Council to appoint a committee of five persons, partly college men and partly school men, to prepare a report on the following topics: (1) the best period for the high school—four years, from fourteen to eighteen, or six years, from twelve to eighteen; (2) the devices already in use for shortening the college course, or the combined courses of college and professional school. These two topics relate to economy of time in education—an economy highly valuable to college graduates who are

going into business, as well as to graduates who are going to study a profession. In case the committee just mentioned be appointed, your committee recommends that the Council ask for an appropriation not exceeding \$500 to be placed at the disposal of the new committee to meet the cost of postage, stationery, and clerk hire.

This report is unanimous so far as its first recommendation is concerned, and is supported by a majority of the committee as regards the second recommendation.

CHARLES W. ELIOT,
JAMES H. BAKER,
J. M. GREENWOOD,
E. J. GOODWIN,
E. A. ALDERMAN,

Committee.

By CHARLES W. ELIOT, *Chairman.*

It was moved and carried that the portion of President Eliot's letter which referred to the work proposed for the United States Commissioner of Education be referred to the Commissioner, and that the part relating to the work of the National Council be referred to the president of the Council with the recommendation that it be placed upon his next program for discussion.

There being no other business, the board adjourned, *sine die*.

IRWIN SHEPARD, *Secretary.*

GENERAL SESSIONS OF THE ASSOCIATION

ADDRESSES

ADDRESS OF WELCOME

JAMES M. GREEN, PRINCIPAL OF NEW JERSEY STATE NORMAL AND MODEL SCHOOLS, TRENTON, N. J.

Mr. President, and Members of the National Educational Association:

In the name of the commonwealth of New Jersey, and of the citizens of Asbury Park and Ocean Grove, I welcome you here.

It was the desire of our President to inaugurate at this meeting a departure from our custom of having representatives of the several departments of the state, general and local, welcome you, and to have instead that office performed by one person only. When asked to suggest that person, we at once fixed upon our governor as the man who more than any other represented all departments; for, while he is a statesman and orator, he is also an educator who appreciates the most intelligent aims of education and is in full sympathy with them. His illness and failure to be here are therefore a great disappointment to us.

When one is to welcome a guest, his cordiality in doing so is naturally measured by the kindness previously shown him by that guest, and by the distinguished character of the latter. Governed by these standards, surely my greeting to you would be warm, when I remember the kindness you have shown our state thru myself, and when I recall the distinguished name you bear thru your great and honorable achievements in advancing education.

We welcome you to a state that was one of the original thirteen, and that among her earliest acts established the public school, and has fostered its growth and development from an institution affording the crudest benefits to the few, to a system of schools supplying a most generous secondary culture to all who will accept it; a state whose department of public instruction has recently decided that a secondary education is not only the privilege of every child, but the right of every child under our constitution and laws; a state whose highest courts have recently decided that the only essential authority for the establishment of higher education within its borders is the vote of the people. This state is already furnishing this higher education in a number of branches—a fact that may not seem surprising to our energetic western friends, fostered as they have been by public-land grants, but which will be fully

appreciated by this old, conservative eastern belt, where it has been so long held that higher education was not the province of the state.

We welcome you to the state that gave to the country the iron railroad, the telegraph, the phonograph and the incandescent lamp; a state that, while it has paid tribute to science, letters, and philosophy, has not been neglectful of the emotions; for it is the one state in which George Washington was actually known to swear.

I mention these things, not to take unto ourselves any glorification, but to show to you a setting in sympathy with your purposes, and thus make you feel entirely at home.

Again we welcome you to the cool breezes and stimulating baths of these "twin cities by the sea," to this Alma Mater of summer spiritual life, to our homes and to our hearts.

RESPONSE

ALBERT G. LANE, DISTRICT SUPERINTENDENT OF SCHOOLS, CHICAGO, ILL.

Mr. President, Ladies and Gentlemen:

Eleven years ago the closing session of the National Educational Association was held in this Auditorium, and it was my pleasant duty to express the sincere thanks of the officers and members of the Association to the citizens of Asbury Park for their generous provision for our entertainment. At that time we were invited to come again. We have come again, on the invitation of Asbury Park, Ocean Grove, and the state of New Jersey. The welcome greetings so cordially expressed by President Green, New Jersey's leading educator in behalf of the teachers and citizens of the state, are gratefully appreciated.

At our last session, in 1894, Professor Richard G. Moulton spoke on this platform of the formative influence of literature on thought and character. The molding power of good reading, covering history, literature, and science, has received a great impetus during the past decade.

The educators here assembled represent the moral and intellectual forces of the nation. Their mission is to lead minds to knowledge that will develop right standards of judgment. Great social and moral questions, involving the welfare of the whole people, are receiving unusual attention. The agitations in the industrial world have led to numerous organizations of allied interests. The great questions of law and order, equity and justice, liberty and equal rights, labor and compensation, have largely engrossed public attention. Unexpected opportunities for leadership have arisen. The dangers of unworthy motives and unwise leadership are threatening the vital interests of our institutions and of our people. The teachers in our elementary and secondary schools, in our normal schools, colleges, and universities, must become leaders of thought, establish ideals, and inspire the action which will aid in solving these great problems in the interests of a common humanity.

The National Educational Association represents 400,000 teachers and 16,000,000 pupils in this country, and we have come here to merge our thoughts and plans, and to emphasize the essential elements in education.

We gladly accept the hospitality offered us, and hope the people will be enriched by our presence.

PRESIDENT'S ADDRESS

EDUCATION FOR EFFICIENCY

WILLIAM H. MAXWELL, SUPERINTENDENT OF SCHOOLS OF THE CITY OF
NEW YORK

The National Educational Association meets in its forty-fourth annual convention at the moment when Japan has given the world another great object-lesson in the value of education. Ever since Napoleon's retreat from Moscow, the world has stood in awe of that massive and mysterious power which we call Russia. In that fateful campaign it was not the skill of the Russian commanders or the bravery of the Russian soldiers that wrought the catastrophe; it was the snowflakes—the arrows from the quiver of God—that overwhelmed the might of the invader. Ever since, Russia has gloried in a victory that was not of her own achieving. The world accepted her at at her own valuation, and stood in awe. Wrapt in the glamor of an unearned renown, Russia pursued her aggressions practically unopposed, until her empire stretched from the Baltic Sea to the Pacific Ocean. There her career of conquest has ended. There, once again, has broken out the irrepressible conflict between ignorance and enlightenment. On the one side stands a people, almost countless in number and rich beyond knowledge in all natural wealth, but ignorant, devoid of initiative, and alienated from their rulers by despotism and cruelty. On the other side stand the Japanese—a people limited in numbers and confined in territory, but born again thru the diffusion of knowledge and thru the universal training for efficiency which has made their inherited patriotism invincible.

Japan has but repeated at Port Arthur and at Mukden and on the Japan Sea the lesson of history—the lesson of Marathon, of Zama, of the Invincible Armada, of the Heights of Abraham, of Waterloo, and of Sedan; the lesson that the race which gives its children the most effective training for life sooner or later becomes a dominant race. Borrowing eagerly from western civilizations, Japan has adopted for her own whatever school exercise or method of teaching gives promise of training for efficiency. Nobly has she repaid her debt to Europe and America. She has demonstrated to the world that the training of the young to skill of hand, to accuracy of vision, to high physical development, to scientific knowledge, to accurate reasoning, and to practical

patriotism—for these are the staples of Japanese education—is the best and cheapest defense of nations.

Such are the lessons of war. The history of peaceful industrial effort tells the same story. No nation is truly prosperous until every man has become, not merely a consumer, but a producer. As Emerson most truly said:

A man fails to make his place good in the world, unless he not only pays his debt, but also adds something to the common wealth. Efficient universal education, that makes men producers as well as consumers, is the surest guarantee of progress in the arts of peace—is the mother of national prosperity.

“But,” exclaims an objector, “this is gross materialism.” Not so. The history of the world shows that a nation improves morally and intellectually only as its physical condition is strengthened. The futility of religious missionary effort, when unaccompanied by physical betterment, is of itself sufficient to prove the thesis. Better shelter, better food, better clothing, are the necessary antecedents and accompaniments of higher thinking, greater self-respect, and more resolute independence.

True, material prosperity too often brings with it a train of evils all its own; sensual indulgence or slothful ease, it may be; or the grasping at monopoly and “man’s inhumanity to man;” or a feverish pursuit of material things, to the neglect of the spiritual. True, enormous wealth is often accompanied, particularly in crowded centers of population, by extreme poverty. These, however, are but temporary reversions to barbarism—the price we must pay for progress. The best corrective of the evils generated by the accumulation of wealth is not anti-trust laws or other repressive legislation, but a system of schools which provides a training for all that is equal to the best which money can buy; which discovers and reveals genius born in low estate, and enables it to fructify for the common good; and which guarantees to every child the full development of all his powers. The trained man will demand, and will, in the long run, receive, his due share. Education is a chief cause of wealth and the most certain corrective of its abuse. In a community in which every man had been trained to his highest efficiency, monopoly and poverty would be alike impossible.

In the light of these historic truths, you will permit me, as a prelude to the addresses which are to be delivered before the meetings, general and departmental, of this convention, to state very briefly—I do not venture to say, discuss—a few of the burning educational questions of the day.

The first of these questions is: What does “education for efficiency” mean? It does not mean that every man should be trained to be a soldier. True, the man who is well trained for the duties of peace is, in these days of scientific instruments of destruction, well prepared for war; but military prowess can never become the ideal of education among a great industrial people. It does not mean merely that each citizen should be able to read the newspapers and magazines, so that he may be familiar with political discussions, and able to make an intelligent choice between candidates and policies.

The imparting of such knowledge to each individual is essential in a democratic nation, but it falls far short of the education needed to secure the highest efficiency of each unit of society. Still less does it mean that wretched travesty of education which would confine the work of the public schools to those exercises in reading, writing, and ciphering which will enable a boy or a girl, at the age of fourteen or earlier, to earn starvation wages in a store or factory. Education for efficiency means all of these things; but it means much more. It means the development of each citizen, first as an individual, and second as a member of society. It means bodies kept fit for service by appropriate exercise. It means that each student shall be taught to use his hands deftly, to observe accurately, to reason justly, to express himself clearly. It means that he shall learn "to live cleanly, happily, and helpfully, with those around him;" that he shall learn to co-operate with his fellows for far-reaching and far-distant ends; that he shall learn the everlasting truth of the words uttered nearly two thousand years ago: "No man liveth to himself," and, "Bear ye one another's burdens." Such, I take it, is the goal of American education.

If this ideal of developing the highest individual and social efficiency of each citizen is the goal of American education, obviously the curriculum of our schools becomes an object of extreme solicitude. Particularly is this the case with the elementary schools, for these contain over 90 per cent. of the children under instruction. During the last quarter of a century a great movement for the reform of the elementary curriculum has been gathering strength. The most prominent characteristics of this movement would seem to have been the development of the imagination and the higher emotions thru literature and art and music; the training of the body and the executive powers of the mind thru physical training, play, and manual training; and the introduction of the child to the sources of material wealth thru the direct study of nature and of processes of manufacture. At first the movement seems to have been founded on a psychological basis. Today the tendency is to seek a sociological foundation—to adjust the child to his environment of man and of nature.

At various times during the past ten or fifteen years, and particularly during the past year, reactionary voices have been loudly raised against the new education, and in favor of the old. Such was to be expected. Reactions follow inevitably in the wake of every reform, political and social. Analysis will show that the reactionary tendencies in education arise from three chief sources:

1. The demagogic contentions of selfish politicians, who see that it costs more money to teach the new subjects of the curriculum than the old, and that thus a large proportion of the public revenue is diverted from the field of political spoils. These are the men who have invented the term "fads and frills" to designate art, manual training, music, and nature study. It must be theirs to learn that it will require something more than a stupid alliteration

to stem the tide of those irresistible forces that are making the modern school the faithful counterpart of the modern world and an adequate preparation for its activities. The saving common-sense of the common people, when deliberately appealed to, will always come to the rescue of the schools.

2. The reactionary tendency is due in part to an extremely conservative element that still exists among the teaching force. For the most part, teachers who are still extremely conservative were themselves brought up chiefly on the dry husks of a formal curriculum. They find it difficult to learn and to teach the new subjects. They dislike to be bothered by the assistance of special teachers. Accustomed to mass work both in learning and in teaching, they regret the introduction into the schoolroom of arts which demand attention to individual pupils.

3. The reactionary tendency has its roots even among the more progressive teachers in a vague feeling of disappointment and regret that manual training, correlation, and nature study have probably not accomplished all that their enthusiastic advocates promised ten to twenty years ago.

The feeling of disappointment, we might say even of discontent, among the more thoughtful and progressive teachers, is what might have been anticipated. In the first place, public education has become a much more difficult thing than it was half a century ago. It has become more difficult for two reasons:

1. Because of the constantly increasing migration of population from the country to the cities. Children removed from rustic to urban life lose that most valuable education which comes from the work and the associations of the farmyard and the fields.

2. Because of the enormous increase in immigration from abroad, and particularly because the character of the immigration has changed. Up to the middle of the last century the majority of our immigrants were of kindred blood with the American people, and a large proportion spoke our language. Gradually, however, the tide of immigration, while swelling until it has now reached the enormous total of one million a year, has shifted its chief sources from the shores of the North and the Baltic Seas to the shores of the Mediterranean. The peoples of southern Europe, illiterate, accustomed to tyranny, without individual initiative, and habituated to a low standard of living, huddle themselves together in our large cities and factory towns under conditions inimical alike to morals, to physical well-being, and to intellectual advancement. Teachers have a good right to complain that municipal authorities, in permitting the overcrowding of immigrants in unsanitary quarters, have aided the establishment of the most serious obstacle yet discovered to the upward progress of public education.

In the second place, the feeling of disappointment with the results of the newer studies arises from the fact that these studies were introduced before the teachers were prepared to teach them; that for too long they were concerned chiefly with uninteresting formal processes rather than with interest-

ing results; that they were not related to real needs of school and home, and were not properly co-ordinated with other phases of the curriculum. Much yet remains to be done to assimilate the environment of the school to the environment of the world.

And yet, while we may feel discontented with the situation, and regret the increased difficulties of our work, there is no reason for discouragement. I have no hesitation in saying that in general intelligence, in all-round efficiency, in power of initiative, the pupils whom I now see are superior to those of a quarter of a century ago. If the obstacles before us are more formidable, if the problems are more complicated than those presented to our predecessors, the teachers of America are better organized and better equipped to overcome the obstacles and to solve the problems. He who has sailed in a modern steamship thru an ocean storm has seen the mighty vessel cleave the billows and scarcely slacken her speed in the teeth of the hurricane. Down in the depths of the ship men are piling coal on the furnaces and releasing a force—the imprisoned sun-power of uncounted ages—that baffles the waves and defies the whirlwind. And so it is with our ship of state. Come what storms of ignorance or wickedness there may, teachers are supplying the fuel of knowledge and releasing the force of intelligence that will hold our nation in the straight course of progress.

And yet, the teachers of America are still far from satisfied with their achievements. They are dissatisfied with the elementary curriculum, because it seems crowded with the new studies that have been added without diminishing the number of the old. They are dissatisfied with the high-school curriculum, because the old-style language, mathematics, and science course, however suitable it may be for admission to college, does not precisely meet the needs of boys and girls who are going directly into life. They are dissatisfied with the specialized high school, because it seems lacking in some of those attributes of culture in which the old-time school was strong. And they are dissatisfied with the college course, because the elective system, which has taken the place of the old prescribed course, does not seem to give a strong, intellectual fiber to the weaker students who, too often, follow the path of least resistance. And they are dissatisfied because there is less intelligence, less efficiency, and less helpfulness in the world than the world needs. So far from feeling concerned at this widespread discontent, we should rejoice that it exists. There is nothing so blighting to educational enthusiasm as smug satisfaction with what is or what has been; there is nothing so stimulating to educational effort as a realizing sense of present imperfections and of higher possibilities.

As to the curriculum of the higher schools and colleges, the problem is really not what studies shall be inserted and what omitted, but how shall we make it possible for the student to get that culture, efficiency, and power out of his studies which his development requires. This is really a question for psychology to answer. Well may we ask of our universities, with their psy-

chological laboratories and their sensitive apparatus for measuring mental reactions: Will psychology ever accomplish what phrenology once promised, but has never performed—the determination of a young student's capabilities and of the line of work he ought to pursue?

As to the elementary curriculum, surely we shall not go far wrong if we apply to each study, and even to each detail of each study, these four questions:

1. Is this study or this exercise well within the comprehension of the child?
2. Does it help to adjust him to the material and the spiritual environment of the age and of the community in which he lives?
3. Does it combine with the other studies of the curriculum to render him more efficient in conquering nature and in getting along with his fellows, and thus to realize ideals that transcend environment?
4. Does it accomplish these objects better than any other study that might be selected for these purposes?

If these questions are answered in the affirmative, we may reasonably conclude that the study or the exercise in question is an important element in education for efficiency. Examined from the view-point established by these questions, every study will assume an aspect very different from that which it bears when taught without a well-defined object. Take drawing, for example. Drawing may be so taught as not only to lay bare to seeing eyes new worlds of beauty, but to lead to that reverent appreciation of nature, and the reapplication of her lessons to daily industrial art, which is the way, as Ruskin has said, in which the soul can most truly and wholesomely develop essential religion.

Again, take the teaching of agriculture. While our soil seemed inexhaustible in fertility as in extent, the need of such teaching was not felt. Now, however, we are obliged to have recourse to lands that produce only under irrigation. The rural schools have added to our difficulties by teaching their pupils only what seemed most necessary for success when they should move to the city. The farms of New England are, in large measure, deserted or are passing into alien hands. To retain the country boy on the land, and to keep our soil from exhaustion, it is high time that all our rural schools turned their attention, as some of them have done, to scientific agriculture. There is no study of greater importance; there is none more entertaining. If every country boy could become, according to his ability, a Burbank, increasing the yield of the fruit tree, the grain field, and the cotton plantation, producing food and clothing where before there was only waste, what riches would be added to our country, what happiness would be infused into life! To obtain one plant that will metamorphose the field or the garden, ten thousand plants must be grown and destroyed. To find one Burbank, ten thousand boys must be trained; but, unlike the plants, all the boys will have been benefited. The gain to the nation would be incalculable. Scientific agriculture, practically taught, is as necessary for the rural school as is manual training for the city school.

Nor are our people going to rest satisfied with mere manual training. The Mosely commissioners pointed out that the great defect in American education is the absence of trade schools. Trade schools will inevitably come. The sooner the better. They are demanded for individual and social efficiency.

It is not in secondary schools alone, however, that efficiency demands highly differentiated types of schools. It is absurd to place the boy or girl, ten or twelve years of age, just landed from Italy, who cannot read a word in his own language or speak a word of English, in the same class with American boys and girls five or six years old. For a time, at least, the foreigners require to be segregated and to receive special treatment. Again, the studies that appeal to the normal boy only disgust the confirmed truant or the embryo criminal. Yet again, the mentally defective, the crippled, and the physically weak children require special treatment. Unless all indications fail, the demand for education for efficiency will lead in all our large cities to the organization of many widely differentiated types of elementary school.

The problem of the curriculum, important as it is, is less important than the problem of the teacher. The born teacher—that is, the man or woman who has a genius for teaching—will teach well, in spite of any curriculum, however bad. Unfortunately, genius is as rare in the profession of teaching as it is in law, or medicine, or any other profession. The great majority of us, as it needs must be, are very commonplace persons, who are seeking for light and doing the best we can. Hence, the supreme importance of training. And yet there is no part of our work to which so little thought and investigation have been given. Normal schools in this country are still very young—only a little over half a century old. The first normal schools were high schools with a little pedagogy thrown in. The majority of them remain the same to this day. There is a strong movement, however, toward purely professional schools to which no student who has not had a reasonably liberal education is admitted, and in which he shall devote his entire time to learning how to teach—how to observe, understand, and exercise children both mentally and physically. Welcome and necessary as this movement is, if all teachers are to train for efficiency, we are still far from precise scientific notions as to the best methods of training teachers. I commend this subject to the National Council as one of the next investigations it should undertake.

To secure training for efficiency, the conditions of teaching must be such that each teacher shall be able to do his best work. By common consent, one of these conditions is that teachers shall not be subjected to the ignominy of seeking political or other influence, or cringing for the favor of any man, in order to secure appointment or promotion. During the past year two events have occurred which seem to be full of promise for the establishment of this condition. The public-school teachers of Philadelphia have been freed from the bondage toward politicians in which they were held for well-nigh a century; and the one-man power, beneficent as such a system proved under a Draper and a Jones in Cleveland, has been supplanted by an appar-

ently more rational system. Independence of thought and freedom of initiative are necessary to the teachers of a nation whose stability and welfare as a republic depend upon the independence, the intelligence, and the free initiative of its citizens. Independence of thought and freedom of initiative may be throttled by bad laws, but under the best laws they will be maintained only by the teachers themselves. By making it unprofessional to seek appointment or promotion thru social, religious, or political influence, the teachers of this country have it in their power to establish one of the most essential conditions of education for efficiency.

Under the conditions that confront us, particularly in the large cities, with the rapid increase and constant migration of our home population, with the influx of vast hordes of people from abroad, alien in language, alien in modes of thought, and alien in tradition, the character of our elementary work is undergoing a profound transformation. We are beginning to see that every school should be a model of good housekeeping and a model of good government thru co-operative management. What more may the schools do? They can provide knowledge and intellectual entertainment for adults as well as for children. They can keep their doors open summer as well as winter, evening as well as morning. They can make all welcome for reading, for instruction, for social intercourse, and for recreation. But I for one believe they may do still more. When I look upon the anæmic faces and undeveloped bodies that mark so many of the children of the tenements; when I read of the terrible ravages of tuberculosis in the same quarters, I cannot but think that the city should provide wholesome food for children at the lowest possible cost in public-school kitchens. To lay the legal burden of learning upon children whose blood is impoverished and whose digestion is impaired by insufficient or unwholesome feeding is not in accord with the boasted altruism of an advanced civilization or with the divine command: "Feed the hungry." Is this not also a subject for investigation by our National Council?

And should it some day come to pass that men will look upon corruption in public and corporate life, such as of late we have seen exposed in New York, Philadelphia, and St. Louis, with the same loathing with which they regard crime in private life, it will be when the schools are in earnest about teaching our young people the fundamental laws of ethics, that

The ten commandments will not budge,
And stealing still continues stealing.

But economic perils and racial differences are the teacher's opportunity. Here in this country are gathered the sons and the daughters of all nations. Ours is the task, not merely of teaching them our language and respect for our laws, but of imbuing them with the spirit of self-direction, our precious inheritance from the Puritans; the spirit of initiative which comes to us from the pioneers who subdued a continent to the uses of mankind;¹ and

¹ Münsterberg, *The Americans*, chaps. I and II.

the spirit of co-operation which is symbolized by, and embodied in, the everlasting union of sovereign states to promote the common weal. And as, in my own city, I see the eagerness of foreigners to learn, and the skill and devotion of our teachers, I cannot but think that we are overcoming our almost insurmountable difficulties.

There is, perhaps, no more striking moment in all history than that at which the apostle Paul, standing on Mars Hill and pointing to the blue Ægean, the center of the then known world, proclaimed the new but eternal doctrine: "God hath made of *one* every nation of men for to dwell on all the face of the earth." Standing here, as we do, on the border of the Atlantic Ocean, and beholding, on the one side, the dove of peace alighting from the hand of our President on the fields of carnage in the Far East, and, on the other side, the homes of peoples of all nationalities stretching from the Atlantic to the isles of the Pacific, under the protection of the American flag, may we not realize that we, as teachers, have a great part to perform in bringing a vast company to an understanding of the sublime truth that God has made all men *one* to dwell on the face of the earth; that their mission is not to defraud and to slay, but each to do his best for himself and to help his fellows?

THE FUTURE OF TEACHERS' SALARIES

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In most rural districts that are sparsely settled the taxable wealth is small and the state does not make an apportionment of its annual funds sufficient, when divided pro rata for each person of school age, to provide for a full school year's instruction; instead of nine or ten months, only three or four, or five months possibly, is provided. Consequently the individual teacher has to find his main vocation in some other occupation than teaching—generally that of a farmer. The ungraded rural school cannot afford to employ professional teachers, because it can pay only a fragment of an annual salary.

Villages and cities can depend upon a school population for the year, and an annual session of from eight to ten months, or even longer, is kept up. Professional teachers are employed at living wages; that is to say, the wages paid teachers are in advance of the average rates for laborers who work the same length of time

The first question of interest to the teacher inquiring about salaries is: Are the positions of teachers, in a state, annual positions, or merely temporary occupations lasting only for a small fraction of the year? The annual position means a teacher employed by the year, who takes up teaching as a vocation, and does not have to shift to other occupations to eke out his salary received from his vocation as teacher.

The second important question is: How many well-paying positions are

there—how many positions are there in the teachers' ranks which promise the individual, successful in his profession of teacher, an increase above the position he at present occupies, say to a salary one-fourth larger, or one-half larger; how many positions will open to him that are twice or three times or four times what he receives now when he first enters the profession? The ambitious teacher wishes to have a career before him. Just as he objects to enter upon the work of teaching, when teaching is a makeshift lasting three or four months each year, so it is objectionable, tho not to such a degree, to enter a profession which has in it no future for the teacher. The salary which he receives at first is necessarily a small one, and if there are no higher positions in the section where he is at work, there is no hope for the able and ambitious teacher for the future, unless he migrates to some land of promise.

Another aspect of the question is this: Do the positions commanding high salaries increase in number as fast or faster than the population? Pretty much all the interest in statistics of salaries in the United States therefore relates, not to the salaries of rural schools, but to those paid in village or city schools which are sufficient to support a professional teacher, and to the question whether there are a sufficient number of higher positions to hold out a promise of promotion from time to time in accordance with the increase of his professional skill.

I am therefore glad to mention here that the average annual increase in higher education throws open nearly one thousand new places a year in colleges and universities for teachers promoted from the secondary schools on being found to have the requisite skill and scholarship. There were in 1890, 7,918 professors and instructors in the colleges and universities of the United States, not counting the professional schools. In 1903 the number had risen to 20,887. It started with less than 8,000, and had an increase of new places in thirteen years almost equal to 1,000 a year (12,969). The secondary schools of the United States counted 16,329 teachers in 1890, and in 1903 counted 33,795. This increase gave 17,466 new positions in thirteen years for teachers in public and private high schools.

The teacher whose salary is low asks himself what he is going to do about it. He may submit in sorrow to his lot, or he may take a more heroic view of the matter, and consider that the lot he will occupy depends in large measure upon his own efforts. He will then try to improve his skill in teaching, and to make his field of learning more extensive and accurate. He will make enthusiastic culture studies in literature and art as well as in science. He will study to perfect himself in fine manners. He will pass under review his moral judgments, seeking to raise the standard of his character. He will seek to make himself the desired professional teacher. What teacher could not improve his position and find a more adequate salary for himself? Daniel Webster is reported to have said to those who advised him against leaving the country town in New Hampshire to go to the great metropolis of New England, it being urged that Boston was already full of lawyers: "Yes, but

there is always room at the top." So it may be said, in general, that the upper story in the temple of education is not yet full of good teachers. There is, in fact, a great lack in number and quality for the highest positions and best salaries that are offered in the United States..

With a view to study our resources in the way of better salaries, I have made an inspection of the vocations of the number of the population which the census finds engaged in gainful occupations. There were some twenty-nine millions of these in 1900, as against about seventeen millions in 1880. I find that, while by far the larger part of the population is counted in the lower occupations—those which are devoted to procuring raw material and manufacturing the simplest and most common products for food, clothing, and shelter—yet the talented and able workmen in the lowest rank have a constant demand upon them to furnish recruits for the occupations that require more skill and offer a substantial increase in salaries.

Taking a series of employments that indicate the increase of luxury, persons laboring in the manufacture of stoves and furnaces—the large majority of poor people use the fireplace, or even the bonfire, for cooking and heating purposes—the number increased from 123 to 429 in the million in the thirty years ending 1900—an increase of three and a half times in each group of a million wage-earners. Upholstery—none is used by the poor—increased so much as to employ 1,060 in the million, where it had employed only 489; paper-hangers—not needed for log cabins—increased from 199 in the million in 1870 to 756 in 1900; plumbers and gas- and steam-fitters increased from 891 to 3,364 in the million; painters, glaziers, and varnishers increased from 6,929 to 9,546 in the million. (See Table I.)

TABLE I

Industries that Provide for Creature Comfort and Luxury	Census Years			
	1870	1880	1890	1900
Stoves and furnaces.....	123	192	393	429
Upholstery.....	489	600	1,129	1,060
Paper-hanging.....	199	288	544	756
Plumbers, gas- and steam-fitters.....	891	1,115	2,693	3,364
Pottery.....	405	416	656	555
Painters, glaziers, and varnishers.....	6,929	7,493	9,775	9,546
Clocks and watches.....	*142	795	1,111	830
Total in each million of employed.....	9,178	10,899	16,301	16,540

On the other hand, persons having to do with trade and commerce—bookkeepers, salesmen, etc.—increased from 24,867, in the thirty years from 1870, to 55,326 in each million inhabitants in 1900; bankers and brokers, from 850 to 2,520; those engaged in insurance and trust companies, from 801 to 2,548; agents and collectors, from 1,625 to 8,295. (See Table II.)

*Includes clock-makers only.

TABLE II

Employments of a Commercial Civilization	Census Years			
	1870	1880	1890	1900
Bookkeepers, salesmen, etc.....	24,867	30,861	44,623	55,326
Bankers and brokers.....	850	1,114	1,582	2,520
Officials of banking, insurance, and trust companies.....	801	894	1,755	2,548
Agents and collectors.....	1,625	1,954	7,679	8,295
Total in each million employed.....	28,143	34,823	55,639	68,689

For employees in transportation, in steam railroads, street railroads, hackmen, and teamsters the increase was from 22,380 to 40,931 in the million. (See Table III.)

TABLE III

Employments that Presuppose Urban Civilization	Census Years			
	1870	1880	1890	1900
Steam railroad.....	12,316	13,573	20,330	20,024
Street railroad.....	408	672	1,646	2,370
Hackmen and teamsters.....	9,656	10,210	16,208	18,537
Total in each million employed.....	22,380	24,455	38,184	40,931

On the other hand, mere blacksmiths decreased, from 1870, when there were 11,360 in a million, to 7,790 in 1900; while the aggregate of other kinds of iron- and steel-workers increased from 15,077 to 23,666 during the same period. (See Table IV.)

TABLE IV

Decrease of a Primitive Trade by Drafting its Skilled Workmen into Lucrative Specialties	Census Years			
	1870	1880	1890	1900
Mere blacksmiths.....	11,360	9,931	9,218	7,790
All other iron- and steel-workers.....	15,077	16,441	21,142	23,366
Total in each million of employed.....	26,437	26,372	30,360	31,156

It is more important to note that what may be called the higher occupations, which have to do with protection and culture, increased with a considerable degree of uniformity in the thirty years ending in 1900, showing an increase from 30,000 to 44,000 thirty years later in each million. I have included in this list clergymen, physicians, dentists, lawyers, engineers, and surveyors, architects, designers, and draftsmen, literary persons and scientists in so far as the census counts them, chemists and metallurgists, artists, musicians,

journalists, photographers, printers, makers of musical instruments, besides professors and teachers, these last forming the class of workers in whose progress we are especially interested on this occasion. Professors and teachers were counted by the census in 1870 at 10,141 in each million, and at 15,345—or 50 per cent. more numerous—in 1900. But from the records kept in the office of the Bureau of Education it would appear that the census count of teachers for 1900 falls short of the true number by 90,623, which would increase the quota of 1900 in each million to 18,509. (See Table V.)

TABLE V

Some of the Vocations for Protection and Culture	Census Years			
	1870	1880	1890	1900
Clergymen.....	3,508	3,720	3,880	3,840
Professors and teachers.....	10,141	13,093	15,277	15,345
Physicians and surgeons.....	4,994	4,926	4,610	4,540
Dentists.....	627	708	770	1,020
Lawyers.....	3,257	3,688	3,942	3,937
Engineers and surveyors.....	590	475	...	1,487
Architects.....	161	194	355	364
Designers, draftsmen, and inventors.....	103	162	413	652
Literary persons and scientists.....	78	65	295	344
Chemists, assayers, and metallurgists.....	62	113	198	304
Artists and teachers of art.....	326	523	989	856
Musicians and music teachers.....	1,280	1,752	2,734	3,170
Journalists.....	423	708	961	1,933
Photographers.....	604	574	881	927
Printers, compositors, lithographers, etc.....	3,232	4,182	5,413	5,337
Piano- and organ-makers and tuners.....	256	451	646	499
Total in each million of employed.....	29,642	35,334	41,364	43,655

Looking at the five grand divisions in the census for 1900, we find agricultural employments relatively decreasing since 1870, when it had 475,700 in each million, for thirty years, namely, to 1900, when it had only 357,100; while professional service had increased from 29,700 to 43,300 in each million; trade and transportation, from 99,500 to 164,000; manufacturing, from 214,100 to 243,700. (See Table VI.)

TABLE VI

Total Employed in Gainful Occupations in the United States, Showing Decrease in Agriculture and Increase in Trade and Transportation, etc.	Census Years			
	1870	1880	1890	1900
Agriculture, etc.....	475.7	443.5	376.8	357.1
Professional service.....	29.7	34.7	41.5	43.3
Domestic and personal.....	181.0	196.6	185.7	191.9
Trade and transportation.....	99.5	107.6	146.3	164.0
Manufacturing.....	214.1	217.6	249.7	243.7
Total.....	1,000.0	1,000.0	1,000.0	1,000.0

What is the future of teachers' salaries? Is the vocation of teacher a permanent one, which will grow into greater consideration with our people during the entire period in which they make progress along the lines of the conquest of nature, and the conversion of things and forces to the rational purpose of supplying the wants of man?

We must look at human occupations in the mass. Some occupations, as we expect, are rudimental; they belong to the earliest stages—nay, even to the savage state—of mankind. Hunting and fishing belong to this stage; also the unsystematic foraging upon the vegetable kingdom of fruits and edible plants, and plants for textile purposes. Before systematic agriculture, we find the procuring of raw materials, and to some extent the conversion of them, by means of fire, into palatable articles of food. By and by there come agriculture and grazing—the cultivation of certain food plants and the domestication and rearing of animals. After a long time come, in the fourth place, some mining and metallurgy. We used to hear about a Stone Age succeeded by a Bronze Age, and lastly by an Iron Age.

Then begins an age of transformation of products. Its beginnings are rude. Something is done in textile fabrics to supply clothing. Something is done in wood- and metal-work in building, and the making of rude instruments of offense and defense, and of tools for use in agriculture and mining. Leather is an important transformation of the raw hide. The raw hide, with its covering of hair and wool, is used without a tanning process in the lowest stage of civilization. There is a third stage, with transportation and trade, which belongs also to the early beginnings of human industry. At first, carrying is done by human strength; next, there is carrying by the animal which is impressed into the service of man—the horse, the ox, the mule, the llama, the dog, the reindeer. More important than this is the transportation by water: first the raft, then the canoe, then the use of sails.

By and by the use of steam on the water and on the railroad ushers in a higher form of civilization. Trade begins by bartering and peddling; in due time it becomes shop-keeping; finally banking and exchange. Steam transportation, and banking and exchange, and the use of machinery in general for manufacturing and transportation, belong to the second and higher order of human industry. This higher order of human industry has three functions to perform by its occupations. It provides, first, for the production of means of comfort and luxury; next, for the protection of the individual by the social whole; and, thirdly, for culture or education.

We may think of a great variety of employments which have as their end the production of creature comforts, and whose manufactures require a higher order of technical skill—a multitudinous variety of occupations coming into being and going out of being, one following after another, many continuing and many supplanted by more useful devices; all devoted to the conserving of the nervous energy of man, and to eliminating causes of discomfort and waste of power.

Under the second head of this higher order of occupations I include occupations that have to do with means of protection, and the first of these is the providing of amusements and recreation—the most potent means of conserving human energy and keeping it rational. The second means of protection includes the medical profession, in all its varied forms. The third is the legal profession, protecting property, which has been sometimes called the “realized reason of man.” It is in the nature of a reservoir of human industry, in that it stores up products of the will for after use. The protection of property, therefore, is the protection of a fundamental instrumentality of civilization. Fourthly, in the protecting class of occupations I place the public service, including officials managing public works or public charities, and government officials, as well as the police and the rank and file of the army and navy. Sixthly, organizations like insurance companies and agencies, or companies formed for guarding against calamities, general or particular; also corporate actions which undertake the supply of urban needs, as water-works, gas-works, hygienic precautions, etc.; also charitable associations, trade unions, national banks, trusts—all forms of business aggregation which have or are capable of having a protective influence on the individual, to secure him freedom in his vocation, and to secure him against calamity by fire, pestilence, accidents of all kinds, and the incidents of infancy or old age.

I have named the vocations that provide means of creature comfort and the means of protection as belonging to the higher order of occupations. It will be seen at once that these vocations involve educated capacity, and that they receive higher wages than the employments of the lower order. There is a third and last division of this higher order of vocations, including employments of that portion of the community engaged in providing the instrumentalities of culture for the people. I include in this list, first, those engaged in religious work of various kinds, and, next, the artistic trades that supply ornament on useful goods, and produce works of sculpture and painting, and music, literature, the formation and care of art museums.

I include three larger classes of workers in this higher order of occupations, namely, school-teachers, librarians, and the purveyors of intercommunication. The corps of teachers in public and private schools numbers something over half a million, the public teachers alone numbering upward of four hundred and fifty thousand, and the private teachers of all kinds numbering about one hundred and twenty thousand more. The curatorship of libraries contains a rapidly increasing list of occupations, and the list of occupations which include the people collecting and diffusing information by the daily or weekly newspapers, magazines, and books, operating telegraphs, photographic and photo-engraving establishments. This class is at present not one-half so large as the corps of teachers in the United States, but it is destined to be much larger, as urban life comes to supplant rural life.

These classes of workers, belonging to the higher order of occupations are

destined to grow in size with the advance of civilization and the increase of production in wealth. I include in this list those employed in the pursuit of science, and the invention of devices useful in the arts.

In the earliest stages of civilization ninety-nine laborers out of each hundred are needed to supply raw material and rude manufactures for the community. With the growth of civilization a larger and larger number are detailed from the one hundred to provide creature comforts, protection, and culture; and the teacher's vocation at present by far leads in the numbers of those who have to do with providing culture for the community. These vocations are limited in numbers only by the ability of the community to furnish a surplus of money beyond what is needed for the raw materials and the rude manufactures for food, clothing, and shelter. In the far distant time a goal will be reached when one person in each hundred, by means of machinery, will furnish all the food, clothing, and shelter needed for the other ninety-nine, and every one of these ninety-nine will find occupation in the higher orders of employments which provide means for creature comfort, protection, and culture.

The increase in lucrative occupations in the professional classes that furnish protection for health and property assists, by competition, the increase of salaries for teachers, by drawing their supply of workers from the more highly educated classes.

The recent canvass of the salaries by the special committee of which Colonel Wright, the chairman, makes report this year, gives us data from which we may complete our list of better-salaried positions, besides those in colleges already named, counting in superintendents, assistant superintendents, high-school principals, elementary-school principals, high-school teachers (not principals), elementary-school teachers—six classes of positions reported in 467 cities of over 8,000 inhabitants. This list aggregates 53,554 positions with annual salaries of \$600 and over, (one-half of which pay 800 and upwards) and 14,193 of \$500 to \$600, and 17,728 of annual salaries below \$500.

I stop at salaries of \$600 because he who receives \$600 per year receives more than his quota of the total productions of the United States, the total income of the nation in 1900, made on a liberal basis, being only \$551.56 per inhabitant, if divided among the entire number of persons engaged in gainful occupations, twenty-nine millions in all. In this estimate I do not set aside anything for the rent of real estate, nor anything for the interest on capital, nor anything for the extra pay of the organizing and directing power which contributes so much towards the increase of the production of wealth.

No teacher has a right to complain, on a socialistic basis, if he is receiving a salary, for his annual services, of \$600. In making this calculation I count in the products of agriculture, manufactures, and transportation, as reported by the census for 1900, and add to it for home manufactures (making of cloth-

ing for the family, etc.) something over a billion of dollars, and for garden and small-field agriculture something over a billion, and an estimate of a billion and a half for the rental of houses and furniture, which items are estimated I think, on a liberal basis, the same making a total of \$16,144,278,462, which is equal to a quota of 58 cents (\$.5812) for each of the 365 days making the the year, for each man, woman, and child. The United States counted in the census for 1900 twenty-nine millions of our people engaged in gainful occupations, of which the number of teachers and professors counted less than 2 per cent. (0.018). I have estimated them at 536,756 for the year 1900 from returns made to this office, while the census reckons only 446,133.

The true valuation of all real and personal property in 1890 was put by the United States census at \$65,000,000,000, the same being an increase of \$22,000,000,000 over 1880. If we allow for a moderate increase during the decade ending in 1900, and call the true value of real and personal property in 1900 \$90 000,000,000, there would be, at 3 per cent. interest, a sum of \$2,700,000,000 to deduct for the use of capital, leaving for total earnings the sum of only \$13,415,000,000, to be divided equally among citizens, without paying extra salaries to those who directed and supervised the industries. Taking out this 3 per cent. interest on the \$90,000,000,000, the true value of all real estate and personal property in the United States, and dividing the remainder, \$13,415,000,000, the balance for the total productions of the entire wage-earning population in the United States gives only 48 cents (\$.4815) per day for each inhabitant, and an income, for each of the twenty-nine million of workers, of \$457.80. Our estimate of salaries at \$600 and over, therefore, as being the largest amount that can reasonably be demanded on any socialistic basis, makes a good showing for the teacher who aspires to make his occupation something higher than a mere trade.

I insert the results of my studies in the two tables following:

TABLE VII

EARNINGS PER DAY PER INHABITANT OF THE UNITED STATES IN 1900

	Value for 1899	Per inhab- itant Per Day
Value of farm products (census).....	\$3,742,129,357	\$.135
Value of manufactured products (census).....	5,656,521,284	.203
Value of mineral products (estimated).....	704,469,710	.0254
Value of products of fisheries (estimated).....	55,476,939	.002
Freight earnings (land) (census).....	1,052,602,235	.038
Drayage, etc. (estimated at 18 per cent. of freight earnings).....	189,368,402	.0068
Freight earnings (water) estimated.....	166,428,129	.006
Expressage (estimated).....	55,476,040	.002
House rent (estimated).....	1,109,520,795	.040
Furniture rent (estimated).....	416,070,298	.015
Railroad building (estimated).....	360,594,258	.013
Household manufactures not reported (estimated).....	1,109,920,795	.040
Agricultures not reported (estimated).....	1,109,920,795	.040
Miscellaneous (partly estimated).....	415,680,325	.015
Total earnings per inhabitant per day.....		\$.5812

TABLE VIII

EARNINGS PER DAY PER INHABITANT OF THE UNITED STATES AT DIFFERENT EPOCHS

	1850	1880	1890	1900
Agricultural, including live stock (census).....	\$0.1200	\$0.1450	\$0.1080	\$0.1350
Manufactures as reported (census).....	.0580	.1080	.1840	.2030
From transportation in enhanced value of products....	.0120	.0370	.0470	.0528
Agricultural products consumed in the household and not reported.....	.0320	.0410	.0400	.0400
Household manufactures not reported.....	.0480	.0440	.0400	.0400
Building of railroads.....	.0075	.0180	.0130	.0130
Mining, fisheries and miscellaneous.....	.0025	.0220	.0424	.0424
House and furniture rent.....	.0200	.0300	.0400	.0550
Total per day for each inhabitant.....	\$0.30	\$0.445	\$0.5144	\$0.5812

The teacher's profession offers, in the elementary and high schools and the office of superintendent, the following positions:

TABLE IX

Salaries	Positions
\$ 600-\$ 700	16,015
700- 800	11,064
800- 900	8,664
900-1,000	4,424
1,000-1,100	2,539
1,100-1,200	1,486
1,200-1,300	2,825
1,300-1,400	1,166
1,400-1,500	861
1,500-1,600	766
1,600-1,700	1,005
1,700-1,800	227
1,800-1,900	361
1,900-2,000	233
2,000 and over	1,918
Total	53,554
\$500-\$600	14,193
Under \$500	17,728

Adding the positions in colleges and universities, 20,887 to 53,554 positions with salaries of \$600 and above, we have a total of 74,441.

It will be seen, on inspection of the above table, that there are 26,475 positions that pay \$800 and upwards, which, with the college positions, make 47,362.

We have seen that teachers, if there are any who claim an increase of salary beyond \$551.56 a year on the ground of their natural right to a pro rata share of the wealth produced in the United States, could not urge a valid plea, because the total wealth distributed, even without payment of interest on capital or rent on real estate, does not yield beyond that average sum to the twenty-nine millions of persons following a gainful occupation in the United States.

We have arrived at the conclusion, also, that the teachers of rural schools for three or four months in the year are not an important element in this discussion of salaries. Teaching as a makeshift occupation can never be of sufficient importance to cause young men and women to spend years at training

schools in preparation for that work. Only places with annual salaries, and with eight to ten months of teaching, will warrant the establishment of normal schools and the requisite time of preparation necessary to secure the special qualification of the professional teacher.

In the next place, the salaries that average below \$600 cannot be named as attractive for the professional teacher, except as a beginning, a period of probation. Salaries of \$600 begin to be attractive to the person who belongs to the rank of mechanical wage-earners, and feels an ability and a desire to undertake a career that promises more honorable service and a higher salary than the mechanical occupation which he finds ready to his hand. The professional teacher demands a permanent vocation at living wages, as I have said, with plenty of higher positions for him, with advanced wages, as a reward for his increase in skill and culture.

In looking over the list of salaries, as reported by the superintendents of the several states, it is found that the average salary of male teachers in Massachusetts is rated at \$145.27 a month, the school year being nine or ten months, while the salary of women teachers is rated at \$54.61 for the same session. Rhode Island reports \$119.06 and \$51.91 a month, respectively, for its men and women teachers. Connecticut also reports an average monthly salary of male teachers of more than \$100. The general average of salaries in the whole United States was \$28.54 a month in 1870; in 1890 it had risen to \$37.46, and in 1893 it reached the sum of \$40 a month; in 1903 the sum of \$47.50.

I have shown, in another place, that there has been an increase of accumulated wealth from decade to decade in the states, and that the total amount of wealth per individual in the United States amounted in, 1900, to \$1,235.¹ In 1850 the total per capita of wealth, on its true valuation, was \$308, and decade by decade it rose to the following sums: 1860, \$514; 1870, \$780; 1880, \$870; 1890, \$1,036. It appears that each individual in the United States has an average of four times as much realized wealth as in 1850, and, therefore, can bear a burden of taxation equal to four times that of 1850 with greater ease, because the greater the income from vested property, the greater the tax possible without stinting the individual in his necessities.

It happens also that the average amount earned, per individual, by those persons reported in the census as engaged in manufactures increases from year to year with the increase of realized wealth. Realized wealth may be considered as capital for the production of property. The individual, therefore, if reinforced by a large amount of realized wealth, is able to produce much more per annum. And thus it happens that the average wage-earner in manufactures in 1850 produced less than \$500 (\$484.80); in 1860, \$651.48; in 1870, \$849.03; in 1880, \$721.93; in 1890, \$990.32; in 1900, \$1,065.69.

The larger the sum produced by the average person in the United States,

¹ Estimate made by the chief of the Bureau of Statistics of the United States Treasury for the *World*

the greater his ability to support schools and furnish positions of large salaries for the highest order of teachers. These figures, therefore, on the increase of productive power on the part of the individual wage-earner in manufactures, are full of hope for the future of the teacher as regards his salary and his social position. Five and one-third millions of workers, it seems, produced in the United States each an average of \$1,065.69 for that year. (See Table X.)

TABLE X

NUMBER OF WAGE-EARNERS ENGAGED IN MANUFACTURES, AMOUNT OF ANNUAL EARNINGS, AND AVERAGE FOR EACH INDIVIDUAL FOR EACH CENSUS YEAR, 1850 TO 1900, INCLUSIVE

Census Year	No. of Wage-Earners	Amount Earned	Average per Individual
1850	957,059	\$ 463,982,794	\$ 484.80
1860	1,311,246	854,256,584	651.48
1870	2,053,996	1,743,898,200	849.03
1880	2,732,595	1,972,755,642	721.93
1890	4,251,535	4,210,304,965	990.32
1900	5,314,539	5,663,677,535	1,065.69

In the foregoing table the total earnings have been determined by deducting "cost of materials used" from "value of products," as shown in census reports for the several years named.

Science makes possible mechanic invention, and it makes possible also the use of the forces of nature to supersede human power and the power of domestic animals. This progress in the reinforcing of human might, as it goes on from year to year, may be expected to increase the wealth-producing power of the individual. It would seem that in fifty years, from 1850 to 1900, the wealth-producing power of labor in manufactures has more than doubled. All countries show increased power of wealth-production in proportion as they adopt labor-saving machinery, but few to the extent of the United States.

The future of teachers' salaries is, therefore, a bright and promising one, viewed in the light of the general industrial progress, but a far more hopeful one, viewed from the economical law of increased values for vocations that have for their object protection and culture.

DISCUSSION

JOHN W. CARR, superintendent of schools, Anderson, Ind.—Dr. Harris has shown, as no one else could show, how the relative number engaged in agriculture, mining, and the crudest forms of manufacture has decreased from decade to decade, and how the number of those engaged in other occupations, especially those which minister to our comfort, has correspondingly increased. This has resulted primarily from two causes: (1) The constantly increasing demands for comforts, luxuries, and the things that minister to man's intellectual, æsthetic, and spiritual nature. (2) By the use of machinery, by better modes of transportation, and by the application of science to his work, man has greatly increased

his productive power in agriculture, in mining, and in the cruder forms of manufacture, thus enabling fewer persons to supply the physical wants of an ever-increasing number. As a result of this, a greater number of persons is escaping from the drudgery of life, and is enabled to give their time and their talents to more congenial, more remunerative, more elevating, and higher occupations.

But, better still, Dr. Harris has demonstrated that the gloomy pessimism of Malthus is false, and that, instead of the world becoming over-populous and lapsing into savagery for want of food and the bare necessities of life, there will be proportionately more food, more comforts, more culture, more happiness. He has also demonstrated that there will be work enough for all and that the work will be higher and more ennobling.

It seems to me, Mr. President, to be most fortunate that, just as Luther Burbank is giving to the world his wonderful discoveries relative to food plants, and just as the announcement is being made that the desert, now scorched and bare, is to produce limitless quantities of food for man and beast, the great philosopher and teacher, the wisest seer among us, after studying the question for forty years, should prophesy that the time will surely come when *two persons* will be able to provide the food-stuffs and raw materials, and do the coarse manufacturing, for a hundred persons, leaving *ninety-eight* who will be emancipated from the merest drudgery and transferred to employments which relate to education, religion, culture, ornament, and the production of other creature comforts. This is a glorious prophecy, an utterance worthy of a noble seer. It fills our hearts with gladness akin to that which inspired the children of Israel when a greater prophet pointed out the Promised Land, flowing with milk and honey, which they were soon to enter and possess forever, provided they obeyed the God of their fathers who had led them up out of the land of Egypt and thru the wilderness of Paran.

But the prophecy of Dr. Harris will never be any nearer fulfilled than that of the great lawgiver's, unless this people shall live up to their high privileges and shall be faithful in the practice of the simple Christian virtues. Education must be universal and efficient in fact as well as in name. The universal intellect of the people must be touched and quickened, the hand must be not only skilful but willing, the taste, ennobled and refined, and above all conscience must be enthroned. Our elaborate system of public education will fail, miserably fail, unless there are great teachers of the people—teachers of hearts as well as teachers of heads.

What wages shall teachers receive in the future? That depends primarily on what kind of teachers is wanted. If we want novices; if we want boys and girls in their teens who have but little education and less special training; if we want weaklings who have failed in other occupations; if we want hangers-on who simply teach as a makeshift until something else turns up; if we want persons lacking in scholarship, insight, tact, power, and character, to teach our children, then the wages of teachers in the future should be small, very small; indeed, the smaller the better, for we should not pay much for waste, neglect, and arrested development.

But if we want teachers of first-class ability; if we want men and women of broad and cultured minds; if we want persons of insight, tact, and power, whose Christian character stands four square to all the world; if we want persons who can instruct, guide, and inspire children, and whose very presence is a benediction; if we want teachers who can not only keep order in the schoolroom, but who can guarantee the peace and prosperity of the nation; if we want teachers who can not only teach children to salute the flag, but who can train citizens to be brave and loyal in war and just and honest and patriotic in peace—faithful to every civic trust and duty; if we want the minds of the children inoculated with the germs of truth and honor and virtue and reverence and love, so as to bring forth the largest harvest of righteousness; in a word, if we want the youth of the land to be taught by the noblest and best of the land, then the salaries of teachers in the future must bear some relation to the services rendered to the public.

THE USES OF EDUCATIONAL MUSEUMS

FREDERICK J. V. SKIFF, DIRECTOR OF FIELD COLUMBIAN MUSEUM
CHICAGO, ILL.

The curator of the Ruskin Museum, Professor William White, at the London meeting of the Museums Association in 1893, presented a paper of consuming interest, on "The Function of Museums as Considered by Mr. Ruskin." One paragraph, quoting the views of Ruskin, especially attracted my attention, both for the analysis of the subject and phrase of expression:

The first function of a museum is to give example of perfect order and perfect elegance, in the true sense of that test word, to the disorderly and rude populace. Everything in its own place, everything looking its best because it is *there*: nothing crowded, nothing unnecessary, nothing puzzling. The museum is only for what is eternally right and well done, according to divine law and human skill. The least things are to be there and the greatest; but all *good*, with the goodness that makes a child cheerful and an old man calm: the simple should go there to learn, and the wise to remember.

That museum will be the most successful which, while conducted for the worker in science, at the same time attracts and stimulates studious thought on the part of poorly or imperfectly—educated people.

The curator of the Ipswich (England) Museum, in an address recently delivered, said:

The museum of today is a very different institution from the museum of five and twenty years ago. Let progress continue at the same rate for the next quarter of a century and we can only dimly imagine the development. . . . I believe that the future of museums as educational factors will be a great one. They will become great palaces of practical reference. They will develop and foster a love and admiration for the wonders of Nature in all her varied moods and branches; they will cultivate a taste for the beautiful, a desire for knowledge of the many processes that go on in Nature's workshop, and lead to a greater reverence for that great Author of the universe, whose mighty works we humble workers try to arrange and catalogue.

The museum on its material side, in its public popular address, must be so arranged and conducted that, quoting from an old friend, "those who come to stare may remain to study." Ruskin, speaking more particularly of art museums, but with equal applicability to all museums, said:

To teach people rightly . . . we must let them feel that, although by poverty they may be compelled to the pain of labor, they need not by poverty be debarred from the felicity and brightness of rest, in places dedicated to the highest labors of thought. What we willingly concede to the graces of society, we must reverently offer to the Muses of seclusion, and, out of the millions spent annually to give attractiveness to folly, we may spare at least what is necessary to give honor to instruction.

The most alert and intelligent educational force in these times is the periodical—the magazine and the newspaper. The magazine is more effective, because there is more time allotted for its preparation, and its less frequent publication gives better opportunity for perusal and reflection. Illustration is a most potent factor, and has come to be an essential feature in all publications. The material on exhibition in a museum is to the student, young or

old, what the illustrations in the periodical are to the reader. The object itself is more accurate than a description of it; the eye is more reliable than the ear. Scientific instruction cannot be perfectly imparted except by object-lessons. The sketch and the drawing are important adjuncts of educational books today. The lantern slide is the almost invariable complement of the lecture.

The purpose of an educational museum, broadly speaking, should be the extension and diffusion of popular information and ordinary fact among the masses, by the exhibition of properly labeled specimens, and to create a repository and archive for scientific material and data. The independent museum—the museum not connected with college or university—has long been recognized as an important, tho general, educational agency, but it is only during late years that it has come to add investigation, research, and demonstration to collecting and exhibition. The lecture course and the publication series are of quite recent occurrence. The educational museum should be at once a laboratory and study for the scholar, and a resort for popular culture. The acquisition of knowledge, coincident with research and collection, does not now confine itself in its distribution to the label prepared for the specimen, but finds a still more effective and broader method of distribution on the lecture platform and in the publication. If the full purposes of a museum are comprehended, its operation will give unconscious education to the young and added wisdom to the mature. Its dedication should be to the people; it should offer hope to the illiterate and inspiration to the scholar.

The educational museum management of today has two ambitions: to prosecute and register important original scientific investigation, and to conduct a popular institution along educational lines; to gather important scientific facts which shall have value to the specialist and interest for the public. Professor Goode wrote in 1888:

No museum can do good and be respected which does not each year give additional proofs of its claims to be considered a center of learning. On the other hand, the public have a right to ask that much shall be done directly in their behalf.

Mr. Goode divided all intellectual work into two classes:

one, tending toward the increase of knowledge, the other toward its diffusion; the one toward investigation and discovery, the other toward the education of the people and the application of known facts to promoting their material welfare.

If I am asked by what means, in my opinion, the museum can accomplish the greatest educational benefits, I shall say: thru the medium of the public schools, and the introduction of the extension system that will bring the museum to the school. My interest in museum-extension work has so far been confined to the advocacy, in public and private speech, of its great possibilities as an educational factor, tho the institution of which I am the executive would probably have made provision, at least, for a preliminary survey in this interesting field, had I not been occupied with other important duties during the past five years. Professor Waterman, of Chicago, has awakened

much interest in this method of supplementing the system of the common school. In fact, it looked at one time as if sufficient private support might be obtained to inaugurate the traveling museum in Chicago. It seems to me, from observation and correspondence, that the educational authorities in both England and the United States, and in centers widely removed, are on the point of seriously considering, if not adopting, this inestimable aid in the instruction of the young.

Under the law permitting the Field Columbian Museum to occupy a public park, certain privileges are reserved for public-school children, which the museum management has greatly extended, so that all of the teachers and pupils of all schools and educational institutions have free access to the museum and its collections and lecture courses at all times, altho the general public pays an admission on five days of the week. The superintendent of schools of Chicago issues to each principal, each year, blank cards of admission, which are filled out by the different principals with the names of the teachers or pupils. The children usually visit the museum in classes accompanied by teachers, and in many instances prepare papers upon some collection or object exhibited. If requested to do so, the curators of the museum willingly conduct classes about the departments, and make informal talks. The number of public-school children, more especially when they come in classes, has been carefully recorded and, while the advantages offered by the museum seem to attract a large attendance each year, yet the number of public-school children that find their way into the museum under all circumstances is very small as compared with the number of school children in the city as shown by the school census. The fact appears to be that the school children, being taken from their routine, and transported in a body to another, and often unfamiliar, part of the city, and to a public park or to the museum, insensibly consider the expedition in the nature of a holiday, and the benefits conferred are rather of a temperamental than of an educational character. If, on the other hand, small representative collections from the museum, accompanied by a prepared paper on the collection, which the teacher may read, should at stated intervals be sent to the different public schools, and introduced as a part of that day's study exercise, it seems to me that the benefits are likely to be multiplied many times, and that the impressions—the instruction—will be received with much more intelligence and greater hope of permanency.

The editor of, and the contributors to, the *Museums Journal*, the organ of the Museums Association of Great Britain, and a most interesting and valuable publication, have devoted considerable space of late to the uses of museums in teaching. In correspondence with Dr. Howarth, the editor of this *Journal*, I have been confirmed in my interest in the extension feature of museum work by the literature of the Teachers' Guild of Sheffield. One pamphlet contains a description of the cabinets that are sent, upon application, to the schools of the city. The contents of one of the mineral cabinets, for instance, are described as follows: Tray I shows ores of the metal of chief

importance in Sheffield—iron; Tray II contains ores and metals used in the arts and manufactures; Tray III illustrates the different forms of the most abundant oxide in the earth's crust—silicia; Tray IV illustrates the simple crystal forms assumed by minerals.

Dr. Howarth, while feeling that the time for the traveling museum has come, says that, so far as he knows, no system has been adopted by a general educational authority for the regular distribution of museum cabinets, with accompanying lectures, etc., tho there are a few isolated instances in England where this work has been undertaken. Russia has adopted, I think, some scheme of the traveling museum, but more related to industrial than to educational purposes. In Austria there is a limited governmental system of traveling art museums. Liverpool, however, has a good and general system of circulating cabinets among the schools, which was described in the report of the Museums Association at the Liverpool meeting in 1890, since which date the system has been considerably extended.

In the United States, while it is possible that some work in this line has been inaugurated, I have not been able to make the careful search that seemed necessary to discover its extent. At the St. Louis Exposition I had the satisfaction of aiding a number of teachers from different parts of the country, who said they were collecting specimens for their school cabinets, but I have heard nothing of a systematic effort.

The director of the Manchester (England) Museum, in a paper read before the North of England Educational Conference in 1902, presented in most direct and impressive paragraphs the thought which seems now becoming quite common as to the use of museums in teaching. The educative authorities of Great Britain had decided that time spent by school classes in museums, under proper supervision, should be allowed to count as time spent in school. With this decision in view, Director Hoyle said:

This at once makes all museums an integral part of the national apparatus for elementary instruction. These institutions are now no longer to be merely storehouses of material for investigation by specialists, nor means for teaching university classes, but they come into intimate relation with the children in the elementary schools. Under these circumstances, it behooves us who have the direction of the museums, and those who teach the children, to take counsel together and see what new responsibilities are laid upon us by this most broad-minded concession of the Education Department. It rests with the teachers to make the ruling of the Education Department a means of progress and enlightenment. Teaching in the museum to be of maximum use must be correlated with teaching in the school. The proper persons to give instruction to classes of children in the museum are the teachers. Many of the facts of science may be taught to quite young children, and that, in a scientific manner, which will be a capital introduction to systematic courses of study which may be undertaken later.

The reference made by Director Hoyle to the Education Department of Great Britain, and the indefinite movement for broader organization, along systematic lines, of the educational forces of the United States, invite attention to the fact that there has been some talk, I believe—unless the consideration of such a possibility has not progressed farther than an expression of views—

about the creation of a new department in the national administration—a portfolio of education and art, a department of the government whose head shall be a cabinet officer. In states, counties, towns, and cities the necessity for a uniform, even, sequential process of education, leading from many primary grades to a regularly decreasing number of higher grades, has been found necessary. Under a national system, uniform the country over, while not in the least invading the rights of states, but unifying the states, as the states unite and supervise the counties, the possibilities of a process of selection for continued advancement after graduation lead up irresistibly to the establishment of a great national academy whose members shall constitute the aristocracy of culture in America, the “seat of learning and the shrine of art.” This would tend to a greater governmental paternity and broader conduct of educational institutions and art development, and would, I suppose, draw the national museums, the Indian schools, and the bureaus of research and investigation, and similar branches, as educational agencies, and all exposition management and participation, under some one national authority provided for in the organization of the department.

Associating the subject of a national supervision of educational affairs and the extension work of the museum, the suggestion occurs that, in the event of the creation of a Department of Education and Art, the national museum would naturally and properly assume the responsibility of directing the diffusion of knowledge thru the medium of the traveling museum and lecture. Each state would select or create a museum which, under state auspices and appropriation, would act as the center or distributing agency for the federal museum, employing either its own duplicate material and lectures, or making requisitions for loans or contributions from the parent institution, but in all instances following the national plan promulgated by the Department of Education and Art as represented by the national museum authorities.

If these important steps should be taken, it may be that the educational influences of the country would accord to certain elected or selected state, municipal, and private institutions, of sufficient importance and endowment, the privilege of sharing in the facilities afforded by the government in securing material and in prosecuting investigation, at home and abroad, on land and on sea, now available by institutions supported alone by the government. To confine all of the potent and effective agencies of the government for collection and investigation to national institutions located in one city, and that city, tho the capital, remote from the country as a whole, is, it seems to me, neither national nor rational. If certain museums, for instance, situated in different parts of the United States could, by some arrangement, have the privilege of utilizing the governmental agencies—the navy, the army, the Bureau of Indian Affairs, the Surveys, and the consular service, etc.—to the same extent that the national museums are now permitted to do, the material secured would have a far greater educational influence and a wider distribution, and the investi-

gations made cover a larger field, than can possibly be the case as under the present restricted conditions.

The museum as a physical thing is, after all, always a prime subject for consideration—the museum in its relationship to the public in its contact with the people. I should estimate that more than one-half the visitors to the Field Columbian Museum are of foreign birth. On free days the Babel of tongues is startling. The manners of these visitors, whose nativity is so remote, are in sharp and rebuking contrast with those of the American-born. Every discovered vandal has been a native of the United States. Reverence is not a dominant trait in this country. I read, with much interest and instruction, an article in the *North American Review* by Dr. Alfred Goldsborough Mayer, of the Brooklyn Museum, in which this paragraph occurs, and to which I cordially subscribe:

We have overlooked the fact that the vast foreign immigration of the past few years has brought among us a population accustomed to museums, and who seek the amusement and instruction which those institutions afford with much keener appreciation, respect, and interest than is manifested by the native-born Americans. Museums, zoölogical and botanical gardens, aquariums, and public parks are all appreciated more thoroughly and visited more frequently by foreigners than by our native-born, and we should take full care that the influence which they exert shall refine the thought and elevate the ideals of that foreign element which is soon to exert a great influence upon our national destiny. About 80 per cent. of the emigrants to our country are between fifteen and forty years of age. Their ideals are already formed, our universities affect them only indirectly, and our libraries exert an influence on them through the feeble medium of a language foreign to their thought. The museum, the zoölogical garden, and the public park may still appeal directly to them; through sight they may come to know our land, and to appreciate and respect its beauty, its history, and its principles.

I believe the deepest, broadest influence of a museum is accomplished on communities. The city or town in which a museum is located is uplifted by its presence, and in time its influence for culture and intellectual betterment is felt by the whole people, and the inhabitants generally become better-informed and more intelligent and cultivated members of society. The entire community is raised a little in tone, as distinguished from the results of the college or university, which makes a marked impression on a few. Making for a place in which to live in a coming generation, the museum performs the better work, because the more general and democratic. Mr. Roosevelt has said that one piece of first-rate work is worth a thousand pieces of second-rate work. He was speaking of the university; and I expect that in the centuries such individual eminence in scholarship would be better for society; but the purpose of the museum, while to educate the few, should be, nevertheless and more importantly, to instruct the many.

STANDARDS OF LOCAL ADMINISTRATION

HON. GEORGE B. McCLELLAN, MAYOR OF THE CITY OF NEW YORK

I owe you an expression of thanks for the privilege of addressing you today, and I know the city of New York appreciates the honor and distinction conferred upon it by the selection of the head of its public-school system to preside over your deliberations.

I take it that the subject which has been assigned to me, "Standards of Local Administration," means educational administration, and, therefore, education itself. As local education is the keystone of the whole structure of national education, my subject virtually covers the entire question which you have assembled here to discuss. The subject is so vast that in the few minutes given to me I can do no more than call to your attention one or two of its many important phases.

It may be that I am old-fashioned; it may be that my theories are obsolete; but I assure you that I am sincere in saying that I believe that schools exist for man, and not man for schools. There is no more misused, misapplied, and misunderstood word in the English language than "education." To teach is one thing; to educate is another. You can teach a bullfinch to whistle "Hail Columbia," or a parrot to sing the "Star-Spangled Banner;" but in neither case will your efforts have resulted in producing a useful American citizen.

Teaching, so far as it goes, is most admirable, but the teaching of children that does not educate can scarcely justify any expenditure of public moneys. What our scheme of government requires is that our children be educated. They must be taught, of course, as a condition precedent to the education; but the teaching is only a means to an end, and is by no means an end in itself.

What the standards of education shall be depend very much on circumstances. Everything in this world is progressive; nothing stands still. As we travel upon the journey of human evolution, the broad and well-paved road ahead may not cause us altogether to forget the beauty of the scenery left behind. Our economic and industrial development has been so extraordinary during the last half-century that the inevitable tendency has been in the direction of the practical rather than the beautiful. However desirable it may be to increase the total of the earth's productivity, the most uncompromising economist must sometimes sigh for the economically incorrect charm of his native country side. Factory chimneys may increase the wealth of nations, but green valleys and wild flowers, even pretty weeds, add more to their people's happiness. In the race for wealth in which for years we have been engaged, our educators, recognizing the economic law of supply and demand, have tried to bring to market only salable goods. When fond parents have preferred that colleges should turn out money-making machines rather than educated men, colleges have met the demand, and well-chosen elective courses have graduated hard-headed young men ready to begin the

struggle for life. Time being literally money, every day saved in preparation for the contest has been considered to advantage. A bachelor-of-arts degree in many cases means that its recipient is a specialist in some one narrow line of money-making, and not that he is the possessor of a liberal education. The craze to turn out complete money-making machines is not confined to our colleges; it has even entered the field of public education. The time that the average child can afford to spend at school is necessarily all too short; so short, in fact, that very little ground can be covered thoroly. Public education cannot hope to make specialists. It can only hope to prepare children in time to become specialists. As the requirements of modern conditions change, so the requirements needed to meet modern conditions change. The three R's of yesterday may not necessarily be the three R's of today. But there are certain fundamental subjects that everyone must know, and know well, if success in after-life is to be hoped for. These fundamentals are the same all over the world. However much opinions may differ as to what should constitute a liberal or a fundamental education, there should be no difference of opinion as to what should form the groundwork. You have a great opportunity here in this convention, you who make education your life-work, to agree upon what these fundamentals should be, and then, by educating public sentiment, to cause their adoption as the three R's thruout the United States.

I do not believe that anyone can be overeducated. But, pardon me, if I again confess to being old-fashioned. I do not believe that anyone can be educated who has not at least a smattering of the three R's. It may possibly serve some mysteriously useful purpose to teach twelve-year-old boys, who cannot read even the simplest English, to sew buttons on shirts; or to drill girls of the same age, to whom the rule of three is unknown, in the theory, but not in the practice, of music and cooking; for both are often bracketed together in our school curricula. But the ignorant outsider who is excluded from the Parnassus of "educational circles" may be permitted to wonder at the wherefore of it all. It is anything but flattering to our "standards of local administration" that the products of our great urban public schools seldom succeed at either West Point or Annapolis. Run thru a list of the honor men at both academies, and, while you will often find among them the products of private institutions, you will find that the vast majority come from the little cross-road country schoolhouse, whose simple-minded teacher—God bless her!—has had no other working capital at her command than a fair knowledge of the three R's, which she has conscientiously imparted to her pupils.

There is nothing either disgraceful or undignified about the three R's. Many eminent and good men and women have been able to read, write, and reckon fairly well. There is nothing disgraceful or undignified in teaching them. And yet how little are they taught!

I trust that you will not imagine that I am playing devil's advocate at the canonization of what in so-called "educational circles" are known as "educational utilities." Many of them are really most useful, if properly and thoroly

taught. But the tendency which exists to exploit the teacher at the expense of the taught inevitably results in giving the pupil the merest smattering of innumerable subjects; in puzzling his poor little brain without developing it; in confusing him with the higher branches of learning when he can scarcely read and write; in making him a little Jack-of-all-trades and master of none. Educate all you like and as much as you like—the more the better; but in doing so remember that there can be no education that is not built up on a solid foundation, the thoro mastery of first principles.

The chief purpose—for that matter, the only purpose—of public education—for it is with public education only that we are concerned today—is to make good citizens of the Republic. We have thrown our doors wide-open to the people of the whole world. Every immigrant who accepts our invitation and comes to us imposes upon us an additional duty which we cannot shirk. The problem is serious, but by no means insoluble. Its solution depends entirely upon ourselves. Every little offshoot of an immigrant, whether born here or brought here from abroad, has in him an unlimited possibility for weal or woe, dependent absolutely upon how we care for him. If he grows up ignorant of our institutions, ignorant of our customs, ignorant of our language, he remains a stranger in a strange land, alien alike in race, speech, and thought, one of a foreign people within our own. If, on the other hand, we educate him, teach him not only to read and write the English language, but, what is of even greater importance—an importance, I am sorry to say, often lost sight of—to speak and to think in English, then we have made of him a citizen of the United States, and endowed him with the priceless right of working out his salvation as an American.

Our duty by no means ends with the immigrant's child. We owe an equal duty to every boy and girl in the land: to see to it that every child whose parents cannot afford to give it an education is thoroly grounded in at least the rudiments of learning, is taught to study and to think, and is given the tools with which, if so disposed, it may still further educate itself. "Get-wise-quick" theories are as pernicious as "get-rich-quick" concerns. We cannot hope to produce scholars ready-made. If we can cultivate the habit of study and of thought, we shall have accomplished much.

The country needs men of thought and men of learning, and needs them badly. The man who thinks may be a greater patriot than the man who does. It has been said that no amount of sweetness and light will avail unless accompanied by action, which is the same as saying that the brain will be useless without the power of expression. We have deified action at the expense of thought. The good old motto, "Act in haste, repent at leisure," no longer stands at the top of our copy-books. We have so persistently preached the doctrine of action that we are almost convinced that any action is better than none. Not only have sweetness and light been discarded as effeminate fads, but thought and deliberation bid fair to follow them. "If you can't act well, then act badly; but, for Heaven's sake, act," threatens to become our guiding

rule. When Samson pulled down the pillars of the temple, he certainly performed a most vigorous action, and yet it may well be questioned whether a little more sweetness and light, and a little less vigor, might not have been as instructive and beneficial. Vigorous action is very admirable at times, but "look before you leap" is a safer rule of life.

We suffer from the spirit of unrest, which frequently prompts us to ill-considered, immatured, and thoughtless action, often merely for the sake of doing something. We are inclined to applaud the man who does, not so much because he accomplishes anything useful, as because he accomplishes something, be it good, bad, or indifferent.

This spirit of unrest permeates our whole national life, political, social, educational. Contentment bids fair to be banished from our existence. He who is content is sneered at as being without ambition, and yet ambition and hysteries are very different things. Contentment and happiness are synonymous, but we prefer to sacrifice both in a struggle for the unobtainable. Were our ambitions laudable, our state of mind would be most commendable; but unfortunately we scarcely know what we are striving for. We have forgotten that deeds are merely a means to an end. Having no particular end in view, we treat the deeds themselves as the *summum bonum*, the ultimate object of attainment.

You who are here today are charged in your life's work with one of the sublimest missions in the world: not to make savants or scholars, not to make writers of book or sages, but to make honest, thoughtful, God-fearing men and women. If you succeed in doing this, you will have proved the reason for your existence. If you do this, the rest will follow. What we need is not so much men who do as men who think; not so much unthinking men of action as thoughtful, earnest, conservative citizens. If by doing your duty you make such citizenship possible, you will yourselves be the purest, the noblest, and the best doers of deeds.

THE NATION'S EDUCATIONAL PURPOSE

ANDREW S. DRAPER, COMMISSIONER OF EDUCATION OF THE STATE OF NEW YORK ALBANY, N. Y.

Mr. President:

This day, a hundred and twenty-nine years ago, the thirteen British colonies south of the St. Lawrence river in America, thru their Continental Congress, solemnly published and declared to the world that they absolved themselves from all allegiance to the British crown, that all political connection with the state of Great Britain was totally dissolved, and that they were and of right ought to be free and independent states.

It was the faith-exacting step of brave and daring souls. It was the natural—yes, the necessary—act of men with the blood of the Puritans of

England, the Covenanters of Scotland, the Huguenots of France, and the Sea-beggars of Holland in their veins. It was even more natural and more imperative because of the manner of life and the independence of thought in the American wilderness. It was not an impulsive or precipitate act. It was the act of men who weighed the reasons, measured the results, and understood the consequences. From it there could be no retreat save in unthinkable dishonor. Once the golden bowl was broken, there could be no restoration of the unity of the Empire. Subjugation and vassalage were as utterly impossible as voluntary retreat was unthinkable. There was no middle ground of compromise, and only superficial thinkers could balance the possibilities of complete subjugation with those of successful revolution. Such a declaration, deliberately and solemnly made, for just cause, by such men, might be one year or forty years in fruition; but no one who understood the factors in the contest and realized the qualities in the Saxon race could seriously doubt what the end would be. Complete independence was inevitable if democratic government, as yet untried and essentially unformed, could stand the strain which war would put upon it. The alternatives were a new nation or unending insurrection.

War was, of course, the immediate sequence of the Declaration. Indeed, war was already well begun. With scrupulous purpose, but unnecessary care, the colonists had long before put the onus of the first shot upon the king's troops, thru a measure of rebellion which made sure that the redcoats would have to take the burden. With prophetic foresight and consummate skill, the provincials had used the fatuity of their enemy to make oneness of sentiment for the great Declaration. With a just intellectual valuation of the guaranties of the great charters of English liberty, they combined the heroic physical qualities which had breathed into those charters the living spark of eternal fire. Lovers of liberty, students of political history, masters of decent diplomacy, they were past-masters in the grim art of wilderness warfare.

When war was the only hope of English liberty, the fact that it had to be made against a dull and obstinate king, and a lascivious and recreant political cabinet, only strengthened the heart and sharpened the sword for it. Success might be delayed in coming, might wait in tears; but that she would bide her time and come in peace and glory by and by was as sure as the breaking of the day and the beaming of the sunlight. And glorious success did come after seven dreadful and fateful years.

The winning of such success did much for the men and women who gained it, and much for liberty as well. It not only brought an independent nation into being, but it opened an entirely new epoch in the development of political institutions. It gave new and distinct energy to the intellectual, industrial, and economic evolution of mankind. It opened the way for the compounding of a new nation and the outpouring of a new civilization in America. It did much more: it brought a new order of democracy, a new measure of opportunity, a new inspiration to high thinking and to splendid doing to all the people in all the world.

We may well celebrate the anniversary of the Declaration. It is the greatest day in English as in American history. Then it is the greatest day in all secular history. It is the day upon which the barons forced the old king to sign the Great Charter in the meadows of Runnymede. It is the day upon which Cromwell was made lord protector of England and the Puritan revolution reached its culmination. It is the day upon which the first plan of colonial union in America was adopted at Albany. It is the day upon which the American nation was born at Philadelphia. It is the day upon which Vicksburg answered back to Gettysburg that the Union should be preserved, and that the most beneficent democracy of the world should live to bless other generations of men and women. If the greatness of days is to be determined by what they signify to political and religious freedom and human progress, then the fourth day of July may well be observed in England and America and in all the world as the greatest day in secular history.

Our nation is the product of the two most remarkable human migrations and of the two most eventful compoundings of people known to the world—one in Britain and the other in America, a thousand years apart. Who shall say that we do not inherit the best blood of all the nations and the finest heroisms in all human history? Our fathers of the colonial era were the men of their race and of their generation who would be free. They had the qualities which would not be denied.

Nor is there essential difference with the men and women who in later years have come from over the sea to have part in the making of the greater nation. Ireland and Italy and the Scandinavian countries and the great German Empire have sent brawn and muscle and wit and art to uncover our resources, to quicken our industries, to warm the heart and liberalize the thinking of Puritanism. Skepticism has been obliged to recede before the demonstration that each new, great migration has brought a new element of strength and a new measure of completeness to the equipment of the nation. Puritanism—call it by what distinguishing name you will—was doubtless the most sublime force which ever developed among men for giving liberty and aiding learning. It was the honest, harsh, necessary instrument which alone could break out the roads over which democracy might advance. It gave birth to the British nation and to English freedom; it gave birth to the American nation and to a new measure of English freedom in America. But it must no longer be denied that the factors which have come into the life of the American nation since the high noon of the nineteenth century have, thru the mixing and thru what we have been jointly doing, produced a newer nation, with feeling and outlook, and power and purpose, which were beyond the ken of Puritanism.

Here we are, eighty millions of people. We are doing our own thinking. We are having our own will. But our thinking, when of general concern, is logical; our will, before it becomes the nation's will, is a disciplined will,

guided by reason, without malice and without fear, determined, yet tempered by goodness and justice and mercy.

Our thinking and our doing have prospered us. We have administered our material and intellectual estate. We have exploited our resources. We have developed industrial energy and inventive genius. We have taken proper advantage of our commercial situation. We have been apt and exact in our scientific progress, and, what is better, we have applied science to the life of the multitude. We have achieved a high order of technological skill, and, what is better, we have not been wanting in the courage of our engineering, or lacked in the power to consummate great undertakings. Almost spontaneous wealth has become our greatest menace, but we give promise of strength to cope with it. In letters we have been eminently respectable and are fast accumulating a distinctive national literature. Exacting study and free discussion make us experts in political philosophy. The manhood suffrage encompasses our public service with some difficulties, but we are gaining in system and growing in knowledge thru the doing, and in the end, on all matters of large import, we are secure. Our propensity for organization is strong, and at times amusing; but our institutional life is singularly virile and effective. We are not quarrelsome. Our good nature and sense of humor are marked. They relieve the strains upon democratic theory, help on community business, make for comity between the states, aid national unity, and promote intellectual good fellowship, in a measure which is useful and unique. The wit and good nature of our maturer years, associated with our marvelous growth in population and strength, with our logical progress in democratic theory and our unhesitating faculty in mobilizing the common power, with our veneration for freedom and our sense of moral right, with our sincere desire for peace and our anxiety to settle differences by discussion, concession, and the rule of right and law, and with our undoubted readiness to meet force with ample force when the stern need comes upon us, have given us an attitude of prominence and a measure of influence among the nations which we did not even know we wanted, and which no one foresaw.

But the nation is resourceful and rises to occasions. It accepts the logical tho unforeseen consequences of its situation, of the form of government which it believes has made it great, of the political philosophy by which it is known of all men, and of the world-relations which its career has put upon it. It does not seek to obtrude its beliefs upon other nations, but it will not recede from its beliefs before any other nation. It distinctly avoids entanglements, but it will not refuse moral encouragement to other peoples that will seek liberty and independence. It expects to control the western continent in the interest of freedom and progress, because it holds that such control is essential to its own security and the full fruition of the ideals for which it stands. In the rescue of Cuba it struck the high-water mark of self-government for the good of mankind. It will seek no territory for the sake of empire; it will oppress no people for the sake of population; but it permits none to thwart

the end for which it stands, and it refrains from no act which may be consequent upon its logically unfolding life.

Our nation has by no means reached either the bigness or the greatness which its common sentiment anticipates. Its people have not been conspicuous for blindness or for dullness. They know that the lives of nations are not brief, and that the laws of nations are unceasing. They know that our territory would sustain many times our present population, and they expect that many, many millions more will come to the freedom which the Republic offers, and the institutions which its freedom has developed. Their anticipations would not be severely shocked if the flag of the Union should yet cover all of the land from the Arctic ocean to the Isthmus of Darien, with here and there another island on the great high seas. They are by no means eager for this. Indeed, they face with solicitude what seems to be the inevitable advance in population, in territory, in domestic administration, and in international responsibility.

The nation is being sobered by its present and future responsibility in view of the self-conscious power of its democracy and of the manifest thought of its citizens that all men and women in all lands ought to have the opportunity to learn the art of governing themselves, and that, as fast as they do learn it, self-government ought to encompass the earth.

The nation does more, and its life depends upon it doing more, than merely meet the emergencies which its own evolution and external conditions impose upon it. It is a purposeful nation. It has always faced the East. It has always worn its heart upon its sleeve. It has always planned for the future. With the growth in material and intellectual estate, with the reaching-out of the common sentiment for the best opportunities for everyone, with the new significance of our political theories in the affairs of all men, wherever they may be—there have come purposes and policies which are new to our own thinking, and certainly new to the thinking of the other peoples of the world.

The greatest, the very greatest, of these, for obvious reasons, are those which concern universal and liberal education. And a great national association of teachers, assembled on Independence Day in overwhelming numbers from every state, may well reflect upon the concept which it entertains of the purposes of this mighty people toward popular education. With knowledge of the utter inadequacy of a single mind for such a task, but gathering courage from the fact that I am only to formulate and not attempt to create, I submit these observations concerning the educational purposes of this free-thinking but sound-thinking democratic nation.

Schools are not of recent origin. Learning, speaking relatively, is as old as the race. But any definite national purpose to erect schools for distinct national ends is comparatively new, and the self-conscious generation of a great national system of education by a people for their own upbuilding and for the greatness of their nation has come within the memory of living man and is essentially peculiar to this country.

In spite of threadbare claims, the original settlers in America held no settled purposes concerning education which can be differentiated from those of their home lands. How meager and undefined the educational purposes of the mother-countries were the student very well knows.

Before independence, American schools were dissociated and fragmentary. There was no educational system. The schools, like those over the sea, distinguished between what were conceived to be the simpler needs of the peasantry, and the necessity of classical training of the higher classes for service in the church and state.

Independence did not of itself fertilize, and did not reflect educational purpose. Neither the Declaration, nor the Constitution a dozen years later, carried any reference to it. This was not because the management of the schools had already come to be a function of the several states, and they were unwilling to concede that it was a function of the nation. The matter attracted no attention. It was scarcely referred to in the congressional discussions. Nor was this in turn because the men of the Continental Congress and of the Constitutional Convention were illiterate or were indifferent to learning. They averaged the best scholarship among public men in their generation. Half of them were graduates of colleges. As you, Mr. President, have pointed out in another place, the dominant personalities in the Constitutional Convention were Alexander Hamilton, of Columbia, and James Madison, of Princeton, universities. Education had no part in the discussions, and found no place in the Declaration or in the Constitution, because education was held to be a matter of only local and private concern, and not a function of organized government at all.

Nor was the federal Constitution alone lacking in educational initiative. The first constitutions of the original states contained only slight references to education. In Georgia, North Carolina, and Pennsylvania the legislature was enjoined to see that one or more schools were erected in each county. The Massachusetts and New Hampshire references were more comprehensive, but less definite. Massachusetts made detailed provision for Harvard College. The North Carolina and Pennsylvania articles were identical and enjoined that the legislature should so arrange that the public "might be enabled to instruct youth at low prices." This was in conformity with the common thought that it was not the function of the state to maintain schools, altho the state might help the people to do it economically. The constitutions of the eight other original states made no reference whatever to schools or to education.

It would be interesting to follow the statutes as well as the constitutions of the original states for educational references. We must for now be content with the statement that they were meager indeed. Old usage, the foreign influence, the fact that thought would run in established grooves, the distances and the difficulties of communication, made the evolution of educational purpose a slow and laborious one. The fathers did not bring it all with them

when they came; it unfolded very slowly: England and America in the first half of the last century were, educationally, not so very far removed from the times of Elizabeth; educational outlook and purpose grew out of our democratic life, and the stronger and freer that life became, the more rapid and the more virile did it grow.

As democracy really became free, and as the conventionalities of the mother political system came to be really obsolete, the educational purpose gained volume and force. It is the operation, not the mere declarations or enactments, of our governmental system that has developed popular purpose. As the people moved west, they managed their own affairs with added confidence and more freely, and as rapidly as they did the educational purpose grew decisively.

While the first constitutions and laws of the original states made little or no reference to it, those of all of the newer states were alive with it. They were not only alive with provisions for the elementary schools which should be common to all, but for higher schools, colleges and universities, which should also be common to all. And while the eastern states do not know it, and are stolidly determined that they will not learn it, there is no doubt whatever about the public educational purpose having its most luxuriant development among the people who exercise their political power more freely and more uniformly in the newer states of the Union. Wherever caste has been most completely overthrown; wherever the aptitude for self-direction has had its freest growth; wherever the fundamental principle of the Declaration of Independence, that all men are created with equivalent and inalienable rights, has had its largest acceptance, there the educational purpose of America has had its best exemplification, and there it has borne its most abundant fruit.

It is hardly too much to say that the first educational declaration, which was really more serious than ornamental, in American law, was that in the ordinance organizing the old Northwest Territory; and that the initiatory step in the public policy of setting aside the common property for popular education, which was really potential and continuing, appears in the uniform legislation of the newer states which set aside a section of land in every township for the aid of schools.

As more recent immigration has given unexpected strength and completeness to the equipment of the nation, so recent immigration has given a new setting and a new meaning to the educational purpose which flickered feebly in the minds of our fathers of the Revolution. Some new immigrants have appreciated our privileges better than some of us have ourselves. Ireland and Italy and France have enriched our scheme with wit and rhythm and color. Scotland has added moral fiber and mental virility. Norway and Sweden and Denmark have sent agricultural insight and domestic thrift. The great German Empire has contributed scientific method, intensive mechanical skill, and splendid energy and stability, to the conception which was begotten, and then for a time held in check, by English and Dutch pioneers.

The educational purpose of this nation is a law unto itself. It is a force which all must regard. It acts upon government. It does not desist, it is not discouraged, when government hesitates or statesmen cannot see. It is independent of dogmatism, of politics, of racial prejudice or religious bigotry, of language, of state or sectional lines, of partisanship or exclusiveness, of selfishness or sectionalism in every form.

Old Andrew Melville, to the king's very face, told James VI.—he who hunted our Pilgrim Fathers out of England: "There are two kings and two kingdoms in Scotland, and in one of them James is not a king, nor a lord, nor a head, but only an ordinary member." So we say there are two governments in America. One is strictly technical, is exactly regulated by written laws, is definitely responsible to the political sentiment of the country; while the other is a pervasive, universal democracy of sense, of moral purpose, and of learning, with an unwritten, free-flowing constitution which shapes government to its purposes, and in which presidents and governors and senators are weighed by the same standards as all the rest.

Then I may well—parenthetically—express the satisfaction we all have in the fact that the mayor of our greatest city, whom we have just listened to with so much interest, has citizenship in the democracy of learning, is not only the son of a respected commander of the Union armies, but a son of Princeton University as well.

And I may go farther and voice the satisfaction we all have in the other fact that the present chief magistrate of the Republic, whom we shall hear at this session, is a foremost son of our foremost university, a hard student and a fine scholar, a prolific and forceful writer, our most accomplished public speaker, a moral force of unprecedented readiness and effectiveness in the presidency, a true exemplar of the nation's strength, and a splendid evangel of the nation's prayer for peace and truth thruout the Union and thruout the world. Without any interest in partisanship, and without any fear of official power, the National Educational Association, on Independence Day, may with all propriety express its satisfaction that the scholarship, the moral sense and the chief magistracy of the nation meet so splendidly in the person of Theodore Roosevelt.

The educational thought of America has no inclination toward socialism, if socialism means paternalism. It holds that the Declaration decrees equality of right under the law, and not equality of result in spite of moral and legal right. With legal right it makes personal accountability fundamental in our political system. It opens the door of opportunity to all; but it takes from no man the fruit of his energy and endurance, of his knowledge and skill, of his patience and his thrift, to repair the just consequences of another man's worthlessness. It not only accepts, it is the surest bulwark of, the fundamental principles of our democratic institutions; it approves the fabric of laws which the wisest men of the race have been a thousand years in the weaving, and it is not disposed to avoid the operation of those higher laws which are from everlasting to everlasting.

There is no smack of charity about the public educational system of America. It is for all. It is the universal and inalienable right of every man and woman, every son and daughter of the realm. It is the cornerstone of our scheme, the essential factor of our governmental plan.

If there are children in the schools who need help; if there are others who are not in the schools because they need help, let them have the aid of private or public charity. That is not lacking: men and women who administer it are experienced in dealing with the needy. Aid so extended will not breed pauperism, and it will not put the school system in a false light. The public schools are to train virile men and women, not to support the thriftless or the unfortunate. People are to be made to support themselves if they may; if not, they are to be helped, as a boon, not as a legal right. It is as fundamental that people shall suffer the inevitable consequences of their own misdoing, even of their own misfortune—except where our moral sense relieves them—as that they shall have opportunity, and have their reward for making the most of opportunity. One principle is the necessary complement of the other. Education is an inalienable right in America. It is the essence of equality in opportunity. Support is not a legal right. The two should not be confused in the common thinking. The schools have all that they can do. It would be most unwise to weight them with any unnecessary burdens, or involve them in popular misapprehension thru confusion over fundamental principles. Let the schools train. Let private philanthropy and organized charity give such support to the needy as good sense and good fellowship will justify.

The educational purpose of the nation reaches forward to the very mountain tops of human learning. Be not deceived—it is not only for a free elementary school within reach of every home, but for a free high school in every considerable town, and for a free university in every state. It, of course, accepts the endowed universities as component parts of the educational system. They afford a fair realization of its ideal in some states; but it insists that such shall articulate with the public secondary schools and, in one way or another, assure every boy and every girl the true chance which the plan and the progressive thought of the nation guarantee. If not, then it insists that the states shall do this thru higher institutions of their own.

It does not insist that everyone must go to the higher institutions. It recognizes wide differences in the circumstances, the work, and the outlook of men and women. It distinguishes between the kinds of learning which are best suited to differing and inevitable conditions of life. It does insist that the political security and the economic power of the nation rest upon the moral sense and the common disposition to produce, and not exclusively, nor even very largely, upon philosophic theory, upon moneyed wealth, or upon a mere knowledge of literatures or of the fine arts. Longing for culture, it knows that the only true culture must result from doing, and that polish at second-hand, transmitted without labor, is neither deep nor true.

It does not accept the rather general implication that honor and useful-

ness depend upon intellectual pursuits. It does not encourage all children to seek them. It would make the work of the schools aid the industries, and it would give quite as much prominence and quite as much honor to manual skill as to intellectual occupations.

It stands for a balanced educational system—the best and broadest that can be made, and therefore good enough for all, in which everyone may find what he will, may go as far and as high as he will; and not for a system which dignifies any interest or aids any class as against any other. In a word, it believes in schools of every grade and for every purpose, with equality of opportunity and absolute freedom of selection for all; and with special privileges for none.

We hold all endowed institutions of learning as part of the public educational system of the country. We look upon private and proprietary institutions, if moved by correct influences and managed by proper methods, to be deserving of aid and commendation. We give to sectarian and denominational schools our fraternal regard and professional co-operation. We express our regret that any may think it necessary to decline the privileges of the public-school system and maintain schools at their own expense, on conscientious grounds. If we cannot accept their thought, we will recognize sincerity wherever it is convincing. We will articulate, as far as we may, with every educational activity calculated to quicken the nation's moral sense or uplift the nation's intellectual life.

It is the overwhelming, and we believe the settled, American opinion that neither the federal power nor that of any state can sustain a business relation with, or give financial aid to, or divide its responsibility with, any class or interest not common to every citizen and every section; but that affords no ground for irritation between any class or sectional interest on the one side, and any phase of the state or federal power on the other. Indeed, if the state cannot give its money to expensive work which enters into the building of the nation, it may well give to that work the fullest measure of moral encouragement which may be welcome. In a word, we can give special aid to none as against another, but we will go to the verge of fundamental and constitutional principles, with all toleration of opinions and all true-heartedness, to bind together all of the moral forces and all of the intellectual activities of all sects and parties for the further upbuilding of the nation.

We recognize the public obligations to afford information, to extend culture, and to aid self-improvement outside of the schools. There has been no more radiant sign of encouragement in our history—none, indeed, in any history—than the manifest eagerness of the adult masses for knowledge. We hold that sound policy will give to libraries and study clubs and all the means for study at home an unstinted measure of generous public aid and encouragement. Whatever adds to the real enlightenment of the multitude, adds to the happiness, the strength, and the security of a republic which rests upon the common intelligence and equality of rights for all.

It is fundamental in America that women shall have the same educational opportunities as men. The opportunities are not to be merely equivalent in the opinion of men; they are to be identical when demanded by the common thought of women. All offerings are to be open, and the right of election is to be free. The sentiment is growing that the education of men and women must be in the same institutions, if the opportunities are to be even; that there is no moral reason why this should not be so; and that good morals, good sense, and the soundest educational ends are promoted by having it so. It is practically universal in the primary and secondary schools. There is yet some prejudice against it in the older states, concerning the colleges and universities, but logic, justice, and experience are ripening sentiment and concluding the matter.

No other country, and no other age ever dreamed of such private benefactions to learning as we have become accustomed to. The common impulse honors the benefactors and holds the gifts to be sacred and inviolable public trusts. They must be neither impaired nor misdirected. The laws must assure the ends for which they are created; public sentiment must see that trustees execute the purpose of the givers with exactness. No one can foresee the influence of these benefactions. They will gain great ends which are often outside the legal powers of organized government. They will round out and complete the undertakings of government. They will ornament and embellish the educational structure which government erects. They may experiment in fields where democracy must hesitate until the ground is proved. The public educational system will aid them and be aided by them. Combining unprecedented public purpose and public powers with unparalleled private beneficence, the United States will develop the most universal, complete, and potential scheme of education that the wisdom and great-heartedness of man have devised.

Of course, our democracy has its difficulties. Equality of opportunity, from the first school to the last one, with continuity of courses from the elementary work in the primary schools to the research work in the universities, presents difficulties which do not confront the educational system of any other land. It is far easier for a minister of education without interference to arrange and administer all this than it is for a whole people to do it. But it is better for the people to do it. And the people tax themselves with doing more than ever confronted any minister of education. The zeal of the people, with fullness of opportunity, often puts more upon the teachers than they are able to do completely. There are seeming uncertainty and indefiniteness. But we must not forget that the people grow in strength and stature thru doing things for themselves. It is the fullness of opportunity and the self-conscious power, and the knowledge that consequences may be corrected if need be, that are rounding out the educational system to its unprecedented proportions and its unparalleled effectiveness. We will go on doing things, meeting difficulties, correcting mistakes, bringing the perfect figure out of the barren

rock, and gaining the splendid ends for which the people sustain the schools.

We are never to forget that the schools are not only to educate people in order that they may be educated, but to educate them in order that they may *do things*. They are to be trained for labor and for effectiveness. We need to have things done, and we expect to make greater men and women thru the doing. Thru the training they are not only to unlock the truths of science, but apply them to the agricultural and mining and animal and mechanical industries; they are to think out economic principles, and understand the underrunning currents of foreign commerce and world-relations; they must know the underlying principles of finance, and apply them to personal and public credits; they are to abound in toleration, and work with others in the institutions of society; they are to stand for knowledge; they are to respect labor; they are to exact the right and do it; they are to bring out the resources, help the thrift, stir the humor, enlarge the generosity, increase the self-respect, and quicken the sense of justice of the nation. We want both moral power and earning power. The schools must help to make the pupils and the people know that the attitude of the Republic in the world is nothing different from the attitude of the individual units which make the nation. There is no one-man power, no ministerial power, no money power, no specious but fallacious philosophy, going to rule this country. This is a democracy—native energy and discussion will point the way.

The educational purpose of America is sharply distinguished from that of other lands. The essential difference comes thru our democracy.

The English purpose would have every English child read and write and work. England has simple but effective elementary schools for the peasant class. All peasant children go to them. Altho they know nothing of American opportunity, the percentage of illiteracy is lower than in any American state. So it is in the leading countries of Europe. We have something to learn and something to do about that. Of course, they have advanced schools for the higher classes. There is no educational mixing of classes, and no articulation or continuity of work. The controlling influence in English politics is distinctly opposed to universalizing education, thru fear of unsettling the status and letting loose the ambitions of the serving classes. The placidity of the social organization seems of more moment to them than the strength of the empire.

So it is also in France. Notwithstanding the republican form of government, the thinking of a thousand years is controlling. With less native sense and less respect for work, with more inherent buoyancy and more art feeling than in Britain, the children of the masses are trained for service—a humble service, tho possibly somewhat higher than across the channel. They are trained for examinations and for routine rather than for power. With less fiber and substance in the character commonly trained, the result is not more reassuring.

There is more to admire in the German purpose and plan; for fiber and quality and ambition and determination are not lacking in the nation, and the Kaiser knows that the material strength and the military power of the German Empire rest upon the intelligence of the German masses and the productivity of German labor. Splendid as that is, it is not enough in American eyes.

We have a fast hold upon all that, and more. We want more than industrial strength and military power. We do not know all that is to be known; we may learn something from every other system; but there is an essential and universal educational purpose in America which distinguishes our system from all others. We will have no classes in education. We are for the equal chance for all. Even more—much more: We are for moral greatness, and it is the national belief that the true greatness of the nation and the welfare of mankind depend not only upon giving everyone his chance, but on aiding and inspiring everyone to seize his chance.

We have no fear of consequences. We rest our future upon the faith that the happiness and the beneficent influence of America must rest upon the average of enlightenment, upon the measure of serious and potential work, and upon the attendant level of moral character, attainable by all the men and women who live under our flag.

The corner-stone principle of our political theory coincides absolutely with the fundamental doctrine of our moral law. All men and women are to be intellectually quickened and made industrially potential, to the very limits of sane and balanced character. The moral sense of the people is determined by it, and the nation's greatness is measured by it. Before this fact the prerogative of a monarch or the comfort of a class is of no account. Before it every other consideration must give way. It is right here that democracies which can hold together surpass monarchies. It is for this reason that the progressive will of an intelligent people is better than the hereditary and arbitrary power of kings. And a sane and balanced and boundless educational system, with a base which is broad enough and a peak which is high enough, will fuse the elements of population and enable a democracy of English speech and sufficient Saxon blood to hold together.

All Americans are optimists. There may be a few stopping with us who are not—but they are not Americans. The expectations of the nation are boundless. We will fix no upper limits. Those expectations are not gross: they are genuine and sincere, moral and high-minded. They are the issue of a mighty world-movement; the splendid product of the best thinking and the hardest struggling for a thousand years.

Our critics say that we are boastful. We will not put them to the trouble of proving it: we admit it. It is a matter of definition or of terminology. We have self-confidence born of knowledge and of accomplishment. We know something of the doctrine of constants. There is logic which is as sure as the sun. The nation believes in the stars which are in the heavens, and it also believes in the stars which are upon the flag. It knows its history;

it understands its constituent elements; it has definite purposes; it expects to go forward; it believes in itself.

It holds the essential principles established in the great charters of English and American liberty to be its particular heritage. It is enlarging, extending, clarifying, reaffirming, and transmitting them. It is putting its whole self, its political power, its sagacity, and its money into the work which it has set itself to do. Of course, it has its perplexities; but it is without apprehension. We have foolish and troublesome men, and some bad and pestiferous men, among us; but the great heart of the nation is conscious of its own rectitude. It will not fear and it will not hesitate. It will act upon its own thinking. It will mend its mistakes. It will not merely stand for security: it stands for liberty and for doing. It is not for the present alone: it is for the future. It will takè care of its own. It will not hide its light. It will not meddle with other people; but it will deny to no men and women who would uplift themselves such measure of sympathy and encouragement as it may give. Its conception of national integrity is such that it must frankly say what it thinks. It readily discloses its political philosophy and its national purposes and policies. It is educating the world in publicity and frankness. This may be called boastful by a stranger. If it is boastful, it is not foolishly boastful. The recording angel will look leniently upon it.

None will deny now that the real growth of the nation must be in soberness, in coherence, in balance, in moderation, in reserve power, in administrative effectiveness. Growth in numbers is inevitable. Growth in moral sense and in respect for law must surpass the growth in numbers in order to cope with it.

With sober knowledge that all real strength must come thru work, and all true growth must come thru service to its own people and to all peoples, the nation once more celebrates the greatest day in the history of political institutions, by dwelling upon its splendid and eventful past, and by dedicating itself anew to the development of a future which shall prove its capacity for the trust which its history has bequeathed to it.

It knows that its purposes are to be gained thru the greatest good to every individual man. Not in the old Pilgrim at Plymouth; not in the minute man at Lexington green and Concord bridge; not in the citizen-soldier of the Civil War; not in the college boys or the farmer lads who fought side by side at El Caney and San Juan; not in the veterans of the Ninth Regular Infantry who pushed thru the heat and filth of China to release the American legation from the horrors of the Forbidden City, were the will, the power, and the purposes of the nation so splendidly exemplified and so exactly disclosed as in its unfolding plans for universal and unlimited education.

CHILD LABOR AND COMPULSORY EDUCATION—THE SCHOOL ASPECT

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In all ages and among all peoples men have talked much of their own rights and of children's duties; we are beginning to reverse the terms and assert children's rights and men's duties. The assertion of rights is in itself a sign of trouble. Trouble causes it, and trouble follows it. It means war, and there never can be local order or universal peace until every human being has all that belongs to him and no more. Meantime, society must occupy itself in finding out what does belong to its different members, and keep on fighting.

It is not creditable to either modern civilization or modern Christianity that, after seventy-five years of fighting the wholesale exploitation of child labor in mines and mills, we should still find the enemy in defiant possession of so many intrenched positions, and defending them so successfully. Tho the cry of the children has been sounding in our ears for two or three generations, it is still true that every discovery and invention which modifies any industry so as to make child labor profitable makes it inevitable. Society has not yet learned that

The child's sob in the silence curses deeper
Than the strong man in his wrath.

That the strong man does not now anywhere have it all his own way is reason for thankfulness and for hope.

The fundamental postulate of this subject of child labor and compulsory education shapes itself in my mind somewhat as follows: Every child comes into the world by no voluntary act of his own. In the world he finds himself subject to inexorable physical laws, whose penalties work automatically and pitilessly. He finds himself, too, subjected to a multitude of social obligations equally inexorable, and he finds society organized with great complexity to enforce these obligations. Born with capacities for enjoyment lower and higher, he finds that the road to the highest enjoyment is a straight and narrow way, to find and to pursue which demands the most active and highly trained intelligence.

When he comes into the world, this intelligence is only a germ—a possibility. Its development is wavering and uncertain. At best it is slow; it may be arrested at any stage; it may never begin. His intelligence is developed, first, thru his own experiences, and, second, thru the experiences of the race. In this process he needs help—instruction and guidance. His own experiences need to be interpreted to him, and the experience of the race made known to him.

Thus two inalienable rights of the child reveal themselves. He has a

claim upon the world for time, and a claim for instruction: time in which to multiply experiences and to co-ordinate them; time to look about him and discover what kind of a world he has been born into, what kinds of things are in it, and what they are for, what kinds of people are in it, and what they are for; time to find his way and to become way-wise; or, to change the figure, time to get his bearings and to learn the ropes. Besides this, he has a claim for time to learn what people before him have learned, so that he may come to his struggle for existence with his intelligence broadened and quickened by having come into touch with the vital social forces that have been active in the world thru all time.

He has a claim to instruction, and to guidance while he is being instructed, and to intelligent instruction and intelligent guidance. His claim includes, first, instruction as to himself, his own nature and powers and needs, and guidance in the use of his powers and in the satisfying of his needs. It includes, second, instruction as to the world about him and as to his relation to it, how to use it, and how to find his way in it. It includes, third, instruction and guidance in finding and using most expeditiously and profitably the knowledge which has been acquired and stored by the generations which have gone before.

Were these two rights, which to us seem so self-evident as to need no public declaration, everywhere recognized and conceded, there would be no need of this discussion. But because they are not everywhere recognized, and because the child is too ignorant to declare them and too feeble to maintain them, a third right appears. The child has a right to protection in his rights.

His rights are paramount because he has everything at stake. No other claims can take precedence of his. They may be maintained against the world.

When we have brought ourselves to assent to all these propositions, our real difficulties begin. We say the child has a right to time. To how much time? He has a right to instruction. To how much instruction and to what kind? He has a right to protection. From whom does he need protection, and by whom and how should it be afforded?

He needs protection against himself. Were he the child of a savage, he might be safely left to follow his own will. Life about him is so simple, nature is so open, that by observation and imitation he might come easily and early to know all of life that he needs to know for his comfort and happiness. Unfortunately for him, into whatever social state he is born, no matter how complex the civilization, he comes into the world with the same equipment of primitive instincts as if he were a savage. But for civilized life, these are inadequate and destructive. His wayward, uncalculating impulses must be restrained until he can learn why as well as how to restrain himself. The child has a right to be governed. To leave him to himself is cruelty.

He may need protection against his parents—sometimes against their indifference and neglect, sometimes against their physical abuse. With this

phase we are not now concerned. He needs protection more often against their ignorance and selfishness. Their own views of life may be so narrow, and their power to reason so rudimentary, that they may, without knowing it, sacrifice their children to their own comfort or ease. It is at this point that we touch most fundamentally the subject of child labor.

Wherever we find children denied prematurely their right to time and instruction, we find as the primary cause the ignorance and the selfishness of the parents. In every investigation into child labor it is found that the motive of the parent is to relieve himself from labor. Cases are common—among certain nationalities they are almost universal—where the multiplication of children is for the avowed purpose of increasing the productive labor of the family, and thereby relieving the father more quickly from the necessity of labor. There is evidence that, as the proportion of the family income derived from the labor of children increases, the earnings of the father decrease. A young Italian girl who asked for an employment certificate gave as a reason that her father was getting too old to work. He was forty-two.

Whatever may be true in the country and on farms, it is certain that in factory towns, where child labor is depended on for family support, race-suicide is not delayed by large families.

To this crime against childhood the parent is tempted by the greed of employers. They furnish the opportunity which in the North has drawn, as by magnetic attraction, the poor and ignorant peasants of Canada and Southern Europe, and in the South the equally poor and ignorant families from the farms and the mountains. Against this conspiracy between employer and parent the child is helpless. Only society, by means of laws carefully drawn and rigidly enforced, can secure him his rights. To such legislation and to such enforcement society is drawn by its own interest, and compelled by its highest obligation. Mercantile interests can look out for themselves, but the children must be protected by the state.

"Business," said Talleyrand, cynically, "means other men's money." Too often it means other men's bodies and souls.

American conditions nowhere furnish a parallel to the revolting revelations made by the parliamentary commission reports during the last century. Such indecent cruelty would not now be tolerated anywhere; but the same spirit is back of the scanty schooling allowed, the low age limit tolerated, and the exemptions of favored industries.

The obligation of the state has come to be recognized in all European countries, and in most of the states of our own country. The exceptions are so few as to be conspicuous, and the absence of child-labor laws in any state gives to that state an unenviable distinction. The history of child-labor legislation shows a steadily rising standard of judgment as to the rights of the child a continuous quickening of the public conscience in regard to those rights, and an increasing rigor in the effort to protect them. For example: In Massachusetts, beginning at a time when a child of any age might be employed

in any industry any number of hours a day and all the time, we have seen an age limit fixed successively at ten, thirteen, and fourteen years. We have seen employment denied, first, in manufacturing and mechanical industries, and, later, in mercantile establishments. We have seen the hours of labor limited, first, to ten hours a day, and then to fifty-eight hours a week. We have seen the required schooling rise from twelve weeks to eighteen, to twenty-four, to thirty-two, until now there is an average of thirty-seven. It has taken seventy years to bring all this about.

The same evidence of a rising tide of righteous public sentiment exists in the legislation of nearly all the states, some of which now surpass Massachusetts in particular features of their laws. A summary of the whole field shows that every stage of this progress is still represented in some state. There are still low age limits, still weakening exemptions, still favored industries, still scant schooling, still inadequate means of enforcement. Legislation lags, and execution is feeble.

The time given to children to call their own, in which to equip themselves for the battle of life, in the most advanced communities has reached a maximum of fourteen years. This is low enough for any community, and, wherever there is a lower limit, all the social forces should combine to raise it. In my judgment it is also high enough, at least for the present. In fourteen years a child of even moderate ability, in a community which furnishes adequate school facilities, should have acquired a good elementary education, broad enough and thoro enough for him to build upon by voluntary effort such superstructure of more advanced culture as he is inclined to.

This may easily be shown by a brief analysis of the modern elementary-school course. Such an analysis justifies as not extravagant Horace Mann's declaration: "The common school is the greatest invention of man." In the first place it secures the formation of certain habits which underlie all modern social relations: punctuality, attention, obedience, order, and industry. This function of the lower school has been so luminously treated by Dr. Harris that it needs only mention here. The wilful, wayward, intermittent impulses of the child which, unchecked and undirected, would leave him a savage in the midst of civilization, a prey to his own passions and to the passions of others, are turned into self-directing forces by which the child becomes able to find and make his way thru the mazes of life. The fixing of these habits involves some of the most profound psychologic changes which take place in human life.

Secondly, the elementary school equips the child with the universal instruments of social intercourse: reading, writing, drawing, and a knowledge of numbers. Having these, in the social statistics of all countries, a person is not classed as illiterate. The Scotchman was right when he declared before a parliamentary committee that if a man knew the twenty-six letters of the alphabet, he had the key to all knowledge.

Once the elementary school undertook to do no more than to furnish these

instruments, and, having them, a child might find his way alone. Now the school does much more. It opens doors for the child, and, before he has reached the age of fourteen, it has opened these doors wide enough, and held them open long enough, to have furnished knowledge, to have created interest, and to have developed tastes.

It opens a door into the world in which he lives. Thru his study of geography he gets a glimpse of men and things outside his immediate surroundings. He has his horizon enlarged, his data for judgments increased, his interests and sympathies widened, his own place in the world made more clear. By all these means he is made more fit to go alone.

Another door is opened into the world of the past. By his study of history he learns to interpret the present in terms of cost. He acquires standards of value of human effort in industry, in the arts, in social improvement. By what men have done he learns what men can do. And he acquires standards of conduct as he forms the habit of looking at the moral aspect of human relations. All this fits him to fill his place in society worthily.

The elementary school does more than to give him the tool called reading. It shows him how to use it. It opens a door into the world's literature, and gives him a tempting glimpse of its variety and attractiveness. A well-taught child in a well-ordered school should, by the time he has reached fourteen, have the inclination and ability to use the facilities for culture which a public library affords. Such a child needs no compulsory continuation school.

Besides all these things, thru the school supplementing the home or without it, the child is able to make some moral distinctions, and he has acquired some sense of moral obligation. He knows the difference between truth and falsehood, between mine and thine, between fair dealing and trickery. He knows honor from meanness, and has a keen sense of justice. All this is no mean equipment for the young knight as he goes out to make his way in the world.

If parents and schools have done their duty by him, another door has been opened—the door into industrial life; for a child has a right to be taught to work with his hands, and to be made to work as a part of his preparation for self-support. This is not merely or chiefly that he may acquire manual skill, tho he will find that useful; but that he may learn the social use of labor, and begin to feel, before he can see, that labor is the tie that binds men together in the family and in the state.

The child has a right to be taught how to be useful, and to be increasingly useful as he grows in strength and intelligence. He has a right to know the pleasure of service and to feel the obligation of service. He has a right to have some place made for him in the industrial life of the family.

The attitude of society toward childhood in this respect seems radically wrong. A child is considered a gift of nature, like a piece of land, or a grove of trees, or a spring of water, or a running brook, or a deposit of mineral ore, which the owner may utilize or not, as he pleases.

If he is poor, he may cultivate the land to feed his family; he may tap the trees for sugar or burn them for fuel; he may bottle his spring water and sell it for therapeutic purposes; he may dam his stream and make it run his mill; he may dig up his clay for bricks or his coal for fuel, or blast his ledges for marble or granite.

If he is rich, he may do none of these things. He may allow his land to remain untilled, his spring to bubble thru its sandy bed, his brook to chatter over stony ways or bicker thru the meadows, his fields of clay and his ledges of rock to remain untouched, finding in the picturesque beauty of their natural wildness gratification for his æsthetic sense; or, if less refined, he may get a lower sort of satisfaction from the mere fact of possession.

So children are regarded, and so they are treated. If the parents need the child's labor, or think they do, in the house or in the shop or on the farm, he is given work to do. If the parents can afford to do without it, or think they can, the child grows up with no industrial training, and, therefore, with no insight into the actual working of the machinery of daily social life in the family and outside.

In one case he helps to drag the family chariot; in the other he rides with the family in the parlor car. The cases are alike in that in neither is the question asked: What is best for the child? In one case the child is made to work, not because it is good for him; in the other, he is kept from work, altho it is good for him.

This takes us over to that other question proposed earlier: To how much instruction, and to what kind, has the child a right? I answer: To all that training in habits, to the use of all the tools, to the opening of all the doors, to all the most generous work of the best elementary schools; and, in addition, to so much instruction and training in the elements of domestic and mechanical and agricultural and commercial labor as the boys and girls used to get in the home and the shop and on the farm before the demands of the school upon time and strength of the children became so exclusive.

The school has no just claim upon all the time and thought of a child of any age, unless, in addition to its own proper work, it is forced to do the work of the home.

If in the home there is no opportunity for the child to learn the use of his hands, then he should learn in the school shop and school kitchen and school garden; but if he does learn to use his hands there, he should learn the more important lesson that in working with his hands he becomes a useful member of society, a giver as well as a receiver. He should learn that the dignity of labor consists in the service that it renders.

With such training continued until the child has reached the age of fourteen, he may leave school with a fair prospect of being able to make his way in the world, to utilize later opportunities to expand his intelligence and to increase his usefulness and his happiness. Given all this, the child cannot complain that he has been unjustly treated.

But when we have said that fourteen is a suitable limit for general child-labor laws and general compulsory schooling laws, we have not said all. We have said only that this is the least that society should insist upon doing for all its children.

We know that beyond the field of the elementary school there are opportunities for quickening and expanding the intelligence of which it would be for the interest of children to avail themselves. But these new fields are very wide, and there is no one now wise enough to decide upon a course which, for their own good and that of society, all children should be compelled to take. It is easy to say that the age limit for employment and school attendance should be raised to fifteen or sixteen years. But no one has yet ventured to indicate just what should be done with the added year or years. To compel all children to take the course in a typical American high school would be cruelty for some and a waste of time for many. There are thousands of children now getting little good out of it.

At this point we cannot afford to lose sight of a certain profound psychological fact. There comes a time in the life of many boys and girls when the developing instincts of manhood and womanhood appeal to them with commanding force, and impel them to do what men and women are doing, namely, to work for wages, instead of doing what children are doing, namely, going to school and playing.

These cases need to be handled with the greatest care. To enact into a law that such children shall remain children, when their whole nature is crying out for them to be men, is to work a hardship as great as to compel them to be men before their time. Compulsory schooling for such children may be as cruel as premature labor is for others. Hundreds of boys and girls who have passed the age of fourteen are getting more real development, a better education, in productive labor than they would get in any such school as they would be compelled to attend.

In asserting the following claims, we may feel that we are on defensible ground: first, that, by suitable state legislation, provision be made for all the children in the United States to have at least thirty-six weeks of elementary schooling until they reach the age of fourteen; that this schooling include varied forms of industrial training; that no child be allowed to work for wages when the schools are in session, nor be allowed to work at any time during such hours or in such employments as may be dangerous to his health or his morals; that from this school attendance there be no exemptions for the purpose of employment, on account of the poverty of his parents; that for the enforcement of these schooling and employment laws special officers be provided, clothed with ample authority, state officers to be appointed to act when local enforcement is lax.

If this Association should plant itself upon this platform, and go before the people of each state with these demands in the name of the children, summoning all the social forces of the state to united effort, I believe the most backward states would feel the impulse.

The weakness of many of the schooling and employment laws now on the statute books of the different states is in their short school terms, their numerous exemptions, their mixing schooling with employment. The laws which I have proposed are simple, easily understood, and easy of enforcement where the best public sentiment of the state is back of them.

Up to this point there is needed a campaign for education, for legislation, and for enforcement.

What schooling laws and employment laws are needed for children over fourteen years of age is a matter at present not for general legislation, but for careful scientific investigation.

On the employment side, facts are needed as to the effects upon the health of the children above the age of fourteen in all the industries in which such children are now employed. What are the physical effects upon boys and girls of continuous employment in factories of different kinds—effects upon nutrition, growth, development? Are there special ailments attributable to special employments or to parts of employments, and at what age is the power to resist disease gained? Here are wide fields in which the aid of local medical experts and boards of health may be invoked. In France such investigations have resulted in employment laws much more detailed and specific than our own. Just so fast and so far as facts are ascertained, the protective power of the state should be called into exercise.

Along another line of inquiry information is needed. We need to know how many children continue voluntarily in school beyond the legal school age. An inquiry last year in Massachusetts seemed to show that 65.5 per cent. of all the children in the state between fourteen and fifteen were in school.

We need also to know into what occupations the boys and girls who leave school at the age of fourteen go, not in a general way, but specifically for all the cases in a community. We need to know the wages earned, the possibility of promotion, and the rate of increase in wages, with the limit to such increase. We need to know what advantages a fifteen-year-old and a sixteen-year-old child has over a fourteen-year-old one, and whether that advantage, if any, is due to physical causes, or to greater mental development, and what sort of education gives the greater advantages.

This would bring us to a review of our present provisions for secondary education, and we should be confronted by two facts: first, that between elementary and secondary education there is little organic connection; and, second, that between school life and business life there is a chasm. These are the two problems to be studied before we undertake to extend the age limit for school attendance and for employment: first, how to make the whole school process a continuous one, each part vitally and organically connected with the part before it and with that which follows it; and, second, how to make the whole school life lead just as vitally and organically into the industrial life which follows.

To the solution of these problems should be given the best thought of all

the friends of children, the friends of labor, and the friends of society. Their mutually sympathetic, co-operative effort will be needed to penetrate the darkness in which we are now groping. When that darkness lifts, infancy will pass into childhood, childhood into youth, and youth into manhood, thru an educative process in which learning and labor thruout have been essential and complementary factors.

Then the cry of the children will no longer be the bitter cry of children misunderstood and wronged, but the exultant cry of children who are finding every day new opportunities, and discovering in themselves new potencies.

THE SOCIAL AND LEGAL ASPECT OF COMPULSORY EDUCATION AND CHILD LABOR

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[AN ABSTRACT]

The educational problem and the industrial problem of child labor cannot be separated. This is true, whether every parent is permitted to deal as he will with his child, or whether he is compelled, as in most American commonwealths, to withhold his child from gainful employment and to keep him in a school, or otherwise to provide systematic instruction for him, during certain weeks of each year. Child labor itself is a kind of education which, according to its nature and extent, may be consistent or altogether inconsistent with other kinds. The labor that American boys and girls had to perform on the farm a generation and more ago was often an invaluable discipline of mind and character, fitting them for self-reliant and useful careers quite as effectively as their meager school training did. Such labor did not necessarily unfit the child for the enjoyment of the highest educational advantages. Exhausting confinement in stores, sweat-shops, and factories is child labor of an altogether different sort. It is antagonistic to the child's mental and physical development, and it cannot be combined with any sound educational policy.

Compulsory education by the state and the prohibition of child labor are policies undoubtedly socialistic in character. They assert the supremacy of the state's interest in the child as against any opposing interest of the parent. The American people have never been afraid of socialism to this extent, and within the last ten years it has greatly extended both compulsory education and the prohibition of the labor of children between ten and fourteen years of age. It would not be inaccurate to say that public sentiment at the present time in New England, in the Northwest, and in most of the North Central states demands an increasingly strict enforcement of child-labor legislation, and that a similar sentiment is rapidly growing in the South.

This policy encounters, however, important obstacles, which call for intel-

ligent examination. Not much difficulty has been encountered in the courts. The constitutionality of both compulsory school attendance and of the restriction of child employment in the interest of health, intelligence, morals, and citizenship is everywhere upheld. The real difficulties are of quite another character.

It is not easy to maintain the administrative machinery to enforce child-labor restriction and the truancy laws. Experience has shown that compulsory school attendance is itself the best enforcement of the laws against child labor; but this is difficult where school accommodations are inadequate, and where population is either dense and heterogenous, as in the tenement-house quarters of our great cities, or sparse and indifferent to educational interests, as in the mountain regions of the South.

A very special difficulty, and one that puts all our theories and our devices to the severest test, is that which is presented by destitute families. The practical question, which has to be answered over and over, is: Is it right to take a strong, overgrown boy thirteen years of age, from money-earning employment, and force him to attend school, when, by so doing, we compel a widowed mother to apply to private or public relief agencies for help, thereby making her, and perhaps the boy also, a pauper?

The only answer to this question, consistent with the policy of compulsory education itself, is the proposition that in such cases adequate public assistance should be given, not as charity, but as a right. To shrink from this course because it is socialistic is thoroly illogical and inconsistent. Compulsory education itself, as I have said, is socialism, pure and simple. State interference with the parent's disposition of the child's energy and time is a further extension of socialism. These policies have never been anything but socialistic; they never by any possibility can be anything less than socialistic. Let us, therefore, not balk at a further provision by the state which happens to be necessary to make them effective. Let us make our socialistic scheme complete and consistent, or confess that it is altogether wrong and abandon it.

A final and deeper difficulty exists, which has received curiously little attention. We hear a great deal lately about "race suicide." Large families are no longer seen, especially in the so-called middle class. It is strange that no one has pointed out the connection between the increased demand upon parents to maintain their children in school, foregoing the earnings that children might add to the family income, and the diminishing size of the average family. The connection, however, is undoubtedly a real one, and the practical inference is obvious. If the restriction of child labor is desirable, if compulsory education is desirable, and if at the same time large families also are desirable, the state must make up to the family at least some part of the income that children could earn if they were permitted freely to enter upon industrial employments. The question, therefore, that we shall have to face and to answer is this: Shall the state pay parents for keeping their children in school between the ages of ten and fourteen? This would be a policy of socialism,

undoubtedly. I do not pretend to say whether the American people will or will not adopt it. I only say that, as a matter of social causation, they will be compelled to adopt it, if they try to maintain both large families and compulsory education, while prohibiting child labor in department stores and factories. It is not my intention to advocate the measure, or to argue against it. My purpose is served in calling your attention to the logic of facts.

THE IMMIGRANT CHILD

MISS JULIA RICHMAN, DISTRICT SUPERINTENDENT OF SCHOOLS, CITY OF
NEW YORK

Ours is a nation of immigrants. The citizen voter of today was yesterday an immigrant child. Tomorrow he may be a political leader. Between the alien of today and the citizen of tomorrow stands the school, and upon the influence exerted by the school depends the kind of citizen the immigrant child will become.

How do we meet this obligation toward the immigrant and toward ourselves? Before examining into our treatment of the immigrant child whom we reach, let us consider our duty to those whom we do not reach. But are there any such? You will ask: Have we not compulsory-education laws? Yes, but you must catch your boy before you can keep him at school. It is a pity that statistics are not available to show what proportion of our school population is of alien birth; it is to a greater degree a pity that statistics are not available to show how many of school age among those landed upon our all-too-hospitable shores never enter an elementary school. Notwithstanding all our compulsory-education laws and all our child-labor laws, notwithstanding the fact that the welfare of the nation depends upon the control of illiteracy, no attempt has ever been made by school authorities, whether municipal, state or federal, to secure a census of immigrants of legal school age. Were such records carefully made at ports of entry, and duplicates thereof immediately sent to the proper school authorities, not one child under the age limit of the laws of the state could escape attendance at school. Thousands of such aliens have arrived, and are still continuing to arrive, drifting into factory and mercantile life, many into delinquency and crime, with little or no interference on the part of the school. Some attend evening school; but many escape entirely, never learning to read English. Our country is flooded with publications in foreign languages, making it possible for the alien to get his news and his miscellaneous literature in his mother-tongue; consequently he never feels the need of acquiring the vernacular. But because he does not feel the need of learning to read English, does it relieve us from the obligation of forcing him to acquire that knowledge? Can we hope ever completely to Americanize the children of parents who, the young themselves at the time of immigration, must always remain foreign

in speech and thought because of their failure to learn to read English? The great blunder in the past, and the greater blunder in the present, is the absolute lack of co-ordination between the governmental forces instituted for the benefit of the nation. The immigration bureau, with its splendid system, is content with excluding undesirable aliens—undesirable because of moral or physical defects. The educational department is content with educating those who voluntarily apply for admission to the schools, and those others whom its attendance officers can catch and force into school. Shall we charge the immigration authorities with neglect because thousands and thousands of aliens under the age of sixteen have never entered school? Shall we charge the school authorities with neglect because these thousands, of whose existence they are, at least officially, unaware, have never entered school? Each would plead not guilty to the charge. Who, then, shall bear the blame? Somewhere and somehow at every port of entry there must be established a bureau in which most careful entries should be made—entries that will show a list of immigrants of school age, tabulated according to destination. Carefully classified duplicate lists must be immediately forwarded to the municipal school authorities in the respective towns or cities to which the aliens are bound. With these lists in hand, the school can enroll immediately all who belong under its control. Delays are dangerous. When once an immigrant child has been permitted to become a wage-earner, it is a task of tremendous difficulty thereafter to place him in school. Time, labor, and money now expended in such work might all be saved under the plan just outlined.

But it is not of the immigrant whom we have failed to reach that I would speak. The immigrant child in our schools is the present problem. Meager as are all available statistics, certain general figures are at hand, from which fair deductions may be made. During the fiscal year ending June 30, 1904, the total arrivals of aliens in the United States amounted to 812,870 (exclusive of 27,844 described as "aliens in transit"). Of this three-quarters of a million there are recorded almost 110,000 as under fourteen years of age. On the assumption that an average of one-fourteenth may be considered as the number of children born each year, eight thousand becomes the basis of calculation for a year of school age. According to the compulsory-education law, which in most states covers the years from eight to fourteen, we must deal with forty-eight thousand new immigrant children annually. Adding to this number the sixteen thousand children of six or seven, most of whom do, and all of whom should, attend school, we have sixty-four thousand annually to be provided for. To this figure the child-labor law in many states demands that there shall be added all between fourteen and sixteen who cannot read and write English. Therefore our problem numerically amounts approximately to seventy-five thousand annually—fully 9 per cent. of the total immigration. Of the alien arrivals during 1904, 54 per cent. are tabulated as Italians, Hebrews (mainly from Russia, Roumania, or Galicia), Germans, and Poles;

the remaining 46 per cent. having come from twenty-eight other countries. The number of illiterates over fourteen years of age in the four classes just referred to amounts to 54 per cent. among the Italians, 33 per cent. among the Polish, 23 per cent. (mainly women) among the Hebrews, and only 4 per cent. among the Germans. The last item furnished striking proof, if proof be needed, of the effective results obtained under a compulsory educational system. As these records of illiteracy are obtained by interrogation only, it is fair to assume that an actual test of the immigrant's ability to read or write would show a far greater proportion. These figures are quoted merely to give some crude idea of the responsibility of the school to educate this army of children so that they may readily assimilate with those of American birth.

The burden of assimilating the foreigner is not evenly distributed. During the last thirteen years New York state alone received more than two million aliens; Pennsylvania, over a million; and Illinois, over four hundred thousand; while, on the other hand, during the same period Texas received only about twenty-eight thousand; Idaho, only three thousand; and Mississippi, less than two thousand. Even in the individual state the burden is unevenly borne. It is the great cities, like New York, Chicago, Philadelphia, and Boston, which furnish homes, or, more properly speaking, dwelling-places, to the bulk of the recent arrivals. They, consequently, have the most serious problems before them. A small American community can receive two or three alien families and absorb them without in the slightest degree disturbing either economic or social conditions; but it is in the great cities, where foreign colonies are planted and foreign customs are perpetuated, that the school must step in to wrest, not only the child, but the whole family, from traditions which enslave the mind, and furnish some of the most stubborn obstacles to a proper assimilation and Americanization of the alien.

Three sets of problems confront us in our school work with these children: purely educational problems, meaning those brought to light in carrying out the course of study in the school; civic problems; and the moral problems.

The educational problems vary with the nationality of the alien. Where illiteracy prevails among the adult classes of an immigrant people, there is a tendency on the part of the parents to underestimate the value of education for the child, and in direct ratio there is the tendency to depend upon the wage-earning capacity of the child. These tendencies form two of the strongest obstacles to permanent progress on the part of many of the children.

Striking characteristics are apparent in the four classes which furnish the greatest number of our immigrants. The southern Italians, as a class, lack education themselves, and are indifferent to the advantages of education for their children. Truancy or non-attendance is the chronic condition of many; few remain at school longer than the law demands; and fewer still advance to high school or college. Immigrants from northern Italy make a more desirable school contingent. The Hebrews are keen in matters of study. Their exclusion from the government schools of Russia, Roumania, and Galicia is

one of the main causes for the excessive immigration of the better class of Jews. It is from these immigrants that the schools in great cities, notably so in New York, get a large proportion of their most studious, most ambitious, most loyal, and most successful pupils. The desire to see their children advance is strong in most Jewish hearts. It is not uncommon for the alien Jew to endure privations of all kinds in order to study or to keep his children at school or college. In contradistinction, we find among them a number in whose environment there are degrading conditions which produce truancy and delinquency. But, on the whole, the Hebrews make a desirable element in the school. The Germans contribute few truants or non-attendants. Their children are respectful and law-abiding, not always clever, but always earnest and faithful. The Poles present practically the same problems as the Italians; the majority do not make satisfactory progress in school work.

In a thirty-minute address it is impossible to do more than make a few suggestions to the teacher of the little immigrant. Every foreign child should, as soon as possible, be graded according to the extent of his prior schooling. It is an outrage upon a child who has had several years of schooling in his own land, to place him in a first-year class with children just out of the kindergarten simply because he cannot read or write English. He can get an English vocabulary in a fourth- or fifth- or sixth-year class as easily as in the baby class. At the same time he can develop intellectually with a far greater rapidity than he could in the lowest grades. Imagine the effect upon a boy well taught in a foreign school, who is placed in a class where he is taught to read, "See my kitty," "Can the kitty run?" and where his training in mathematics consists of combinations of three splints and four splints! Even an illiterate, if he be over ten years of age, should not be placed in a first-year class. Our first-year studies are designed to develop the mind of the six-year-old, and the child four or five years older must be taught in a separate class and along more mature lines. Where immigration is slight, the immigrant child so classified will quickly be assimilated, particularly if a classmate can act as interpreter. Where, however, a large number of immigrants of one tongue can be gathered into a school, a special class should be formed and special instruction be given. Boston and New York, possibly other cities, have undertaken such work, and special classes for immigrants (commonly called "steamer classes") are conducted in all localities where conditions make such organization possible. One word of warning in reference to such special classes: they are means to an end, not an end in themselves. A child must be taken out of the special class as soon as he has a vocabulary sufficient to enable him to take up the work of the regular class. It is fatal to segregate foreigners for any length of time; only by close association with American children and American influences can a proper assimilation be hoped for. With judicious classification and intelligent promotion, the most serious educational problem is met. Careful instruction in pronunciation and enunciation, and vigilance in correcting false idioms, are essential. Beyond this, in the training of the immigrant child there need be no differentiation from normal standards.

Among certain classes of foreigners cardinal school virtues are planted with difficulty. Regular and punctual attendance and personal cleanliness are not obtained without effort; but persistent effort does bring about the desired result. To the credit of the schools let it be recorded that in that special foreign section of New York from which I have drawn my richest experiences, such standards of punctuality and cleanliness as now prevail in the community as a whole have grown out of the habits gained by the children in the schools.

Closely interrelated with the purely intellectual problems are the civic problems. Every course of study makes provision for instruction in civics and lessons in patriotism. In our New York schools a deeply impressive feature of the formal opening exercises in every school is the solemn oath of allegiance to our flag. Always impressive, nowhere is it more soul-stirring than when pronounced by the five hundred immigrant children who learn their first English in the school of the Educational Alliance in New York. My heart beats faster and my eyes grow moist when I hear it. These children, refugees from Russia and Roumania, with hate in their hearts for the land of their birth, turn loving eyes to the flag of the land of their adoption, and there is genuine fervor in their pledge. In the public schools, too, there is affection in the heart and earnestness in the voice that declares its love of country. There is love, too, and enthusiasm in our celebrations in honor of Washington, Lincoln, Memorial Day, and those other occasions when patriotism is awakened and nurtured. There is respect, perhaps even reverence, for the Constitution. Why, then, are there so many law-breakers among our school children? Why are our courts so busy? Why is our police force all too inadequate? Shall I tell you? Because our instruction in civics is largely a sham. We content ourselves with teaching, mainly to pupils in classes of advanced grade, the constitution of the United States, the chief features of state and municipal government, and the names and rank of national, state, and municipal officials. Is that enough to make a community law-abiding? Will a knowledge of the qualifications of a United States senator help an alien, or even a native, to obey local ordinances? Will familiarity with the length of the term of a state governor, or a knowledge of the powers of the mayor, teach the children of an alien, or of a native either, to avoid violations of local ordinances?

It is so much easier, and the effect is so much prettier, to teach the oath of allegiance to the flag, than to teach a community to keep the fire-escapes free from encumbrances. It is so much easier, and so very much more interesting, to prepare a program for a patriotic celebration, than to secure from a tenement-house population a proper respect for tenement-house laws. It is so much easier, and so much more picturesque, to teach children to wave small flags while singing "The Star-Spangled Banner," than it is to teach them to separate the ashes from the garbage as required by law in large cities. It is because we do not teach to children the important city ordinances, and the reasons underlying them, that violations of such laws are so common.

It is not so important to obey the law as it is to bribe the petty officials. This the immigrant learned at home, in the school of political and religious persecution. Political corruption in many of our large cities gives an additional object-lesson in this direction. The immigrant learns all too soon that for a consideration the district leader can secure for law-breakers freedom from fine or imprisonment. It is we who must teach these foreigners better standards. Thru their children only can we teach them. We must teach them the nature of the law; the causes which led to the making of the law; the injury that must come to the community thru a violation of the law; and a respect for the law, even tho compliance with the law imposes hardship upon the individual. In no other way can a foreign community be led to meet its obligations of citizenship; in no other way can we hope to solve civic problems.

We must recognize that pedagogy based solely upon theory has outlived its usefulness. Abstract educational theories must stand aside to make room for sociological experiences. The sociological needs of a community must be examined and closely studied by educators, and the causes thereof must be scientifically traced. In the removal of these causes the school will find its chief function, its chief obligation to the community. Sociology and pedagogy must be harmoniously blended, would we truly serve the state and the nation. With this ideal before them, the training schools for teachers must revise their methods.

While the purely educational problem is engaging the attention of the teacher, he will find himself confronted with moral problems equally difficult. These problems in great cities are not limited to any one class of the community, but they grow more numerous and complicated where the population is densest. Juvenile delinquency and juvenile crime are on the increase, because children are reared without any sense of responsibility by parents who have no realization of their own responsibility. Many immigrants have large families and small means. Adults set themselves to the task of wage-earning, and leave their children to themselves. A child left to itself, in the crowded streets of a great city, is bound to come in contact with influences that tend to undermine all his standards. The weak-minded boy follows the lead of an older and stronger boy, and the street gang is the result. Loafing, gambling, and larceny are the natural consequences of this street life. Parents in the tenements seldom know, and occasionally do not care, what becomes of their offspring.

Colorado has done a wise thing in passing a law which holds the parents financially responsible for the delinquencies of their minor children. When such a law becomes general, we may hope to control some of the lawlessness so noticeable at present among children, native-born as well as alien. The child of the immigrant associates with the American-born child of the street, and acquires all of his vices and none of his virtues. Hundreds of immigrant parents, whose children are disorderly, unfilial, and ungrateful, justify this condition of affairs with the claim that the child has acquired American habits. They even blame the school for these bad habits. What agency is

there that can explain to these foreign parents true American standards, unless the school undertakes that task? It bodes ill for our nation if American vices are to be considered true American traits. If these vices, in the mind of the foreigner, seem identical with Americanism, then every right-minded alien will pray that his child may forever remain a foreigner and may never become truly Americanized. It is we teachers who must indicate to the alien what habits a true American child must acquire, in order to make of the future man or woman an American of whom the nation may be proud. After all, morality is a question of standard, and what from our point of view is grossly immoral may, under other conditions and in other lands, have seemed an unimportant matter. Many juvenile offenses which to us seem appalling appear to the parents of trifling import. If, then, we would raise the tone of the community, we must teach correct standards to the parents as well as to the children.

There is one phase of the life of the alien in America which is a cause for worry to all earnest communal workers. Many of the children are surrendering themselves to the best American influences, brought into their lives by the school, thru settlements, and thru such other agencies as deal with the betterment of child life. So far, so good; but, unfortunately, the more that is done for the child, the more is it weaned away from the standards and traditions of its home. The parents remain foreign; the children become American. There is thus created an almost unbridgeable gulf between the two. Difference in taste, customs, and language brings about domestic shipwreck. The parents remain at home, and mourn over the waywardness and wilfulness and disloyalty of their children. The children find their best friends among the teachers and settlement workers, and their warmest interests away from home. Wider and wider grows the gap, until the children have lost absolutely all touch with the home, all sympathy with their parents. Independence of parental control and disrespect for the opinion of the old folks is not an uncommon condition. When children seek and find all their pleasures, all their companions, and all their interests away from home, the community and the nation are bound to suffer. A happy nation is based upon happy homes.

How, then, shall this problem be met? Shall we stop Americanizing the child? Surely not. But if this process of Americanization creates the gulf, where shall we look for the remedy? Let those who made the gulf build the bridge to span it. If we have given to the child other, and let us hope better, standards, then let us build a bridge between the Americanized child and its foreign parent, so that the parent can cross the bridge to join the child on the American side.

It is for us who are Americanizing these immigrant children to bring their parents forward with them. But how can this be done? First and most prominent in school activities should be parents' meetings. In a foreign community where English is not well understood, it may be necessary to have one familiar with the tongue of the majority carry our message to the parents,

for they must be made to understand what it is we are trying to do for the children. They must be made to realize that in forsaking the land of their birth, they were also forsaking the customs and the traditions of that land; they must be made to realize an obligation, in adopting a new country, to adopt the language and customs of that country. They must be made to understand that the welfare of America demands the proper assimilation of all these conflicting foreign elements that are so generously admitted to our land; but they must also be led to see that, unless they readily and willingly take on Americanization in its best sense, the day will come when our government must close its gates to their compatriots who wish to follow. The sins of the earlier immigrants will be visited upon their cousins and wives and brothers who try to follow. If our gates are ever closed to them, it will be because the immigrants already among us have failed to measure up to our standards of citizenship.

The school must make the parent see that the advance of the child is bound to carry it beyond parental control, unless the parents also advance. The school must at the same time impress it upon the child, that he is securing educational advantages which were denied to his parents, and that it was their heroism in giving up their land, their customs, and their home which has enabled him to receive a free education in a land of religious and political freedom. The school must make him see that this sacrifice on the part of the parents deserves, not only recognition, but also gratitude and loyalty, respect and sympathy. Too much stress cannot be laid upon the child's duty to the parents. One of our national weaknesses today is the general lack of respect for authority and the lack of reverence for things sacred. The school must insist upon the child's recognition of the claims of parenthood.

The parents' meetings, at best, however, can reach only those parents who choose to come to school. Those who most need this influence are likely to remain away. Our duty then becomes clearer. If the parent will not come to the school, the school or its representative must go to the parent. The mother in particular must be reached. She is, perhaps, weighted down with domestic burdens, which have made her apathetic or hopeless. With such a mother it is almost impossible to rescue a child subjected to evil influences outside of the home; and yet it is just such children that must be rescued. Who will undertake this task? Wives and mothers, thru their nurture of children and their influence over men, have the destiny of the nation in their keeping to a greater extent than any other single agency. If this be true—and who can doubt it?—shall we allow thousands of wives and mothers of alien birth to become so submerged that physically, intellectually, and morally they become unfit "to rock the cradle"? The state intrusts to us the solemn and sacred duty of preparing for citizenship every child within its borders. When we recognize that many of the mothers are unfitted for the task of motherhood, shall we, as teachers, withhold the aid that might perhaps bring to a proper citizenship the child who, but for our help, must be lost to the

community? It is, perhaps, something utopian that I suggest, but are not all ideals utopian in the eyes of those unable to create an ideal? If we are to serve the state—and if we are not willing to do so, have we the right to hold our present positions?—cannot we see that half service is but a compromise with conscience? It is for us as individuals, and it is for us as a force for the betterment of social conditions, to carry into the homes of these children such influences as lie within our power. Who can—who dare—set a limit to our power in this direction?

We have long passed the day when ability to teach the studies of the school course is regarded as the whole of the service required of the ideal teacher. To build up character, to guide and direct toward a better life, to right wrongs, to bring about civic and social improvement, to make the individual happier, are duties no less important and no less essential. A teacher's life, if viewed with the eyes of the optimist, is one of glorious opportunity; to the pessimist it is one of hopeless drudgery. Let every teacher look into his or her own teaching career. What have you made of your school life? With you it still rests either to make your teaching a work of hopeless drudgery or of unlimited opportunity. Nowhere else is that opportunity so rich, so fruitful, and so soul-satisfying as in a community of aliens. Affection and gratitude flow from the heart of the little immigrant in response to the teacher's interest and warmth. Those who have not met and recognized the richness of the responsiveness of most foreigners cannot realize the depth and earnestness of this gratitude.

In all classes of the community there is much of God's work to be done. In the large immigrant communities this is especially true. Here is our opportunity, teachers! Dare we neglect it? Let us then give ourselves to the task of serving the state, humanity, and God. Let us Americanize, according to the truest American standards, the children and the home; let us first secure, thru co-operation with the Immigration Bureau, a complete list of the little immigrants whom we would reach; let us classify them thoughtfully, promote them intelligently, and teach them wisely; let us revise our standards in teaching civics, so that a law-abiding community shall result from the efforts of the school; and let us bring together in affection and mutual sympathy the foreign parents and the Americanized child. Thus we shall render the rare and holy service to which we have been called, the making of a true American citizen out of the immigrant child.

MANUAL TRAINING IN THE GRADES

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Manual training, as a form of educational effort, involves such a systematic training of the hand in construction work, thru the use of tools and manipulation of material, as is adapted to the proper development of the

motor activity of the hand, initiated, guided, and controlled by mental activities essential for the proper development of the mind.

It will be observed that by this statement the systematic training of the hand, in construction work, thru the proper development of its motor activities, is made a definite end and aim of elementary training.

By the "proper development of the motor activities of the hand" I mean such a growth of power and control in the use of those activities thru manual training as will enable the individual thus trained, and because of that training, more readily and more effectively to employ the hand in productive labor in the field of industrial effort. That such a result can be secured thru this training is my belief, based upon the results of reasoning, of extended observation, and of experience in the administration of this line of work in the elementary schools.

To put it plainly, I find justification for that sort of manual training which aims at a systematic training of the hand in the increased power which it gives the individual to earn a livelihood thru the use of his hands.

I am aware that this statement will invite criticism from some quarters; that it will be claimed that it is putting educational effort and aims on too low a basis. I would anticipate such criticism by saying that manual training is not all of education; that I do not claim for it everything that is needed for the proper development of those who attend our public schools; but I do claim that, if properly administered, it will increase the effectiveness of those trained, as productive factors in society, and thus increase their capacity to earn a living and to support those dependent upon them.

Our public-school system is supported by public taxation. The right of the state to levy taxes for the support of a public-school system is found in the fact that the state has the right to do whatever is essential for its perpetuity—and good citizenship is essential for the perpetuity of the state.

The duty which the public school owes to the state is to train American citizens. The fundamental basis of all good citizenship is a trained intelligence which will enable the individual to earn a living, to become a self-supporting member of society. The public school which ignores this fact, thru the quality of the training given, has no right to an existence.

That the individual trained in the public schools subsequently shows his capacity to support himself may be because of the training there obtained, or in spite of it. It should be because of that training. The public school should be an active factor in the development of this capacity to earn a livelihood. With this given, all things else may be added; but without it nothing is possible.

Some years ago the secretary of the International Committee of the Young Men's Christian Association, after careful study of statistics relating to the subject of educational preparation of the young men of the United States between the ages of sixteen and thirty-five, reported as follows:

Of 13,000,000 young men in the United States between these ages, only five in every one hundred have been specially prepared for their occupations by education received at some kind of a school.

He also found that of every one hundred graduates of our grammar schools, only eight obtained their livelihood by means of the professions and commercial business, while the remaining ninety-two support themselves and their families by means of their hands. If these statistics are correct—and an examination into the conditions existing in any community will seem to substantiate them—it must be evident that the education given in the grades below the high school which does not make provision for the training of the hand, as well as of the brain, is failing to do for these children what they have a right to demand shall be done for them, and what society and the state have the highest interest in demanding shall be done for them.

President Roosevelt has expressed, as the keynote of his administration, the sentiment: “a square deal for every man and every interest.” If ninety-two out of every one hundred of the graduates of our grammar schools, and practically all of those who leave the elementary schools before completing the eighth grade, are to earn their living by their hands, I submit that the system of education which fails to give them, during the most impressionable and formative period of their lives, such a training of the hand as will fit them the earlier to become skilled in the different departments of manual labor in which they may engage, and thus to make their work more productive, is not giving “a square deal” to these future members of society, to society itself, nor to the state.

Thus far I have spoken of the systematic training of the hand as a definite end of manual training. But it is not the sole end or purpose. We must take note of the fact that the essential essence of all training is *doing*; of manual training, is *doing with the hands*; and that in systematic manual training, from start to finish, the motor activities of the hand must be set in operation, must be guided and controlled by the action of the mind; and the opening statement of this address calls for mental activities essential for the proper development of the mind—not all forms of mental activity, but forms which cannot be omitted, because of their necessity for proper mental unfolding.

Mental power comes thru organized thinking. The mere memorizing of what others have said, or learning about what others have done, is not organized thinking, and gives little or no mental training. Organized thinking comes whenever the individual sets himself a definite task to do, and then determines and applies the ways and means necessary for the accomplishment of that task. This task may be the solution of a problem in arithmetic; or it may be the construction of a model from wood, iron, or other material; or the creation of a new and original design for such a model. I believe the latter to be of the higher value, because it demands the use of tools and material. The tools cannot be used successfully upon the material to produce the desired result, without the exercise of the closest attention and of those forms of mental activity leading up to an act of the judgment. There can be no training of the hand which does not involve mental activity, and the mental activity thus involved is of a kind which furnishes just the training needed for the practical

concerns of life. It is a mental activity out of which grows skill in doing; and skill in doing, as a result of intelligent thinking, should be one of the chief purposes of education.

It is the ambition of every boy, at a very early age, to become the owner of a pocket-knife. The reason for this is that the pocket-knife is a tool which furnishes for him the largest opportunities for the exercise of his inherent desire to do. No one thinks of denying him the pocket-knife because of the fear that its use will result in his becoming a mere whittler; but, on the contrary, the thoughtful parent will furnish it because of its value as an instrument in the training of the child's manual and mental powers.

Because in the manual-training school the child learns to use a plane or a saw, it does not follow that he is to be a carpenter. Because the girl learns to sew, it does not follow that she must be a seamstress; or because she learns the value of foods and how to prepare them, that she must therefore be a cook. The use of the plane and the saw will be of value to the boy, should he decide to become a carpenter. The training in sewing and cooking will be of value to the girl should she decide to become a seamstress or a cook, or should she be compelled to take the place of either seamstress or cook, even temporarily. But, in any case, the training thus afforded will be of the highest value in the development of the individual, because it demands, first, concentration of attention, and thus develops that quality so essential to success in any field of human endeavor; second, it requires organized thinking in the adaptation of means to ends—a demand which will be constant thru life; and, third, it demands an exercise of the will-power resulting in doing for the realization of those ends, and thru the doing there comes a clarification of the thinking. It is not claimed that this sort of training, and the knowledge and the skill which it brings, constitute all that is necessary in the education of the child; but the claim is made, and well made, that any system of education which leaves out this kind of training omits one of the essential requisites in the proper education of the child.

I believe that anyone who will analyze closely the mental processes involved in the mastery of a lesson in grammar, in history, in geography, or in any of the branches taught in the public school, and then compare them with the mental processes involved in making a working-drawing of a model in wood, and then from that drawing, by the use of tools, reproducing that model, will see that, for all purposes of mental training, the latter is of no less value, to say the least, than the former. It has the added value that it has developed control of the hand, and skill in its use, which will be of value in other fields of work where manual skill is required.

Systematic training of the hand involves a definite purpose, and adaptation of material, tools, and processes for the proper accomplishment of that purpose. These determinations are, in every case, the result of mental activity. The selection of the material, the choice of tools, and even the specific purpose, at any given stage of the work, may be the result of mental activity and choice

on the part of the teacher, but the setting in operation of the motor activities employed in the use of tools, or in the manipulation of material, and the guidance and control of those motor activities to the accomplishment of the given end, are the result of mental activity on the part of the pupil. Hence it follows that the systematic training of the hand for the proper development of its motor activities involves an equally systematic training of the mind which imitates, guides, and controls those activities. The statement already given calls for systematic training of the hand for a proper development of its motor activities. The term "proper" is used advisedly. Under the limitations it imposes, the specific ends determined, and the exercises necessary for the accomplishment of those ends, must be selected with reference to the state of development of motor activity and power of the child being trained. It eliminates all classes of exercises beyond the strength of the pupil, at any given time, and also other classes of exercises requiring close work and too fine adjustments of motor activity at an early stage of the child's development. Since the training of the hand required by this statement involves mental initiative and control, it follows that, when such a stage of skill has been developed as to cause the actions to become reflex, or when that stage is closely approached, they fall outside of the demands here made, because then we have motor activity, but without the corresponding and correlated mental activity. Exercises thus continued may make for skill in a given narrow line of effort, but not for general development. The term "proper," as used in the statement, requires the discontinuance of any special motor activity when it has reached a stage where mental control is no longer an essential.

The *proper* development of motor activities implies an order of development which must be taken into consideration, and which must determine and control the character of the exercises which involve the training. The requirement that the motor activities involved in the manual training shall be initiated, guided, and controlled by mental activities essential for the development of the mind makes it necessary that these exercises shall be selected with reference to the demands which they make upon the mind. It follows, therefore, that the mental capabilities of the pupil, at any stage in the process of training, must be considered. Work must be given of sufficient variety in the demand which it makes, for calling into play the varied forms of mental activity and in their proper order.

If this statement of the function of manual training in the public schools is accepted, it would seem to follow that there should be a definite course of training organized in the light of definite knowledge as to the motor and mental capabilities of pupils at different stages in their development and that it should be systematic in its unfolding. It must grow out of careful study and scientific knowledge of what is necessary for the proper motor development of the child. It must not be left in its development to the sport and play of the child's impulses or temporary interests. The problem is to present such a line of training as the child needs, and to interest him in something

worth while, rather than to find some new thing which may appeal to each new and fleeting interest. Training involves the shaping and directing of interests, and especially is this true in the training of the child whose interests are as varied as his impulses.

The exercise of the hand in manual occupations outside the school is not systematic; it is accidental, sporadic, fragmentary; and because the work is unrelated, unorganized, it is not of the highest value for hand-training, and the mental activity is not of a kind to give the best results.

The schools which do not give manual training give an incomplete training. The sources of stimuli which they furnish are words mainly. The words presented for the pupil's consideration are symbols. The interpretation of the symbols depends upon the character and extent of the apperception mass in the pupil's mind. It may be entirely adequate, or it may be partially or completely inadequate, in which case the mental product is imperfect, inadequate; the *impression* is faulty in that it is incorrect, vague, incomplete. The *expression* of the results of this consideration of words is again chiefly thru the medium of words.

The teacher, under the present system of school organization, and with existing ideals of what is demanded of the pupil, too often is unable to test whether the pupil's expression is a remembered form of words without meaning, or, when other words are used, whether they are correct symbols of the correct idea.

In manual training the sources of mental stimuli are things chiefly, and words secondarily. The same thing is true in nature study; but the former is of a higher form, because the mental stimulus leads directly to, and co-ordinates with, motor activity, and results in an expression of thought in the completed products of the hand, guided and controlled by the mind. This expression of thought is in permanent objective form, and furnishes an opportunity for comparison and correction of inaccuracies, which the fleeting word does not.

Book study deals with words, and the character of the mental activity aroused is uncertain. Nature study deals with objects of nature, their forms, structure, sources, and uses. Manual training deals with material things, their form, sources, and uses; and, in addition thereto, demands physical and mental activity in changing the raw material to the finished product; and this is exactly what the individual will have to do who earns his living with his hands.

We may say that education demands, on the intellectual side, the development, control, and training for effective use of the varied activities of the mind, thru the action of stimuli of the right kind, properly applied at the right time.

The work of the teacher then, in the development, control, and training of the intellectual powers of the child is in selecting the stimulus proper in kind and time, and thru right methods of applying it, securing the kind and amount of mental activity, properly directed, required to meet the needs of the pupil at a given time for given ends.

It will be apparent that in the field now under consideration—the intellectual side of education—the nature of the mind determines what is essential in the educational process, and this without reference to environment. It will also be evident that the nature of the mind does not determine the choice of material available as to the source of stimuli for various forms of mental activity or control.

Sources of mental stimuli available in the work of the public schools are words and material things. In the actual affairs of life the great majority of human beings are engaged in productive activities of one form or another. These productive activities demand a knowledge of material things, and knowledge of and skill in the processes necessary for the transformation of the raw materials of nature into forms fitted to satisfy human wants.

To do the work with the greatest effectiveness, it is evident that there must be specific training for it. Such training is not afforded thru the activities evoked by the mental stimulus of words alone.

The activities evoked by the stimulus of material things may be roughly separated into two classes:

1. Those which begin with observation, and, passing on thru a consideration of their forms, sources, and uses, terminate in definite judgment, but which require no constructive effort involving processes resulting in change of form.

Nature study affords an illustration of this type of mental activity. It has its place in a rational scheme of elementary education, because it furnishes a necessary stimulus not supplied thru the medium of words.

2. The second class of activities resulting from things as a source of mental stimulus is that shown in constructive effort thru motor activities, controlled by the mind and directed to a change of form of the material things under consideration.

Since this is the class of activities which must employ the great mass of mankind, since systematic training is essential for effectiveness in this line of effort, and since systematic training is not given outside the school during the school age, and because it can be most effectively given during that period of the child's life, it follows that provision should be made for giving it in the elementary schools.

Manual training, under the implications of the introductory statement of this address, furnishes this kind of training, and rounds out and completes the necessary forms of activity for the development of the child during the elementary-school age.

Let us consider briefly the part which constructive effort plays in the work of the world:

The magnificent cathedral, with its splendid proportions, adorned with paintings, mosaics, and statuary, embodies the highest creations of the mind of the architect and the artist. The splendid structure in its completed form existed in the mind of the architect as a mental product before it assumed

material form. The breathing marbles and the speaking canvasses which adorn its walls existed in the mind of the sculptor and painter as products of the constructive imagination while the marble was yet in the unhewn block and the paints unmixed. Before these creations of mind could stand forth in embodied form to minister to the spiritual needs and æsthetic tastes of all, the materials of which its component parts are formed must be selected, assembled, and wrought upon by the cunning hand of the builder, the sculptor, and the painter in concrete constructive effort.

We may, perhaps, rightfully claim that the highest form of mental activity here involved is shown in the conception of the architect and artist, which preceded its objective realization; but we must not forget the debt they owe to the cunning work of the hand. Art, whether in architecture, painting, or sculpture, is an evolution. The builder's intepretation and embodiment of the constructive imagination of the early architect into an objective reality, gave to that architect and others, in concrete form, that which had else remained a figure in the imagination. It now stands in form for study, for a determination of its defects and its points of excellence, of its adaptation or lack of adaptation to the purposes it was designed to serve. As a result of this study of the adaptation of means to ends, the imagination constructs a better mental product, which the builder again fixes in permanent form thru the work of the hands. This process is continued, the work of architect and builder each necessary for the other, each gaining by the other's work, until new types and higher forms of structure, both in utility and in beauty, are realized.

In the same way we might trace the development of art in painting and sculpture. The idea of the artist must take form thru the work of the hand, and each creation of mental and motor activity, whether in statuary or painting, becomes a lesson and an inspiration for further effort.

Design, whether for decorative purposes, or in the production of new forms and combinations of materials adapted to the uses of man, follows the same line of development.

The modern printing-press is one of the most marvelous products of human ingenuity, but in its highest type today it is an evolution from the first crude press employing movable type, thru the combined work of mind and hand. Each new type in the evolutionary process has come thru a new conception of the mind, the outcome of a study of the defects and excellencies of an earlier type, and put into concrete form by the trained hand of the workman.

The more thoroly the workman has been trained to conceive the end for which he works, and at each step to adapt wisely and skilfully his efforts to the accomplishment of that end, the more likely will he be to see the necessity and possibility of improvement. The more skilful the inventor is as a workman, the fewer the errors in his designs and in the complete product.

The course in manual training in the grades designed to meet the demands for training here set forth, should have a content of its own, wrought out and

determined by the capacities and needs of the individuals to be trained. The materials and tools to be used, the particular forms of constructive work and their order, and the processes employed in the construction, should be selected and determined with respect to their adaptation in furnishing the kind of training required.

Manual training should not be given as the fag end of other subjects in the course, and not chiefly for the purpose of illustrating or enlarging the work in those other subjects. The question as to how far the exercises of manual training may be utilized to supplement other school work—geography, history, arithmetic, etc.—is of far less importance than the question as to how far these exercises are adapted to meet the demands for necessary mental and motor activity, essential for the development of the child and not otherwise provided.

It is not my intention to claim that the work in manual training should not be in any way related to the other work of the school. It furnishes opportunity for work of high value in connection with other subjects; and such opportunities of relating one line of work with another, to the betterment of both, should certainly be seized.

Enough crimes have already been committed in the educational world under the name of correlation, without still further extending the list in attempting to correlate every form of motor training with some phase of the textbook or the schoolroom.

Correlation in educational work should be natural and not forced. Indeed, it cannot be forced; and much of what goes under the name of correlation would better be called a conglomeration of disjointed and unrelated fragments of knowledge, with a resulting habit of mind of little value in effective and concentrated effort.

A course of study in manual training extending thruout the grades, and planned as above set forth, would furnish many opportunities for extending knowledge of materials and processes in industrial organization and administration lying outside the main line of training which the work is designed to offer. The extent to which these fields of knowledge may be explored must be determined by their value as matters of knowledge, and their relation to other subject-matter of the course of study, and to the character of mental activity involved in their mastery. The exercises may frequently develop an interest in past or present industrial processes, the knowledge of which may be of value to the child.

I believe the children being trained today are far more concerned with the industrial processes of today than they are with the industrial processes of primitive peoples, and I cannot bring myself to the belief that nature has made so great a mistake as to bring children into the world, at any given stage of the development of civilization, lacking the capacity to enter into that civilization without going thru all the preliminary processes and steps thru which it has been evolved.

I am not undertaking to argue the question as to whether the child in his

unfolding must live over again in his development the development of the race, and must begin where the race began; but I do undertake to express my belief that, if this be true, he is, at the time he enters the public school, advanced so far in this process of development that some systematic effort may be undertaken for his training thru the utilization of his immediate environment, and that it is unnecessary to attempt the difficult task of reconstructing the environment of primitive peoples which finds no proper place in the environment of today.

It is true that the industrial development of today presents complexities too great for the child of the public school; and yet I believe there is in it sufficient that is simple and elementary, and which leads directly and naturally to the more complex, to furnish ample scope and material for the activities of the pupil's mind and hand; and that the consideration of these simpler phases of present environment furnishes a better basis for the understanding and appreciation of environment as a whole than would a class of exercises growing out of a dealing with the supposed environment of a people remote in time and low in the scale of development.

I believe that, in our effort to make the work in manual training serve as a point of departure in the accumulation of knowledge of that which is remote, we have overlooked some opportunities which it affords, subsidiary to the main line of training, but which are of the highest value. I shall call attention to one instance of this kind which has been very generally ignored, so far as my observation goes, in the field of manual training. I refer to the opportunities it offers for exercises of the highest order in developing the use of language. In the completed products of the constructive exercises involved in manual training, and in the processes employed, we have materials which may be utilized for language-training, in the two forms of description and exposition, unexcelled by any other material employed in the public schools.

The child who is trained in accurately describing one of these completed products of his own hand, or who is trained in giving an accurate exposition of the steps in order, and the processes employed in the construction of that object, has secured a power in the use of exact and definite language which he receives nowhere else in the public-school course. Every such exercise in the use of language requires such a training of the observation, and a clarification and organization of his knowledge, as is demanded by almost no other exercise in any phase of the public-school work.

One of the greatest weaknesses of the pupils in the public schools today is the lack of power in definite, concise, accurate statement. Too often this lack of power is due to the fact that pupils are asked to talk when they have nothing to say, to write essays on subjects of which they know nothing except as they acquire the knowledge from the words of the book.

The constructive work demanded by the manual-training course requires close observation and adaptation of means to ends, an examination of effort and its results with relation to its success in realizing the desired end, a determination

of what is lacking, further effort guided and directed by the increased knowledge of what is demanded, and again further comparison and study, followed by further renewed efforts. All this requires clear thinking. The work of the pupil's own hands is then a subject about which he knows something definite; and definite knowledge is the essential for definite statement. Here we have the raw material out of which accurate language in certain important forms naturally follows.

For the workman, in the shop and elsewhere, the ability to state accurately and concisely what he is to do, or what he has done, or what another is to do, is an ability which has commercial value; and it is also an ability which has other value than can be measured in terms of dollars for the individual. Clear thinking furnishes the right conditions for clear statement. Clear statement begets clear thinking.

Too often in manual training we have left out all that is artistic. Motor activity may be developed and trained, and with it all the mental activity necessarily involved in such training when dealing with things beautiful as well as with things ugly in form. Artistic design is constructive work of the highest order. It is called for in the requirements for manual training set forth in the very first sentence of this address. But manual training is not a mere annex to artistic work, nor is it to be employed solely as a medium thru which to display the results of constructive artistic design. Each should supplement the other. They are closely related. They should go hand in hand. Design for the mere sake of design in art has no value. Its value lies in its use; and ample scope is afforded in the field of manual training for effective and valuable artistic training in design and its applications to things useful.

A question of vital importance in the introduction of manual training into the grades is: Where shall it be begun, and how long shall it be continued? If I have correctly described its function, the question is answered in that statement. It should be begun when the child enters the public school, and it should be continued during his stay there.

There are still other reasons than those I have named, why it should be begun in the lowest grades and continued thruout the course. We have been making the mistake in our public-school work of assuming that the child can be taken from the home, where his activities before entering school have been concerned chiefly with things, and that during the school period each day we may entirely change the form of his activities and invoke the activities which come from the use of books. We are asking for mental activity, whereas the demand of his physical nature is for physical activity. We are demanding physical quiet, when his whole nature rebels against it. We have been asking him to deal with the abstract, when he wants the concrete, that for which he is fitted and which appeals to him. We give him pencil and paper, and occasionally paints and brush, and expect him to find in these materials ample scope for the demands of his physical being for motor activity.

We should have, during these early years, just such scope for motor activity

and systematic training as a well-organized course in manual training will provide.

I have sometimes heard it said that the claim made for motor activity carries with it the implication that manual training will make too great demands upon the mental activities of the child, and furnish no relief from the supposed mental activity involved in the use of books; but we must remember that change and variety in the form of mental activity invoked by material in use in manual training, which serves as a stimulus for such activity, afford the relief needed; and we must not forget that it is an impossibility to secure effective mental activity on the part of pupils in the primary grades while holding them exclusively to a study of books and recitation work during the six hours of the school day. Manual training, then, is needed, in the very lowest grades, to furnish a form of activity which the physical nature of the child demands, and to utilize that activity thru systematic, organized work for the development of the child.

While, perhaps, this reason may not be urged with the same force in the higher grades, it cannot be ignored with propriety in any one of the elementary grades. Manual training should be continued thruout the grades, not only because a large number of pupils do not go beyond the completion of the work in the eighth grade, but because a very large percentage of them drop out before that time. All need the training, both motor and mental, which a systematic, well-organized course of constructive work gives when properly administered.

I shall not undertake now to discuss in detail, or even generally, the course of study in elementary manual training. This is not the place nor the time for such a consideration. But I do wish to say that, in my judgment, the large problem for those engaged in furthering the cause of manual training today is in the determination of the values of the different lines of work, material used, and processes employed in this field of educational effort; what motor activities are proper at a given stage in the child's development; what mental powers are valuable for the control of these activities; what materials, tools, and processes are best adapted to meet the needs of the child at the different stages of development.

Such an examination as this would result in material modification of the work done in almost any of our schools where manual training is in operation. We are as yet feeling our way. We shall make progress most rapidly when we throw aside sentimentalism, and consider the question of, not what showing can we make, but what can be done to meet the needs of pupils. We should stand ready to discard each and every pet form of work which cannot stand the test of such an examination.

The examination of the manual training exhibits at the St. Louis Exposition showed some remarkable things. It showed work being done in the lowest grades in one system of schools, and exactly the same line of work in the highest grades in another system. It showed work too difficult for the grade

in which it was undertaken in some schools, and not up to the capacity of pupils required to do the same work in the higher grades in other schools. It gave evidence, in many cases, that product was the thing in the mind of the school authorities, rather than training. It showed that the relation of art to manual training was, in most cases, so remote as not to be discoverable.

All these conditions are what might naturally be expected. This entire field of work is comparatively new. But the time has come for deliberation, consideration, and examination, not only of the basis upon which it rests, of the ends which it is to serve, but of definite plans of adapting means to ends. It is not the work of any one individual, nor of any short period of time. It must be undertaken faithfully, patiently, and systematically by all who are interested in this phase of educational work. Further, experiments must be tried; other failures will result; but out of failure will come new experience and better judgment.

I cannot close without considering briefly another phase of the subject—and that is how to find a place for it in the course of study. We hear much of the overcrowded condition of the elementary course of study, and we hear, perhaps, as much more as to the meager results which come from the administration of this course of study. We are told that pupils from the public schools have no power in the use of language, are not able to use arithmetic for the practical purposes of life, know little of geography and less of history; and, in fact, that they are more noted for the things they have not learned than for those they have mastered. And many of those who make these complaints, doubtless with more or less of truth, argue that what is needed in the public schools is fewer rather than more subjects, and that manual training would only add to the burdens of teachers and pupils, and would detract from the quality and quantity of knowledge and kind of training to be derived from the study of the traditional subjects in the course of study.

The remarkable thing about these claims is that they are made just as frequently, and with just as much truth, where no work in manual training, or other of the so-called "fads," is found.

The trouble is, not that we have too many subjects, but that we attempt to teach too many things in those subjects which are not worth teaching, and are wasteful in time, method, and effort, with correspondingly poor results.

Those who argue against manual training forget that there is no other line of work in which the pupil can engage which calls forth mental activity of a higher order than manual training; forget that this work can be introduced into the school, and be used as a stimulus for mental activity when books fail as such a stimulus, and when the time spent in the subjects studied is time not only wasted, but worse than wasted, because it results in the development of bad mental habits; they forget that this work gives physical activity, change of position, change of interest, change in the form of mental activity; and that the pupil goes from it to his other tasks refreshed instead of wearied, and that he is able in the remaining time to do more in the field of the common branches

than he could have done had the effort been made to hold him to those lines of work continuously.

The mental power gained thru this dealing with things, and in the direction and control of motor activities, is a mental power which manifests itself in greater capacity of the pupil for the mastery of his work and more rapid progress in that work. He sees in it practical utility. It holds him in school longer, and, if properly organized, it is pleasing to his parents from the standpoint of utility, if for no other reason. The influence upon the parents is to make them more cordial in the support of the public schools; and the development of such a sentiment in any community is one which should be encouraged, because the development of the public-school system depends finally upon the belief of the public in its efficiency.

THE PRACTICAL UTILITY OF MANUAL AND TECHNICAL TRAINING

WILLIAM BARCLAY PARSONS, FORMER CHIEF ENGINEER, RAPID TRANSIT COMMISSION OF THE CITY OF NEW YORK

Mr. President and Members of the National Educational Association:

Not being engaged in education I approach the topic of this evening's discussion, not as an educator, but as one engaged in practical work, where both manual and technical training play their parts, and I shall speak, therefore, from the point of view of results achieved and of ends to be attained.

The statement is almost axiomatic that any particular educational work, precisely the same as work of other kinds, must pass the supreme test of practical efficiency if it is to assume a permanent place. Unless special educational training can show some actual value in making men and women better able to meet the ordinary demands of life, no matter how desirable it may seem, it has no reason to exist, and must in the end give way to other work, or to other subjects that will employ the student's time more profitably. It is, therefore, by actual results that we are to judge of the value of any teaching, and, by this same standard, of the practical value of manual and technical training. The question is whether students are sufficiently improved thereby to compensate for the time spent.

Subjects that are taught in our schools and colleges may have one or both of two values: they may be useful in developing the reasoning faculties, thus fitting the student to deal later with the actual problems of real work, in the same way as gymnastics develop the muscles of the body and are thus useful, tho one may not become a gymnast; or the subjects may have a direct value *per se*, as do all subjects that will later have bearing on actual daily vocations. It is not for me, in a gathering of educators, to discuss the relative importance of any subject of the former class. Others who will address you will cover the

value of manual training from the standpoint of mental development—if that phase of the question requires any consideration or argument; while I, within the narrow compass of this paper, will invite your attention to a consideration of the subject solely from the standpoint of practical utility, and with regard to better fitting young men for the actual demands of work to come.

When manual training was first brought forward, it was with the view of its use as a means of mental development; it has, however, a much wider field a more practical application, and an actual educational value of great practical utility. We are all conscious of the tremendous progress in mechanical development that has taken place within the past fifty years, more especially during the last twenty years, and that is still going on at an increasing ratio. It was not so very long ago that the great source of wealth was in agriculture, where work was performed by the most rudimentary of unskilled labor, while even in mining and in the mechanical arts implements were of the crudest form. On the strength of men's arms, legs, and backs was the main reliance for power. Today it is hard to call to mind a single trade in which machinery of intricate form does not enter in some degree, and usually to a great extent—machines requiring on the part of the operative some knowledge of mechanics, some experience in manipulation, and some skill in manual dexterity. The hand-needle has given way to the sewing-machine; the farmer's foot-loom and spinning-wheel, to exceedingly complicated machines of great capacity, engine-driven; the telephone is used in place of the messenger; a machine and not a pen writes our letters; while our stables have become repair shops for motor cars. Such are but a few of the many examples in our everyday life that at once occur to one, where machinery is displacing handwork, and where skilled labor is taking the place of unskilled. The change that has come about does not, however, stop with these. A moment's consideration shows us that our great crops are sown, gathered, and harvested, not by the hand-sower, by the scythe, and by the flail, but almost wholly by machinery; and where farms are conducted profitably and on modern lines, such means are wholly employed. Even at sea, where there is still rivalry between wind and steam as motive power, the former can be used to advantage only by placing on a sailing-vessel an engine to hoist and work the sails, thus permitting a reduction in the size of the crew by the substitution of mechanical skill for ordinary labor; while the fishermen of small capital, instead of rowing or sailing each morning from the beach to the fishing grounds, are now going, in increasing numbers, to and from their daily work in gasoline-driven dories. Mechanical development has already invaded our homes and our offices, and is fast taking possession of every avenue of human industry, from the extensive field of transportation and the great factories, whose fires never go out, down step by step to the electric cooking-stove.

A measure of the number of persons dependent upon mechanical pursuits can be obtained from the reports of the United States Census Bureau. The report for the decade ending 1900 shows that there were then 29,000,000

persons engaged in various occupations. Of this number there were no less than 8,000,000, omitting entirely all those engaged in agriculture, employed in occupations where machine and tool knowledge formed the basis of work; while in nearly all of the others some such knowledge was desirable, and in many cases essential. It is not an exaggeration to say that machine- and tool-work form so large a part of the daily vocation of the majority of all the working classes in this country that there is not a single calling where the worker is not required to show some familiarity with tools, and where some proficiency in mechanical dexterity will not lead to his advancement. In fact, it would seem that, after the great foundation of all education, reading, writing, and arithmetic, there is no one subject of instruction of so widespread practical benefit as that of teaching the art of using the hands. With the masses an education that develops the thinking power alone is of small value; it produces a development that is unbalanced; it creates a power that is ineffective, that cannot be used. Give a man a rudimentary education, with an understanding of how to do things, and the educational foundation of productive capacity has been laid, which capacity governs the wage-earning power. The practical utility of manual training is the instruction of the rising generations in the use of tools, the education not only of the mind, but of the hand and the eye, and in teaching a subject that will later be an actual portion of the life-work of the majority of students.

The limit to which manual training should be carried is to be considered from three points of view: the elementary work in the lower grades, the specialized in the trade schools, and the higher in the technical colleges. As to manual training in the lower grades—the basis for the more advanced in the trade schools—you have already listened to an acknowledged expert, while of the specialized work in the trade schools you will presently hear one who has given the subject the closest study. As to its practical value in our technical colleges, we must differentiate between the technical college and the highest grade of trade school, especially in the matter of manual training. The one aims to turn out the professional engineer, educated not only in technical sciences, but in the liberal arts as well, to whom time and money spent in procuring an education are quite a secondary consideration as compared with the acquiring of an education itself; the other aims to develop the highest grade of mechanic and general foreman. Altho there is a great difference in the scope of the educational work in the technical college and most advanced of trade schools, yet there is this similarity, that both deal with mechanical appliances; but with this distinction, that the men of the latter will in practice have to do with their own hands their own work, while those of the former will direct other hands to do it. It is not essential, therefore, that a technical college should carry manual training to the same point of development as the highest grade of trade school does. In the education of the engineer there should be enough manual training to make him understand how things are made to familiarize him sufficiently with casting and forging, hand and

machine tools, engines and their adjustment, the winding of dynamos, and the connection of electrical devices, so as to give him the requisite knowledge of how to design, how the engine should be used, and how construction results can be accomplished; in short, to make him conversant with principles, rather than to develop manual dexterity.

This brings us to the question of the practical value of technical training itself, and whether it is better that young men who are to follow the professional life of engineering should get their education in the offices of an older practitioner, as has been the custom in England, and is still to a large extent the universal custom in teaching the allied subject of architecture; or to gain the same end by passing thru a technical college—the practice in America and Germany. To quote the growth of technical colleges is not necessarily a rational argument, but it certainly goes to show popular appreciation. In 1870 there were less than half a dozen institutions in the United States where a good technical education could be had, and the number of students was small. Today there are no fewer than forty-three such institutions, with over 23,000 students enrolled.

Before considering the practical value of technical education, let us define what is an engineer, and what is the vocation known as engineering. The word "engineering" is used here in its broadest sense, including all branches of professional work in applied science or construction. The word "engineer" is not, as is popularly supposed, derived from the word "engine," a machine. There were engineers before steam was practically applied, or before the development of engines, in the modern acceptation of the term, began. Both the words, "engineer" and "engine," come from the same derivation, the Latin *ingenium*, whose prime meaning is "natural quality, character, genius;" and it in turn is derived from *gigno*, "to produce." The engineer is, therefore, a man of "natural quality"—one capable of producing. The early engineers were military men engaged in fortifying cities and constructing battering rams and other engines of war. The first man to use the term "civil engineer" was John Smeaton, the eminent designer and constructor of the first Eddystone lighthouse, that guided safely into the harbor of Plymouth the East India merchantmen of the eighteenth century. He adopted this appellation to distinguish himself from his confrères as one working, not in military, but in civil undertakings. The profession of engineering in its broadest scope was later defined by Thomas Tredgold, when founding the Institution of Civil Engineers, as being "the art of directing the great sources of power in nature for the use and convenience of man." It is difficult to imagine a field of work of higher order, of wider scope, and for which a more complete previous technical training is essential.

The powers of nature, those great and mighty forces that surround us; that sustain and govern, not merely our own small earth, but the whole universe; powers that are without limits as to time and space; whose laws never vary; whose manifestations may undergo change, but which never suffer loss,

and which are the only things of which we have cognizance that are of perfect truth—these forces, in all their might, from the great energy of the engine capable of lifting mighty weights, or the violence of an explosive rending mountains of rock, to the gentleness of the watch-spring in your pocket regulated to a variation of less than a second a day, are by the study of the engineer controlled and directed for the use and convenience of his fellow-men. How little did Smeaton foresee the development of civil work to which he applied a designative title! How little did Tredgold realize the far-reaching effects of a calling to which, it is true, he gave unlimited bounds! The responsibility of educating men who are to follow Smeaton, who are to realize the ideals of Tredgold, who are to understand, direct, and make useful the powers of nature, rests upon such as you who make up this audience. It seems but necessary to repeat that definition of engineering, which in simplicity of language, in directness of thought, in broadness of conception, has never been excelled, to answer at once the question whether such education is better given in special technical colleges or in the offices of some one practitioner. What are these powers of nature? They are not only those that we see or feel every moment—light, heat, steam, gravity; but also those studied by the electrician, by the chemist, by the physicist, by the geologist, and by the other disciples of pure science; those intricate forces that, whether matter consists of many or few elements, give it such a manifold and diversified character. When the total of human information of the several branches of science was comparatively limited; when the engineer could depend largely upon precedent; when progress was made by short and careful steps, it was possible for a sufficient education to be acquired under the tutelage of a single man, leaving it to the inherent genius of the pupil to self-develop. With, however, the vast and constantly broadening field of modern scientific knowledge, it is quite impossible for one man, or such a limited group of men as one office may contain, to impart to the young student the requisite instruction in all the properties of the forces and materials of nature that he should have as a general foundation for his professional education. Although engineering, like medicine, law, and the other learned professions, is divided into separate branches, nevertheless the modern engineer must know something of machine design, of electricity and its practical-application, of hydraulics, transportation, structural construction, together with physics, geology, and metallurgy. If such a structure be built on the solid foundation of a good education in the liberal arts, so much the better will it be; and, obviously, such a preparation can be given in an institution with a corps of specialists. It seems a contradiction to say that, as any profession becomes more specialized, at the same time it becomes broader; but, as a matter of fact, the range of subjects to be studied does become wider. It is not necessary—in fact, it is impossible—for anyone to become expert in all branches; yet so interdependent are the several divisions, so interlocked are the various nature forces, that some knowledge should be had of many subjects and much knowledge of few.

I gave you above numerical statistics of the growth of our technical colleges as an instance of the practical success of such education. Educational statistics of the engineering forces engaged in building the Rapid Transit Subway of New York city were compiled, and are both interesting and suggestive as showing the extent to which technical training is availed of. The staff of engineers numbered about two hundred at any one time, exclusive of inspectors, and was divided into three classes: the executive, or those engineers holding positions of responsibility, and who were called on for original thought in designing as well as for ability in execution; the assistant engineers, holding positions of less trust, men of less experience, carrying out the orders of their superior officers, tho still with responsibility; and the third, the rodmen, those just beginning engineering work, called on for no originality, but acting entirely under instructions. All of these positions, except those in the first class, were filled after a competitive civil-service examination. Of the first two classes 86 per cent. were college graduates from our leading institutions; while of the third, where such education was not in any way a necessary requirement, not less than 58 per cent. had passed thru some college of recognized standing.

During recent years we have been frequently admonished to lead "the strenuous life" by no less a person than the president of the United States, who has always been a vigorous exponent of his own doctrine. More recently an eminent French divine has been preaching the antithesis to "the strenuous life," namely, "the simple life." Judged from the cold standpoint of practicality, is either right? Should either "the strenuous life" or "the simple life" be our ideal? Does either as an ideal satisfy in full all the requirements of life? Strenuosity suggests, and may be nothing more than, energy for good or for evil—vigor whose force, acting without guidance, produces no useful effect, and entirely fails to come up to the meaning of "engineering," which is character, and the underlying motif of Tredgold's definition, which is force directed for the benefit of man. Simplicity, on the other hand, preached as a doctrine, calls to mind a gentleness deficient in vigor; or possibly a timidity that shuns a contest with the hard, unsympathetic conventions of life, and an avoidance of the necessary and entirely proper complications that ear an inevitable concomitant of modern development. Life itself is involved; everything about is vast; and nature, with its sources of power, is complicated beyond human grasp; and all to an extent for which simplicity alone fails to present a satisfactory solution as a life-guide. We need force, we need a vigorous force; we need that direction and avoidance of the unnecessary which is simplicity; but with either one alone there is something lacking. Instead of great force and latent energy without control; instead of quiet gentleness without restriction, or of power of control without vigor to be controlled, what we need is force and energy applied where necessary, and always under control, always working to a definite purpose, and at the same time avoiding complications and unnecessary friction. That is, to have a life whose great

underlying motif is efficiency; and, instead of speaking of "the strenuous life" or of "the simple life," let us have before us as a doctrine "the effective life." What we need is not merely a man who acts, but one who does; that is, one who will do what he has to do regardless of intervening obstacles. Efficiency and effectiveness are the keynotes of success in actual life. They are also the lessons taught by every parable in the New Testament, even if that work is regarded only as a code of ethics; and they form the spirit of that stirring definition of engineering which is based on the direction of the vital forces of nature and the doing of things for mankind. Efficiency is the practical underlying principle in the work of technical education. In no other walk of life is actual efficiency so essential as in engineering. In other lines there is a place for the student, for the didactic, for him who would turn to his books to gather wisdom; but not so in technical work. Here there must be the man to do—to take those great and mighty forces and make them do effective work. Unless he can so stand up and do that, he cannot succeed.

We are all cognizant of the great results already achieved by technical development; but have you ever paused to take the measure of any one example, to analyze some one of the results that we see daily produced, and to estimate what they mean? Let me give you one example, to which I have referred on other occasions, but which is not out of place here. You have all seen some ocean liner pass majestically to sea out of the port of New York; but have you ever thought of what that ship has to be designed to do, and the amount of energy, expressed in simple language, that is required to propel her from shore to shore? You see the many decks, the several funnels, and the tall masts. Below the water and out of sight there is still more than what is visible above; but all is so adjusted that, no matter how buffeted by the storms, the ship will always be stable and will come back to a vertical position. Longitudinally, the great ship of 800 feet must be structurally designed to be supported at one moment on waves at bow and stern, and yet resist breaking in the middle, and at the next moment be supported by a wave in the middle only to resist breaking in two in the opposite direction. To drive this great mass, whose weight is 40,000 tons, through the water at railway speed, requires a force rated at 50,000 horse-power. So stated it means nothing, but as each horse-power is equivalent to one and one-half ordinary draft horses, and as each of the latter can do the work of eleven men—who, however, can work for only eight hours a day, thus requiring three sets of men—there would be needed to take the place of the same energy in the ship no less than 2,500,000 men. Here in one single case combined we have an illustration of great static ability and enormous dynamic energy, and the whole is an excellent illustration of efficiency. The structural strength and the compressed energy of the ship are strenuousness in the extreme, but a vigorous strenuousness under absolute control; and that control by one man at a throttle wheel is simplicity itself. Either one without the other is valueless; together they make the vital principle of which I spoke—efficiency.

You invited me to address you on the practical value of technical training as related to work in applied science. As to the necessity for such education of the highest order there is, of course, no debate, and as to the proper method of acquiring it there can be no question. Technical education has so many points of contact with professional work, and it covers so wide a range, that one cannot discuss its details. For the moment we are dealing with fundamental principles only, the basis of the subjective and objective value of such an education, which can be summed up as efficiency leading to effectiveness. The one is the ability to do, the other is the doing. The responsibility of giving to technical education its practical value by making it thoro and efficient rests with you as educators, but efficiency alone will not complete the whole value. There must be instilled into it the great living principle that Tredgold had in mind when he spoke of directing the powers of nature for the benefit of man; there must be developed, not only in the education but in the educated, in all simplicity, the vigorous strength that is embodied in "The Effective Life."

THE ECONOMIC IMPORTANCE OF TRADE SCHOOLS

FRANK A. VANDERLIP, VICE-PRESIDENT OF THE NATIONAL CITY BANK, NEW YORK, N. Y.

In the group of great industrial nations there has come forward in recent years one that has taken a place in the very front rank among industrial competitors. It has reached a pre-eminent position in many special fields of industry, wresting from others the vantage they had long held in serene security. That nation is Germany. By the aid of rapidly developed skill and constantly improved methods, Germany has closed its own markets to the products of the manufacturies of other countries. But Germany has done much more than that; it has developed an ability successfully to compete in the neutral markets of the world, until today it shows the greatest capacity in this field of international industrial competitors that is displayed by any of the great nations.

In accomplishing this remarkable industrial success, Germany has had little aid from nature to make the task an easy one. There has been no wealth of raw material such as we Americans have had to aid us. There has been no vast homogeneous domestic market such as has been of vital importance in building up our own manufactures. Her people have lacked the peculiar inventive ingenuity which in many fields of industry has been the sole basis of our achievements. Her artisans have possessed almost none of the delicate artistic sense which makes French handiwork superior to the obstruction of all tariff walls. Her industries were forced to grapple with English competitors intrenched behind a control and domination of the international markets which for generations have been successfully maintained. But amidst

this poverty of natural resources, and from among a people not signally gifted either with inventive ability or artistic temperament, there has, in a generation, emerged an industrial nation which stands forth, if we take into account the disadvantages against which it had to struggle, as a marvel of economic development.

I have had a somewhat unusual opportunity to study the underlying causes of the economic success of Germany, and I am firmly convinced that the explanation of that progress can be encompassed in a single word—the school-master. He is the great corner-stone of Germany's remarkable commercial and industrial success. From the economic point of view, the school system of Germany stands unparalleled. The fundamental principle of the German educational system is, in large measure, to train youths to be efficient economic units. In that respect the German system is markedly at variance with the present development of our own educational system. In the German schools the most important aid in the work of successfully training youths into efficient industrial units has come from an auxiliary to the regular school system. It has come from that division of instruction known as the trade schools. The German trade schools have been so designed that they supplement the cultural training of the common-school system. They are devised to give instruction which will be practically valuable in every trade—in every commercial and industrial calling. They are so arranged that their work supplements both the cultural training of the academic system and the technical routine of the daily task. These schools are the direct auxiliaries of the shops and offices. They have been the most powerful influence in Germany in training to higher efficiency the rank and file of the industrial army.

The students in these trade schools, you understand, are youths who have completed the regular compulsory educational course, and have gone out into the ranks of active industrial and commercial workers. The hours of instruction are so arranged that they fall outside of the regular hours of labor in shop or office. The curriculum is broadly practical. It includes the science of each particular trade—its mathematics or chemistry, for instance—and its technology. But it does not stop there. Principles of wise business management are taught. The aim is to prepare a student for the practical conduct of a business. He gains knowledge of production and consumption, of markets and of the causes of price fluctuations. He is put into a position to acquire an insight into concrete business relations, and into trade practices and conditions. Are not these aims worthy of our schools? What truer democracy can there be than to have a school system that will point the way to every worker, no matter how humble, by which he may reach a clearer comprehension of the industry in which he is engaged, and with the aid of this knowledge may rise to a position of importance in that industry?

To do all this does not mean the "commercializing" of our educational system. There is no need for opposition even from those who hold that it is not the place of the schools to teach youths how to earn a livelihood. Those

educators who lay strongest emphasis upon such phases as "character formation," "mental discipline," and "harmonious cultivation of the faculties," may continue to hold firmly to those views, and at the same time welcome an auxiliary school system which, while not curtailing their ideal culture courses, will add, after the ordinary period of school life is over, the opportunity for valuable practical instruction.

Such an auxiliary system of trade schools will be available for the youth after he has left the direct influence of our present school system. There are in the United States ten millions of population between the ages of fifteen and twenty years. Three-quarters of that number are not in attendance at any school. Here is a group of youth, seven and a half millions in number, from which the students of such trade schools would be drawn.

Surely it needs little training in the economics of industry to comprehend what an unreckonable advantage it would be if a substantial proportion of that seven and one-half millions were to be brought within the influence of a new and entirely practical system of education designed to make each youth a more efficient economic unit.

The present generation of American youth, entering industrial or commercial life, is to encounter a new, and in some respects a harder, condition of affairs. So far as you, as educators, conceive education to be in any sense a preparation for practical life in a workaday world, there have been laid upon you new demands and fresh responsibilities. The industrial life of this country has in a decade undergone changes more significant than had been encompassed before in a period of two generations. No one whose life has been largely in the classroom is likely to have comprehended fully the true significance of the development of the forces of combination—combination in the field of labor as manifested in the growing power of unionism, in combinations, in the domain of capital as manifested in the trusts, concentration in the control of industries, in the subdivision of labor and the aggregation of wealth. This display of the forces of combination, equally significant in the fields of labor and of capital, has brought changed conditions to the problem of human industrial endeavor. The welfare of the people, and the position which our country is to maintain among nations, both depend on no single thing more than on the recognition of these changed conditions by our educators. You must recognize the new demands of the times. You must provide the educational requisites which these changed conditions make imperative.

The forces of combination—the labor unions and the trusts—are united and are working in harmony to accomplish at least one thing. They are united in a tendency to make, of a great percentage of our population, commercial or industrial automatons. They both tend to subdivide labor, and thereby limit the opportunity to acquire a comprehension of broad principles. They both tend to circumscribe the field of the apprentice, narrowing his opportunity, forcing him into petty specialization, and restricting his free and intelligent development. All this is placing us in grave danger of evolving an

industrial race of automatic workers, without diversity of skill, without an understanding of principles, and without a breadth of capacity. There is but one power that can counteract that tendency; that power is the schoolmaster. These youths who can gain from their daily work only that narrow routine technical experience which, in the main, is all that the conditions of modern industry offer, have a right to demand something more. They have a right to demand the opportunity for a practical education. As modern conditions narrow their technical training, those same conditions broaden the opportunity for the man who does acquire knowledge which will give him a grasp of more than a single detail of his business. I believe it is your duty to provide schools that will supplement the routine of the day's work; schools that will give to those youths a comprehension of the relation of the narrow daily task to the broad industry; schools that will supplement such cultural training as our present system has provided with practical knowledge of immediate and valuable application; schools that will counteract the discouragement and monotony of the daily round of toil, and create in their stead some enthusiasm for work, building up a love of labor by showing an intellectual side to what was before blank mechanical routine.

The industrial and commercial world never needed the schoolmaster more. It is not enough to say that you will give your efforts toward the perfecting of the present system, until it will so garb youth in an armor of sweetness and light, until it will so instil into the youthful mind a love of the beautiful, so strengthen his character, so build up by general instruction his mental grasp, so train his general faculties, that you will for him have dignified all labor and provided him with springs from which, without regard to material surroundings, he can always drink with the deepest satisfaction. All that is a noble ideal; but none know so well as yourselves that an armor of that sort, if it is to be forged by a boy before he is fifteen years of age, will be an imperfect protection against the difficulties of modern industrialism. The present system of education does not meet the present requirements of industrial conditions. There is a want in that industrial situation which nothing can so well supply as an auxiliary school system. I believe Germany has recognized that more clearly than any other nation. Her answer to the problem raised by the new industrialism has been the development of the trade school. Her reward has been an unprecedented prosperity of her people and an unexampled development of her economic resources.

I would particularly emphasize the difference between a system of trade schools and a movement to enlarge the present curriculum of existing schools by the introduction of manual training. There should be no confusion between those two ideas. One belongs to the category of the "fads and frills." I believe it is useful, but perhaps it crowds out other things still more useful. The trade-school system which we need is an utterly different and far more serious matter. It is a technical school of comparatively advanced type, with the technical side of its instruction in the hands of skilled, practical workmen.

The students are serious workers, regularly employed in shops or offices, who are seeking for knowledge that will help them better to grasp the technique and the principles of their daily labor. The curriculum is designed to aid them to comprehend the scientific and theoretical side of their work, supplementing their technical experience. The field is quite outside the direct influence of our present school system. The result, in my opinion, if such a system is generally developed, cannot be reckoned in symbols of dollars. It will be as far-reaching as our international relations, as broad as our industrial life, as important as the welfare, prosperity, and contentment of our people.

DISCUSSION

J. M. H. FREDERICK, Superintendent of Schools, Lakewood, Ohio.—In Europe, when one asks you who you are, he usually means to inquire who your ancestors were; in this country this question implies, among other things, what you do, what you can do, and what you have done. In the United States the overwhelming dominancy of what we may call static education is past; the dynamics of our entire civilization was never so marked as it is today, with Theodore Roosevelt in the chief place of power and trust. Our ideas and our ideals are more vivid than ever before. The mental processes reflect the age, and are no longer considered complete with "knowing, feeling, and willing." Action is the acme of thought; or perhaps, to speak more accurately, the acme of thought is not reached without action. It reacts upon and vivifies the idea, intensifies the feeling, and strengthens the will. A few years ago we argued that impression precedes and determines expression; today the impression is not considered complete without expression.

Complete education may be said to be the harmonious development of all our faculties. Manual exercise develops powers and appreciations that would otherwise lie dormant. It is no accident that so large a percentage of successful men were reared on the farm. Charles Dickens declared use and necessity to be the best of all teachers. The necessities of farm life compelled the use of certain faculties. From early childhood these men were accustomed to do useful things, and thus they acquired the habit of achievement, as it were. There was demand in plenty for the exercise of initiative and perseverance in thought and action. Every boy who ever taught a calf to drink, or persuaded a ram to go the peaceful way and the pig to return to his sty, thereby was acquiring the habits of success. At every turn his farm life trained him. These necessities furnished the natural opportunities of the farmer boy. The average boy of the city has no such necessity, and no such natural opportunity. The manual training of the schools tends to give the boys of the cities equal opportunities with the boys of the country. It does, moreover, what the farm so often fails to do: it cultivates the appreciations; and life is rich about in proportion as our appreciations are large and keen.

The habits of early days cling to us. Therefore it is important that the child shall acquire early the habit of doing useful things. It is a valuable discovery when he learns that he can be useful. I have in mind children who did poor work in every branch of study until clay-modeling, basket-making, weaving, or drawing revealed their possibilities and put them on the way to confidence and hopeful effort. Once one is conscious of his ability to perform real service, he is a king compared with him who knows much, but feels that he can do nothing that the world needs. The feeling that one is doing something useful constitutes a kind of interest; and interest is the mainspring of all worthy effort. Let a child copy a picture or make a drawing of a cabinet before him, and he will grow in careful observation and manual skill; but let him design a picture or make a cabinet, and

the task will give in addition, keenness to his senses, and power and freedom of invention to his thought.

So far as possible, manual training in the schools should have usefulness of the work to be done as an incentive, because, rightly directed, it tends not only to efficiency, but also to the best self-expression—the desire to be useful and sympathy with manual toil. I recall the handiwork of pupils at Christmas. It was their best work of the entire year, because it was the fruit of effort born of the altruistic spirit of the season.

Present needs and conditions have in every age been the principal factors in determining educational as well as all other conduct. The two dominant forces in the world today are business and education, and it is in manual and technical school work that they first unite in the pupil's experience.

I hope that I shall not be understood as at all lacking appreciation of the cultural in education. We all agree that we are here to live—that the ultimate purpose is to make a life rather than to make a living, as someone has said; but in order to make a life we must have that ability which is necessary to make a living. We want the greatest breadth possible; but efficiency must go hand in hand with it. Manual and technical training give efficiency, and I am not prepared to admit that they are altogether devoid of cultural value. Emerson held that to be cultured a person must be able to perform some kind of manual work well. Superlative efficiency is required to plan and construct a New York Subway and a Panama Canal, or to finance a great twentieth-century business corporation; but such works are not accomplished usually by uncultured men. Let us have high-minded life, with its philosophy which can bear its head above the clouds and among the stars, but let us also always keep a firm footing on the earth.

ADDRESS

THEODORE ROOSEVELT, PRESIDENT OF THE UNITED STATES

[STENOGRAPHIC REPORT]

President Maxwell, and Members of the National Educational Association:

I thank you for the chance of addressing you today; and I wish, Governor (turning to Governor Stokes), to thank thru you the state of New Jersey for the hospitality extended to us, and to say personally how glad I am to be within the borders of this great state once more, and particularly on such an occasion as the present.

I am particularly pleased to have the opportunity of addressing this Association because in all this democratic land there is no more genuinely democratic body than this; for here each member meets every other member as his peer, without regard to whether he is president of one of the great universities or the newest recruit to that high and honorable profession which has in its charge the upbringing of the boys and girls who in a few short years will themselves be engaged in settling the destinies of this nation. It is not too much to say that the most characteristic work of the Republic is that done by the teachers; by the teachers, for whatever our shortcomings as a nation may be—and we have certain shortcomings—we have at least firmly grasped the fact that we cannot do our part in the difficult and all-important work of self-government, that we cannot rule and govern ourselves, unless we approach

the task with developed minds, and with what counts for more even than developed minds, with trained characters.

You teachers—and it is a mere truism to say this—you teachers make the whole world your debtor, and of you it can be said, as it can be said of no other profession save the profession of the ministers of the gospel themselves; if you teachers did not do your work well, this republic would not outlast the span of a generation. Moreover, as an incident to your avowed work, you render some well-nigh unbelievable services to the country. For instance, you render to this republic the prime, the vital service of amalgamating into one homogeneous body the children alike of those who are born here and of those who come here from so many different lands abroad. You furnish a common training and common ideals for the children of all the mixed peoples who are here being fused into one nationality. It is in no small degree due to you, and to your efforts, that we of this great American republic form one people instead of a group of jarring peoples.

The children, wherever they have been born, wherever their parents have been born, who are educated in our schools side by side with one another, will inevitably grow up having that sense of mutual sympathy and mutual respect and understanding which is absolutely indispensable for working out the problems that we as citizens have before us.

And now I wish to speak of another service that you render which I regard as inestimable. In our country, where altogether too much prominence is given to the mere possession of wealth, we are under heavy obligations to a body such as this which substitutes for the ideal of the mere accumulation of money the infinitely loftier non-materialistic ideal of devotion to work worth doing simply for that work's sake. I do not in the least underestimate the need of having material prosperity as the basis of our civilization, but I most earnestly insist that, if our civilization does not build a lofty superstructure on that basis, we can never rank among the really great peoples. We need the material prosperity as a foundation, but it serves only as a foundation, and woe to us as a people unless upon that foundation we build a building of use to mankind.

A certain amount of money is, of course, a necessary thing—a necessary thing as much for the nation as for the individual, and there are few movements in which I more thoroly believe than the movement to secure better pay, better remuneration for the teachers. While I hope for the success of that movement, it remains true that the service you render is incalculable because of the very fact that by your lives you have shown that you believe ideals to be worth sacrifice, and that you are eager to do non-remunerative work—non-remunerative as judged by the ordinary standards—provided only that work is of genuine good for your fellow-men. To furnish in your lives such a realized high ideal, not merely to speak about, but to live up to, is to do great service to the country. The chief harm done by the men of swollen fortunes to the community is not the harm that ~~the~~ the demagog is

apt to depict as springing from their actions, but the fact that their success sets up a false standard, and so serves as a bad example for the rest of us. If we did not ourselves attach an exaggerated importance to the rich man who is distinguished only by his riches, this rich man would have a most insignificant influence over us.

Now let me keep your minds upon my exact meaning. I speak of the rich man who is distinguished only by his riches, not of the rich man who uses his wealth aright as a means to an end. I ask you to remember the explanation of the parable of the rich man's difficulty in finding entrance to heaven. The parable shows how hard it shall be for the rich man who trusteth in his riches. It is the rich man who trusteth in his riches that I am speaking of, not the man who is a first-rate citizen, whether rich or poor. Altho it is eminently right to take whatever steps are necessary in order to prevent the exceptional members of his class from doing harm, it is wicked folly to let ourselves be drawn into any attack upon the man of wealth merely as such. Remember, you teachers, that it is just as wicked to attack the man of wealth as such as to attack the man of poverty as such. Moreover, such an attack is in itself an exceptionally crooked and ugly tribute to wealth, and therefore the proof of an exceptionally crooked and ugly state of mind in the man making it. Venomous envy of wealth is simply another form of the spirit which in one of its manifestations takes the form of cringing servility toward wealth, and in another the shape of brutal arrogance on the part of certain men of wealth.

Each one of these states of mind, whether it be hatred, servility, or arrogance, is in reality closely akin to the other two; for each of them springs from a fantastically twisted and exaggerated idea of the importance of wealth as compared with other things. The man who is rendered arrogant by the possession of wealth is precisely the man who, if he didn't have it, would hate with envious jealousy the man who had it. The man who is roused to a fury of sour discontent, of envy, because he sees another man very well off, would with absolute certainty misbehave himself if he became well off in his turn. The clamor of the demagog against wealth, the snobbery of the social columns of the newspapers which deal with the doings of the wealthy, and the misconduct of those men of wealth who act with brutal disregard of the rights of others, seem superficially to have no fundamental relations; yet in reality they spring from shortcomings which are fundamentally the same, and one of these shortcomings is the failure to have proper ideals. If the community pays proper heed to the right type of ideal, and admires the men most who approximate most closely to that ideal, you will not find in it any of these unhealthy feelings toward wealth.

The failure to have the right type of ideal must be remedied in large part by the action of you men and women here, and your fellow-teachers thruout this land. By your lives, even more than by your teachings, you show that, while you feel, as all of us ought to feel, that wealth is a good thing, you regard other things as still better.

It is absolutely necessary for each of us to earn a certain amount of money. It is a man's first duty to those dependent upon him to earn enough for their support; but after a certain point has been reached, money-making can never stand on the same plane with other and nobler forms of effort.

The roll of American worthies numbers men like Washington and Lincoln, Grant and Farragut, Hawthorne and Poe, Fulton and Morse, St. Gaudens and MacMonnies; it numbers statesmen and soldiers, artists, sculptors, inventors, explorers, bridge-builders, philanthropists, moral leaders in great reforms; it numbers all these and many others like them; it numbers men who have deserved well in any one of countless fields of activity; but of rich men it numbers only those who have used their riches aright; who have treated wealth, not as an end, but as a means; who have shown good conduct in acquiring it, and not merely lavish generosity in disposing of it.

Thrice fortunate are you to whom it is given to lead lives of resolute endeavor for the achievement of lofty ideals, and to instil, by living and teaching, those ideals into the minds of the next generation, who will, as its boys and girls of today and as men and women of tomorrow, determine finally the position which this nation is to hold in the history of mankind.

And now, in closing, I want to speak to you of how certain things, some of which have happened during the past week, and others that have been suggested by what has happened during the week, emphasize what I have said to you as to the importance to this country of having within its limits men who put the realization of high ideals above any form of money-making.

Within a week this country has lost a great statesman, who was also a great man of letters—a man who occupied a peculiar and unique position in our country; a man of whose existence we could each of us be proud, because his life reflected upon each of us; for the United States as a whole was better because John Hay lived. John Hay entered the public service as a young man, just come of age, as the secretary of President Lincoln. He served in the war; he was a member of the Loyal Legion; he was trusted by, and was intimate with, Lincoln as hardly any other man was. He then went on rendering service after service, and of his merits this was one of them: he had the great advantage and great merit of always being able at any moment to go back to private life, unless he could continue in public life on his own terms. He went on rendering service after service to the country, until as climax of his career he served for some six years as secretary of state in two successive administrations, and, by what he did and by what he was, contributed in no small degree to win for this republic the respect of the nations of mankind. Such service as that could not have been rendered save by a man who had before him ideals as far as the poles from those ideals which have in them any taint of what is base or sordid.

I wished to secure as John Hay's successor the man whom I regarded as of all the men in the country the one best fitted to be such successor. In asking

him to accept the position of Secretary of State, I was asking him to submit to very great pecuniary sacrifice; but I never even thought of that aspect of the question, for I knew he would not either. I knew that, whatever other consideration he had to weigh for and against taking the position, the consideration of how it would effect his personal fortune would not be taken into account by Elihu Root. And he has accepted.

And now I am not speaking of Hay and Root as solitary exceptions. On the contrary, I am speaking of them as typical of a large class of men in public life. When we hear so much criticism of certain aspects of our public life and of certain of our public servants—criticism which, I regret to state, is in many cases deserved—it is well for us to remember also the other side of the picture—to remember that here in America we now have, and always have had, at the command of the nation in any crisis, in any emergency, the very best ability to be found within the nation; and that ability given with the utmost freedom, given lavishly and generously, altho at the great pecuniary loss of the men giving it. There is not in my cabinet a man to whom it is not a financial disadvantage to stay in the cabinet. There is not in my cabinet one man who does not have to give up something substantial, very largely substantial in some cases, which it is a very real hardship for him to give up, in order that he may continue in the service of the nation; and the only reward for which he looks or for which he cares is the consciousness of having done service that is worth rendering.

I hope more and more thruout this nation to see the spirit grow which makes such service possible. I hope more and more to see the sentiment of the community as a whole become such that each man shall feel it borne in on him, whether he is in public life or in private life—mind you, some of the very greatest public services can be best rendered by those who are not in public life—that the chance to do good work is the greatest chance that can come to any man or woman in our generation or in any other generation; that, if such work can be well done, it is in itself the amplest reward and the amplest prize.

RESPONSE TO THE ADDRESS OF PRESIDENT ROOSEVELT

BY PRESIDENT JOHN R. KIRK, OF THE STATE NORMAL SCHOOL, KIRKSVILLE, MO.

The members of the National Educational Association are deeply grateful for the recognition this day received.

We recall the severe duties at all times entailed upon our honored chief magistrate, especially those of the past few days. We know that the nations of the earth have lately looked to the Capitol at Washington for the word that would bring to an end the greatest war the world has ever known. With directness and simple dignity, the great contending powers were asked to make peace. They have made prompt and favorable response. The world now knows a new diplomacy, and treats with befitting respect a new world-power, our own fair land, the United States of America.

We highly appreciate the spirit of the great leader who, thus engaged in the councils of nations, finds time to participate with us in discussing the great fundamental

problem—the education of a generation of citizens to receive and perpetuate the institutions of our country.

We know the words spoken to us today come from the heart. We know this great American who speaks to us. The school children of our country know him. The artist and the artisan, the student and the merchantman, the laborer and the capitalist know him; for out of a strenuous life he finds moments to speak to them all.

We have just pride in this rare American of many parts, this embodiment of diversified talents possible in no land except our own, who represents the culture and poise of the East, the energy and force of the West, the fervor and frankness of the South, and the sturdy endurance of the North.

We prize the sentiments here expressed to us, because they are the spontaneous, unvarnished outcropping convictions of a straightforward, unhesitating, versatile, unspoiled American, now closer to the hearts of the whole people than any president of our republic since the days of the martyred Lincoln.

But what shall we reap as the harvest of this passing hour?

The National Educational Association represents all the schools of all the states and all the territories of this vast Union. We are here for business and not for pleasure. We seek no personal favors. Moved by a happy discontent and by settled purpose, we face without fear the great issues of our country.

In a few days we return to our several posts of duty, and there the old problem, forever new, will confront us—the American boy. At the door of his home his eyes are opened to a complication of human agencies dazzling, bewildering—unknown to any other age or country.

Can we catch him while he is young? Can we start aright this bundle of restless energies, this dynamo of alternating currents, this uncertain fluctuating marvel of potentialities?

With him and us it is now or never. In him, active or latent, is every instinct and every impulse of the human race. Good or bad, they are in him. They are his race inheritance. For them he is not responsible. Can we by use bring to maturity his good inheritance? Can we by non-use free him from his bad inheritance? Can we regulate his will and action? Can we make him a free, self-respecting, law-abiding, law-creating, law-enforcing man? We will try; and when he is a man, we will send him forth on election day armed with a ballot and an indelible pencil. We will teach him to be both patriot and partisan, but never in serfdom to any party or man or platform. We will teach him not only to vote, but to make the ballot that he votes.

My friends, the day for honest deeds is dawning. My story is short. Let me tell it: The old conservative state of Missouri, keystone of the middle West, had a campaign of education. It was in November, 1904. A mysterious stranger, unheralded, unlooked for, stepped into the arena of politics. He did not say: "I am a Democrat." He did not say: "I am a Republican." But he *was* a Democrat, a moss-back Democrat with the moss shaken from his back. He *was* a Republican, grim, gaunt, and hungry, but unmindful of long blighted hopes. He was 60,000 strong. Guided by his personal judgment, he piled up a majority of 30,000 votes for the young, virile, unrelenting, Democratic prosecutor of crime and corruption, Governor Joseph W. Folk; and another majority of nearly 30,000 votes for the fearless, aggressive, uncompromising foe of wrong and friend of right and exemplar of law enforcement, President Theodore Roosevelt.

Mr. Chairman, I move that we, the members of the National Educational Association tender to the Honorable Theodore Roosevelt, President of the United States, our sincere thanks.

SECOND RESPONSE

MISS KATHERINE D. BLAKE, PRINCIPAL OF PUBLIC SCHOOL NO. 6, NEW YORK CITY

Mr. President:

In warmly seconding the vote of thanks to President Roosevelt for honoring us with his presence here today, and for his earnest words to which we have all listened with so much admiration, I am sure that I express the feelings of the members of this Association from all parts of the country, but I bear a special message of thanks from the teachers of his own native city.

We of New York feel that he is of us, and belongs to us; for with us began his work, which has widened and grown until his influence for good reaches far beyond our utmost borders.

He is the greatest teacher of us all, for he is a teacher, not of children, but of men—nay more, of nations—and as we watch the work of our great peace-maker, we all hope that success may shortly crown his efforts.

The teachers of New York city especially owe a debt of gratitude to our great executive, because only a few years ago, when he was the governor of the Empire State, a bill was placed before him which provided liberal salaries for the city teachers, based on length of service and meritorious work. It removed the teacher from the power of the politician. The Board of Education was unanimously opposed to the bill; the city authorities protested that it would lay too heavy a burden upon the taxpayers. At the public hearing the might and power of the city government were arrayed on one side, against a handful of pedagogs on the other. It seemed as tho there were but little hope that the bill would become a law. Mr. Roosevelt listened patiently and carefully to the arguments on both sides; then, after mature deliberation, he did as he always does, that which he felt it was right for him to do; and, in spite of the powerful opposition, he signed the bill.

Today the schools, the teachers, and the children are reaping the benefits of that wise law. By it a standard was set of adequate pay for meritorious service—a standard which other cities and states are striving to reach. The signing of his name to that bill is an act in the President's life that the chroniclers are not wont to dwell on; yet it has had an influence for good that will reach far into the future. By that little act Mr. Roosevelt did the highest service to the public-school system of this country, did his utmost for cultivating that enlightened public opinion which is essential to good government.

Please do not regard me as mercenary in speaking thus. I often think that the love of money which is so strong in Americans today was put into their hearts by the poorly paid pedagogs of the past generation. All unconsciously, we teachers impress our pupils with our own ideals; for personality is the strongest force in teaching, tho sometimes the least considered. When a teacher is ground down to starvation wages, the acquisition of a dollar or two more becomes an object that takes the place of high ideals. When the longing for a better coat is substituted for the yearning for the true and the beautiful, it is a sad thing. Hitherto the world has progressed, one might almost say, in spite of the pedagogs. We trust that now it is progressing because of the pedagogs. We hold the future of this nation in our hands; as we mold the children to whom we minister, so do we shape the destinies of this country. The importance of the work of farmers has been recognized by our national government in the Department of Agriculture. So also have the rights of commerce and labor. I look forward to the time when the sacred rights of our children to the highest type of education may be recognized by our national government as greater than the rights of laborers or farmers, to the time when the Department of Education shall equal in importance the Department of State itself.

Before closing, may I add a personal word of thanks? Years ago, when Mr. Roosevelt was the youngest member of the New York State Legislature, I had the pleasure of hearing him speak and of meeting him afterward. I have not forgotten what he said then, and I think I could almost quote his speech verbatim; his words made such an impression of sincerity upon me. I well remember what my mother said to me on our homeward journey: "My daughter, that young man is on the threshold of his career. I believe that he will be the president of the United States some day. See what he has already done. Try, if you can, to imitate him, and make as much of your life as he is making of his." Her words sank into my mind. I have watched his life with ever-increasing admiration. His fearless right-doing has been a stimulus and an inspiration to me, and in like manner to countless thousands of others. Little did I think, as I talked to him in my girlhood, that I should live to lay my tribute of praise before him, and to greet him, not only as the president of the United States, but as the most popular, the best loved man in all the whole round earth. Mr. President, I second the vote of thanks.

DEPARTMENT OF SUPERINTENDENCE

MILWAUKEE MEETING, 1905

SECRETARY'S MINUTES

FIRST DAY

MORNING SESSION.—MILWAUKEE, WIS., TUESDAY, FEBRUARY 28, 1905

The department met in the Davidson Theater, and was called to order at 9:30 A. M. by Edwin G. Cooley, superintendent of schools, Chicago, Ill., president of the department.

A chorus of five hundred boys from the city's public schools gave to the assembled superintendents the first installment of welcome in song. The welcome was continued by William George Bruce, editor of the *American School Board Journal*, and Carroll G. Pearce, superintendent of the city schools, representing respectively the civic and the educational interests of the city of Milwaukee.

A response on behalf of the department was made by President Edwin G. Cooley.

The topic, "Educational Features of the Universal Exposition at St. Louis," was discussed in papers as follows:

1. "From the View-Point of the Chief of the Department of Education": Howard J. Rogers, first assistant commissioner of education, Albany, N. Y.

2. "From the View-Point of the Chairman of Group 1 and Department Juries on Education and Member of the Superior Jury of Awards": Eliphalet Oram Lyte, principal of the First Pennsylvania State Normal School, Millersville, Pa.

3. "From the View-Point of a Member of the Jury of Awards, Group 1, Elementary Education": Ben Blewett, assistant superintendent of instruction, public schools, St. Louis, Mo.

The president announced a complimentary banquet to be tendered Wednesday evening to Dr. W. T. Harris, United States Commissioner of Education, at the Plankinton House.

A pleasant incident occurred at the beginning of the morning session, when a large picture of Dr. Harris was brought upon the stage and greeted with a round of applause.

On motion, the department adjourned until 2 o'clock P. M.

AFTERNOON SESSION.—TUESDAY, FEBRUARY 28

The afternoon session opened at 2:30 P. M., President Cooley in the chair, with music by the Glee Club of the Milwaukee State Normal School.

Three papers were given on "Means of Increasing the Efficiency of Our Public-School Work."

The first speaker was John W. Carr, superintendent of schools, Anderson, Ind. He took the place on the program allotted to Albert G. Lane, of Chicago, who was absent on account of illness.

The second paper was given by Superintendent Carroll G. Pearce, of Milwaukee.

The third paper on the topic was by William I. Crane, superintendent of schools, Marshalltown, Ia.

The general discussion which followed was participated in by J. F. Keating, superintendent of schools, Pueblo, Colo.; Gustavus R. Glenn, president of North Georgia Agri-

cultural and Mechanical College, Dahlonga, Ga.; F. Louis Soldan, superintendent of public instruction, St. Louis, Mo.; W. O. Thompson, president of Ohio State University, Columbus, O.; Elmer A. Lyman, professor of mathematics, State Normal College, Ypsilanti, Mich.; George H. Martin, secretary of Massachusetts Board of Education, West Lynn, Mass.; A. S. Downing, third assistant commissioner of education, Albany, N. Y.; Charles F. Carroll, superintendent of schools, Rochester, N. Y.; and George J. Miller, principal of Woodward Avenue High School, Kalamazoo, Mich.

The discussion was summed up in the following resolution, introduced by John W. Carr, superintendent of schools, Anderson, Ind.:

Resolved, That the paramount educational question of the hour is the employment and retention of sufficient numbers of well-qualified teachers to fill all of our public schools; and that this department pledges itself to use its best endeavors to secure sufficient compensation to enable teachers to prepare themselves properly for their work, and to justify them in remaining permanently in the profession of teaching:

The president announced the following committees:

COMMITTEE ON NOMINATIONS

E. H. Mark, Louisville, Ky.	Ben Blewett, St. Louis, Mo.
T. A. Mott, Richmond, Ind.	Frank B. Cooper, Seattle, Wash.
L. C. Greenlee, Denver, Colo.	

COMMITTEE ON RESOLUTIONS

L. H. Jones, Ypsilanti, Mich.	C. G. Pearse, Milwaukee, Wis.
J. A. Shawan, Columbus, O.	A. B. Blodgett, Syracuse, N. Y.
W. F. Cramer, Waverly, Ia.	

On motion, the meeting adjourned.

EVENING SESSION.—TUESDAY, FEBRUARY 28

The evening session was called to order at 8:15 P. M. by President Cooley. The exercises were introduced by music by the Treble Clef Chorus of the Milwaukee Public Schools.

Then followed an address on "Some of the Conditions which Cause Variation of the Rate of School Expenditure in Different Localities," by Dr. W. T. Harris, United States Commissioner of Education, Washington, D. C.

Music by the Glee Club of Milwaukee-Downer College.

An address on "The Group Morality of Children" was delivered by George E. Vincent, professor of sociology, University of Chicago, Chicago, Ill.

On motion, the meeting was declared adjourned to 9:30 A. M. Wednesday, March 1.

SECOND DAY

MORNING SESSION.—WEDNESDAY, MARCH 1

The department convened at 9:30 A. M., with President Edwin G. Cooley in the chair.

Music for the opening of the program was furnished by the Mandolin and Glee Club of Marquette College.

N. C. Dougherty, superintendent of schools, Peoria, Ill., referred to the serious illness of two highly esteemed members of the Association, President Harper, of Chicago, and Bishop Spalding, of Peoria, and offered the following resolution, which was unanimously adopted:

Resolved, That we, the members of this department, extend to President William R. Harper and Bishop John Lancaster Spalding, by a telegram, expression of our sympathy in their affliction, and of our sincere hope that each may soon be able to continue his good work.

"Charter Provisions as Related to the Organization of School Systems" was discussed by—

1. William H. Maxwell, superintendent of schools for the city of New York, and President of the National Educational Association.

2. F. Louis Soldan, superintendent of instruction, public schools, St. Louis, Mo.
3. Hon. Edward C. Eliot, former president of the Board of Education, St. Louis, Mo.

The following telegrams were sent in accordance with the instructions of the department:

President William R. Harper, University of Chicago, Chicago, Ill.:

The heartfelt sympathy of the Department of Superintendence is extended to you, and the confident hope is expressed that you will fully recover your health, and with renewed vigor and energy continue the great work of service to your fellow-men to which you have devoted your life.

E. G. COOLEY, *President.*

EVANGELINE E. WHITNEY, *Secretary.*

Rt. Rev. John Lancaster Spalding, Bishop of Peoria, Peoria, Ill.:

The Department of Superintendence of the National Educational Association recognizes the great service you have rendered to the teachers and children of the public schools of the country, and of all schools, and sends loving greetings and heartfelt sympathy to you in your affliction. The department expresses the sincere hope that you may soon be able to continue your great life work.

E. G. COOLEY, *President.*

EVANGELINE E. WHITNEY, *Secretary.*

BUSINESS SESSION

The business session of the department was called to order by the president at the close of the morning session. A report of the Committee on Simplified Spelling was presented by the chairman, Superintendent W. H. Elson, of Grand Rapids, Mich.

REPORT OF THE COMMITTEE ON SIMPLIFICATION OF SPELLING

To the Department of Superintendence of the National Educational Association:

GENTLEMEN: Your committee appointed last year to present to the Board of Directors of the National Educational Association, and to ask their acquiescence in, your resolutions petitioning them to appoint a committee of prominent and scholarly men to head and direct the movement toward simplifying our spelling, and to put in its hands for this purpose a fund not to exceed \$2,000 a year for five years, on condition that an equal fund be given to the committee from outside sources, begs leave to report that, in accordance with the spirit of your instruction, steps were at once taken to ascertain the attitude, as far as practicable, of every active member of the National Educational Association on the points involved, in order that the directors and members of the Council might be duly informed as to the desire of all who were directly concerned in the proposed action. We are gratified to be able to report that the votes footed up 1,545 approving the proposed action, and only 171 opposing. A limited edition of the lists for and against, arranged alphabetically by states, was printed and distributed to the directors and members of the Council. It is an interesting document. The remainder of the edition is here for distribution to those who desire to examine these lists.

At the St. Louis meeting of the Board of Directors your resolutions were duly submitted, together with two alternative outline plans for the business organization of the proposed commission. According to the usage of the Association, the resolutions and plans were received and referred for advice to the Council Committee on Investigations and Appropriations. This committee gave your representatives a patient hearing and carefully considered the whole subject, finally deciding to ask the advice of a committee of experts as to what course they had better recommend in the matter. They designated as this committee Superintendent W. H. Maxwell, President of the National Educational Association, chairman *ex officio*, H. H. Seerley, president of the Iowa State Normal School; C. M. Jordan, superintendent of schools, Minneapolis; George Hempl, professor of philology, University of Michigan; and Calvin Thomas, professor of the Germanic languages, Columbia University. This committee is asked to report to the president of the Council by June, 1, 1905.

We are all awaiting with interest the action of this committee. The time seems ripe for a discreet, systematic, quiet, and thoroughgoing effort, on a business basis, to disseminate accurate knowledge in regard to English spelling and to promote its simplification. This effort must be more or less of an experiment, of course; but the more we study the problem, the more fully are we satisfied that the general business plan outlined in the petition of this department and indorsed with surprising unanimity by our active members, and by sixteen or more large state and section associations of teachers, is one that is practicable and which should be put into operation without needless delay.

Respectfully submitted,

W. H. ELSON, *Chairman*, Grand Rapids, Mich.
 CALVIN N. KENDALL, Indianapolis, Ind.
 F. T. OLDT, Dubuque, Ia.
 A. W. RANKIN, Minneapolis, Minn.
 EDWIN B. COX, Xenia, O.

. Committee

A motion to accept the report of the committee was unanimously carried.

W. H. ELSON: I think it must be evident to this body that there is much remaining for this committee to do, and that it is advisable that this committee or a similar one be appointed for another year. I wish, therefore, to suggest that the present committee be continued, excepting myself—since I have become a member of the Board of Directors of the Association. I would recommend that Herbert M. Slauson, superintendent of schools, Ann Arbor, Mich., take my place as a member of this committee, and that E. B. Cox, of Xenia, O., be appointed chairman.

It was moved, seconded, and unanimously voted that the Committee on Simplified Spelling be continued for one year, with the provision that E. B. Cox act as chairman and Herbert M. Slauson be added to the committee to fill the vacancy left by the resignation of W. H. Elson, of Grand Rapids, Mich.

E. O. Vaile, chairman of the Committee of Conference on a Universal System of Key Notation, on behalf of the conference committee composed of members of the American Philological Association, the Modern Language Association, and the Department of Superintendence of the National Educational Association, reported that the joint committee met at Boston at the time of the National Educational Association meeting in July, 1903, and appointed a subcommittee to take the work in hand. This subcommittee consists of Professor Calvin Thomas, Columbia University; Professor George Hempl, Michigan University; Professor C. P. G. Scott, Yonkers, N. Y.; Professor O. F. Emerson, Western Reserve University, and E. O. Vaile. The most of the labor has been performed by Professor Thomas and Professor Hempl. The manner in which they have accomplished their work proves their eminent fitness for it, and it is confidently hoped that the members of the Department of Superintendence will give the report careful study, and take it up for discussion and adoption at their next meeting, thus joining in the movement to establish a rational and scientific substitute for our present cumbersome and complicated system of diacritics. The complete alphabet, as recommended by the committee, provides a separate letter for each of our forty-two distinct vocal sounds, adopting as its basis the vowel signs recommended in 1877 by the committee of the Philological Association headed by Professor Whitney and Professor March. The present report merely adds enough new signs to provide single characters for the consonants and diagraphs, the step which Professor Whitney avowedly left to be taken in the future. The report of the committee is now submitted for discussion and amendment. All suggestions should be sent to Professor Thomas, the chairman, and will be carefully weighed before the report comes up for approval and adoption at the next meeting of each of the bodies represented in the joint committee.

Two hundred printed copies of the report will be distributed to the members present. Others can be obtained by writing to Professor Calvin Thomas, Columbia University, New York city.

By request, the report of the Committee on Resolutions was deferred until a subsequent meeting.

The Committee on Nominations recommended that the following be elected officers of the department for the ensuing year:

For *President*—J. W. Carr, superintendent of schools, Anderson, Ind.

For *First Vice-President*—J. H. Phillips, superintendent of schools, Birmingham, Ala.

For *Second Vice-President*—Ida C. Bender, supervisor of primary grades, Buffalo, N. Y.

For *Secretary*—Ella C. Sullivan, district superintendent of schools, Chicago, Ill.

The nominees were elected by a unanimous vote of the department.

The selection of a place of meeting was declared the next in order of business.

Louisville, Ky., Niagara Falls, N. Y., Washington, D. C., and Hot Springs, Ark., were each in turn proposed.

Superintendent E. H. Mark and Principal Reuben P. Halleck, of Louisville, Ky.,

presented that city's claims to the honor, which was indorsed by letters of invitation from the governor of Kentucky, the mayor of Louisville, and the presidents of the board of trade, of the school board, and of various civic clubs of Louisville.

Hon. John H. Hinemon withdrew the invitation to meet in Hot Springs, Ark., and indorsed the invitation of the city of Louisville, Ky.

Louisville was then chosen by a standing vote as the next place of meeting.

There being no further business before the house, on motion, the meeting was declared adjourned.

AFTERNOON SESSION.—WEDNESDAY, MARCH 1

ROUND TABLE SESSIONS

The Round Table of State and County Superintendents met in the large Colonial Room of the Plankinton Hotel at 2:30 P. M., with Alfred Bayliss, state superintendent of public instruction for Illinois, as leader, and W. T. Carrington, state superintendent of public instruction for Missouri, as secretary.

The topic under discussion was "High-School Extension to the Children of Rural Districts."

A paper on the topic was read by C. P. Cary, state superintendent of public instruction, Madison, Wis., and was discussed at some length.

The committee appointed at the Atlanta meeting of the Round Table, on Interstate Recognition of High-Grade Teachers' Certificates made a report through its chairman, G. W. Nash, state superintendent of public instruction for South Dakota. The report was, on motion, adopted.

The Round Table of City Superintendents met in The Arcade of the Plankinton Hotel at 2:30 P. M.; the leader, Frank B. Dyer, superintendent of schools, Cincinnati, O., presiding.

The topic for discussion was "The Merit System of Appointing and Promoting Teachers and Principals."

Ben Blewett, assistant superintendent of instruction, public schools, St. Louis, Mo., presented a paper on "The Merit System in the Public Schools of St. Louis."

This was followed by a series of brief outlines of "Methods of Appointing and Advancing Teachers," presented by the superintendents of various cities.

A general discussion followed.

The greatest mark of honor ever paid by the Department of Superintendence to one of its members was the banquet tendered to Dr. W. T. Harris, on Wednesday evening, March 1.

A dinner was laid for two hundred covers in the French dining-room of the Plankinton House. At the close of the dinner President Cooley, with whom the idea of the banquet originated, introduced the guest of honor to whom he paid a high tribute, and then made way for Superintendent William H. Maxwell, President of the National Educational Association, who officiated as toastmaster. Those who responded successively to toasts in honor of the guest of the evening were: Superintendent F. Louis Soldan, St. Louis; Frank A. Fitzpatrick, Boston; Superintendent J. M. Greenwood, Kansas City; Inspector James L. Hughes, Toronto; Miss Elizabeth Harrison, Chicago. A response was made by Dr. W. T. Harris, the guest of honor.

THIRD DAY

MORNING SESSION.—THURSDAY, MARCH 2

The meeting came to order at 9:30 A. M., President Edwin G. Cooley in the chair.

The exercises were introduced with music by a chorus from the German English Academy of Milwaukee.

President Cooley announced the receipt of communications as follows: from the Milwaukee Teachers' Association, expressing appreciation of the honor to the city of Milwaukee conferred by the meeting of the Department of Superintendence in their midst; and from the Federal Council of the North American Gymnastic Union, inviting the members of the department to attend the Twenty-Ninth Festival of that body at Indianapolis, Ind., June 21-25, 1905.

President Cooley then announced the absence on account of illness of Edgar Gardner Murphy, executive secretary, Southern Educational Board, Montgomery, Ala., and George H. Conley, superintendent of public schools of Boston, Mass., and stated that it had been suggested that the afternoon and morning meetings be combined by taking over the afternoon speakers into the morning session. He asked for an expression of choice by the department.

A motion was made, seconded, and unanimously carried that the afternoon and morning sessions be combined.

The first speaker on the program by rearrangement was James P. Haney, director of manual training, Boroughs of Manhattan and The Bronx, City of New York, who spoke on the general topic, "Manual-Training Work in the Elementary, High-School, and College Curricula."

At the close of Mr. Haney's paper the following members took part in general discussion: William H. Elson, superintendent of schools, Grand Rapids, Mich.; C. Valentine Kirby, instructor in art and manual training, Manual Training High School, Denver, Colo.; Charles Milton Carter, director of art, public schools, Denver, Colo.; Miss Ella A. Rowe, teacher in city schools, Chicago, Ill.; and Miss Ida C. Bender, supervisor of primary grades, Buffalo, N. Y.

The next topic on the program was "Child Labor," on which Miss Jane Addams, of Hull-House, Chicago, Ill., gave an address.

At the conclusion of Miss Addams' address, William H. Maxwell, superintendent of schools of the city of New York, stated the child-labor law in that city, and described how the teachers were combating the circumvention of the law by parents. William F. Slaton, superintendent of schools, Atlanta, Ga., gave a graphic picture of the conditions existing under his own observation. Lawton B. Evans, superintendent of schools, Augusta, Ga., described the conditions of the factory child in the South and the efforts to combat the evils of child labor.

The last paper on the program was given by Calvin M. Woodward, dean of the School of Engineering and Architecture of Washington University, St. Louis, Mo., on the topic, "Manual-Training Work in the Elementary, High-School, and College Curricula."

The Committee on Resolutions reported as follows:

Resolved, That our thanks are due, and are hereby extended, to Superintendent C. G. Pearse, to William George Bruce, editor of the *School Board Journal*, and to Charles McKenny, principal of the Milwaukee State Normal School, for their untiring efforts and unusually complete arrangements for the success of this meeting; to the board of education, for their interest; to the Citizens' Committee of twenty-five, for the carefully planned details; to the public schools, State Normal School, Milwaukee-Downer College, Marquette College, and German American Academy, for the most excellent music furnished at our sessions; to the city press, for the prominent space given and the full reports of the proceedings published; to the hotels, for the uniform courtesies extended to all; to the railroads, for the usual reduction in rates granted; to the speakers on the program who are not directly engaged in educational work, for the time and labor given in our behalf; and to the president and other officers of the department, for the excellent program prepared for our meeting, and successfully carried out at the various sessions.

Resolved, That the proper officers of the Department of Superintendence be directed to express the thanks of the department to Hon. Edward C. Eliot, for the valuable paper presented at this session, and which the Association considers of great practical importance.

Resolved, That this department approves of the bill now before Congress extending the franking privilege to state educational departments covering the mailing of reports and other official documents, and urges the passage of the same.

Resolved, That the paramount educational question of the hour is the employment and retention of a sufficient number of well-qualified teachers to fill all of our public schools; and that this department pledges

itself to use its best endeavors to secure sufficient compensation to enable teachers to prepare themselves properly for their work, and to justify them in remaining permanently in the profession of teaching.

L. H. JONES, *Chairman*.

C. G. PEARSE.

A. B. BLODGETT.

J. A. SHAWAN.

W. F. CRAMER.

On motion, duly made and seconded, the resolutions were adopted.

The president then read an invitation from the South Division High School Girls' Club, inviting members of the Association to an "at home" from 2 to 5 P. M.

On motion, the department adjourned *sine die*.

EVANGELINE E. WHITNEY, *Secretary*.

PAPERS AND DISCUSSIONS

TOPIC: REVIEW OF THE EDUCATIONAL FEATURES OF THE UNIVERSAL EXPOSITION AT ST. LOUIS

I. THE FOREIGN EDUCATIONAL EXHIBITS

HOWARD J. ROGERS, CHIEF OF THE DEPARTMENT OF EDUCATION AND DIRECTOR
OF CONGRESSES

The Department of Education found most favorable conditions in St. Louis from the outset, inasmuch as the Exposition Company had fixed upon education as the fundamental principle for the development of the exposition, and the National Educational Association was particularly anxious for a comparative presentation of the educational methods of other countries. The former condition predetermined a generous attitude toward the exhibit department which embodied as a concrete science the ideal of the exposition; the latter carried as its corollary the combined support of the educational efforts of the United States.

From the favorable comments which had been made, both in foreign and domestic journals, upon the educational exhibit of the United States Commission at the Paris Exposition of 1900, a discussion had arisen concerning the relative merits of the different systems of education in various nations, and it was felt that a more thoro comparison could be made from the St. Louis exhibit. That the theory of public education in Europe was different from that in this country was an admitted premise. Whether each was best adapted to the conditions underlying its own national development; whether each contained methods that could be advisedly adapted to the system of the other; whether the tendencies of the two were more widely, or less sharply, divergent than formerly; and whether conclusions could be drawn clearly as to which has had the most beneficial effect on the commercial and industrial development of the country, were the larger problems for which the educational exhibit was to furnish the solution.

The educational exhibit was planned from two standpoints: first, its foreign participation; second, its domestic representation. With the former only this paper has to do. On its material side it was thoroly satisfactory, inasmuch as twenty-one nations were represented—five from Asia, twelve from Europe, and four from our Latin-American neighbors to the south. This representation varied from a single institution, or class of schools, to a complete presentation of the educational activities of a country. How best to present the salient facts in this brief paper, whether by nations or by subjects, is a problem which I shall probably solve by each method in part.

Two lines, widely divergent from American practice, stand out prominently and must always be in mind in comparing educational systems. The first is the promotion of class distinctions by educational training, as illustrated in the systems of primary and secondary instruction; and the second is the training of young men for commercial and political fields, particularly in reference to colonial and foreign service. To these two general subjects, and to some special matters which seem to be of interest to the United States, I shall confine my remarks.

The system of public instruction in this country is articulated so as to form a symmetrical unit. The transitions from the elementary to the high school, from the high school to the college, and from the college to the professional school, are made without a break, and form a steady progression. A pupil may drop out at the end of the elementary, or at the end of the high-school, or in the middle of the high-school course; but he has had the same training as those who go on to the end, and if he returns to his school after an interim of two or three years, he can pick up his work where he left it, handicapped in no respect but by age. We have grown accustomed to see the entire sequence of studies under one administrative head, and much of our recent thought has been given to so interrelating the different parts as to put forward the time when a student may become a self-supporter. It is confusing to the standards of our teachers in considering foreign educational systems to see elementary, or primary, education displayed as an independent entity, controlled by a separate administrative head, and designed to perpetuate the social castes, or orders, by training the children of the masses manually and artistically for the trades in store for them. The average age for completing this course in France and Belgium is nearly fifteen.

Parallel with this course, so far as the ages of the pupils are concerned, is the system of secondary instruction under quite another administration, embracing a study of the classics and humanities in general, and leading to the cultural professions. This instruction, tho under public control, is not free to the public. It is not my intention to draw comparisons between these radically different theories of free public education. I have twice done it before this Association, and it is so interwoven with the history and development of civilization, and with the social evolution of each country, that it is a distinct topic in itself. My only point is that no intelligent observation can

be made of the educational work of another country at an exposition, or elsewhere, that is not based upon a thoro appreciation of this truth. We cannot assert that the European system is not the best for the social conditions that Europeans have to face. We only know that it is not in accord with the theory of our institutions, and that a system of instruction which tended even in the slightest degree to promote class perpetuity could not stand. It follows, as a corollary to this proposition, that it is a sound policy to go slow in the introduction of foreign methods and ideas when they touch the roots of things. There are plenty of methods, and details—administrative, teaching, and other—which we can adopt, and a neglect to observe which would prove us narrow and provincial.

From this view-point in particular, the exhibit of training-schools for teachers was difficult to classify. This matter is put very clearly in the report of the jury of Group I, Elementary Education:

In the chief foreign countries professional schools for the training of teachers are easily classified by virtue of their administrative relations; but in our country the different orders of pedagogical training merge into each other almost imperceptibly, because they are all based upon the same fundamental conception of the teaching profession.

There are also disclosed by the exhibits striking differences in the spirit and methods of instruction. In France the teaching is logical and analytical. The stress of pedagogical training in that country is upon the treatment of subjects, and the abiding effects of that training are seen in the theses by teachers and by school inspectors (the latter all men of professional training) which form a very interesting and instructive part of the exhibit of that country. The analytic principle is maintained in the manual training which, as shown by the examples presented, consists of a graded series of exercises upon the elements that enter into simple constructions. Germany adheres more closely to the authoritative method of instruction, a fact plainly shown by the photographs of classes in which every child seems listening with breathless attention to the word of the teacher. From the photographic displays one would readily infer that in our own country the emphasis of class exercises is upon the activity of the pupil; in Germany, upon the personality of the teacher.

The second divergent line noticeable in the exhibit was the training given to young men by Germany, and some other nations, but noticeably Germany, in foreign commercial relations. The aim of the "technical high school," as announced in the official catalog, is to afford a higher education for the technical professions in the civil and public service and in commercial undertakings, as well as to cultivate arts and science in so far as they come under the head of technical instruction. In one of the rooms devoted to technical exhibits was an exhaustive display of methods for colonial training, in which appeared not only the careful study of the geography and topography of the country, its routes of trade, its fertile and sterile regions, etc., but also actual specimens, and a careful description including their commercial value, of every agricultural and mineral product of the country, together with an equally complete representation and description of every bird and animal native to the clime. All this as a matter of class routine and regular curriculum; so that when an agent or employee goes to east Africa or the south Pacific,

he goes as one familiar with every possibility of the country and not as a stranger.

I might multiply this by similar examples drawn from Belgium and France, but it would be duplication, and Germany seems to have a long lead. It is a matter which we can well take under consideration; for, blessed as we are with natural advantages which have rendered easy thus far our commercial supremacy, it needs no tongue of a prophet to foretell that with the decrease of these advantages, consequent upon a more thoro occupation of the country, we cannot hold our own in the markets of the world unless we train equally well our agents and factors. We have been prone to believe that to give a boy his elementary instruction, and a year or two, or perhaps all, of his high-school course, and then turn him into business, relying on his native shrewdness and adaptability to push along, is sufficient for a business training. It may have been under old conditions; it is not enough in the present-day world-competition. Our so-called business colleges have been a makeshift and devoted to turning out bookkeepers and stenographers—good enough in their way, but a short way. They can contribute nothing to the solution of the question unless they are thoroly reorganized. Two or three cities have provided for high schools of commerce, but they are as yet John the Baptists crying in the wilderness. The question has come, and come to vex us till we solve it.

Among the great crowd of scholars, statesmen, business men, and others who visited us at St. Louis last summer, no nation was better represented than Germany. They came not only to see, but to take notes, and since their return their comments have been many and varied. These opinions have been carefully observed and reported by Consul-General Mason, of Berlin, and embodied in a report to the State Department. Among other things he says:

There are, say these critics, a pervading ignorance and indifference about everything outside the United States that, from the German standpoint, will be, unless corrected, a serious handicap in our quest for foreign trade. The careless confidence with which agents and salesmen are sent abroad, with no special preparation and with no knowledge of any language but their own, to do business in countries where only a trifling percentage of the population understands English, strikes these careful, methodical European experts as amazing. The meagerness of technical education, the trifling annual contingent of chemists, engineers, educated dyers, weavers, and electricians, as compared with the throng of lawyers, physicians, dentists, and unspecialized graduates turned out by our colleges and universities, seems to them short-sighted and improvident. The high standing and excellence of a half-dozen great technical schools in the United States are frankly conceded; but what are these in a country of 80,000,000 of people, in which practically every student is destined for an active and useful life?

But most surprising of all appeared to the German visitors the absence of any adequate system of special education for commerce, banking, and foreign trade. Reduced to simplest terms, these investigators generally conclude that the reliance on a general and more or less superficial education, together with natural adaptability, to fit young men for almost every walk in life, and the lack of specialized study in physical science, modern languages, and the industrial arts, will, if persisted in, neutralize much of the advantage which our country enjoys through natural resources and advantageous geographical position for the South American, Mexican, and Asiatic trade.

Without enlarging further, these seem to me the two greater lessons to be drawn from the foreign educational exhibits. With the first we may well remain content, as our system seems absolutely unassailable; with the second we shall have to reckon.

Concerning some of the special features, no account of the exhibit would be justified unless mention was made of the wonderful scientific exhibit of the faculties of the German universities. From the elaborate medical exhibit, which was the delight of every physician who visited the grounds, to the exhibit of instruments of precision and scientific research, it was unsurpassed. This is a scientific age, and naturally the exhibits of the universities would assume that form; but everything has its reason, and this exhibit seems to me a magnificent attempt on the part of Germany to demonstrate that in the field of special training, particularly in biology and medicine, her universities are still the foremost in the world. In view of the marvelous advance of American universities in this respect in the last fifteen years, and the acceptance of the idea that it is no longer necessary for American students to be trained abroad, the exhibit assumes a most interesting aspect, even if it may not be deemed to become historic in its purpose.

The Swedish exhibit was particularly interesting to Americans on account of its sloyd, which brought to many the source of inspiration pure and undefiled. A rich display of pupils' manual work was brought over, as well as a thoro exemplification of the Sloyd Training College at Nääs, the original home of the Swedish National system. Another interesting feature of the exhibit was the chart describing the lectures on social topics before the Secondary School for Girls in Stockholm. Among the topics for 1904 were: "Features of the Swedish Poor-Law Administration," "Private Charity in Stockholm," "Housing Question," "Legal Position of Swedish Women," "Social Settlement Projects and Their Practical Realization."

Perhaps no exhibit was richer in suggestive details than that of Belgium. Blessed with a fruitful peace of seventy-five years, enjoying the respect and legal protection of its powerful neighbors, it has an enviable record for continued improvement of the condition of its people, materially, intellectually, and morally. All the elementary public instruction is directed by the communes, represented by a council of seven members as a minimum, thus placing in a small board supervision over a small area. The teachers enjoy security of position, with rights of appeal, guaranteed by the constitution. Their salary is fair, bringing a regular increase at recurring intervals, and carrying with it lodgings at the commune's expense. At the age of fifty-five or sixty years they are entitled to retirement on a pension equal to two-thirds the highest salary they have received. Efficient government and cantonal inspectors visit each school at least twice a year. Four times a year each cantonal inspector meets, by districts, every member of his teaching staff. Attendance is compulsory; expenses are paid. Teachers selected by lot (here is a good point) give to the children of the school where the conference is held two prac-

tical lessons, relating to the theoretic questions treated in the papers submitted to the conference. After the pupils are dismissed, these lessons are criticised by those present. Over sixty per cent. of the teachers who begin in a commune finish their life-work in the same commune. You can readily infer the devotion and pride they bring to the advance of their schools, and the power of their influence over the community.

The commune provides also a garden where the elements of agriculture taught in school are practically explained and demonstrated. The trees and flowers planted are placed under the protection of the pupils, and, while contributing to their æsthetic development, promote also a respect and guardianship for public property. More might be said of their professional training, their continuation schools, their intensive study of agriculture; but the time limit forbids.

In the three countries of France, Austria, and Italy the industrial training stood forth pre-eminent. France, it is true, gave in charts and printed volumes a full record of the work of her primary, secondary, and higher instruction; but, unfortunately, it was not so installed as to be easily studied, and all information obtained had to be dug for. Her attractive and carefully considered exhibits came from the higher professional primary schools maintained by the cities and under the supervision of the ministry of commerce and industry.

The exhibits of the art and industrial schools of Austria and Italy have never been surpassed on American soil, and were at once the admiration and despair of American critics. The exhibits of both nations were limited to Groups IV and VI, Art and Industrial Education. The international jury on Group IV said:

We feel, as jurors, that it is a part of our duty to call the attention of American educators to these excellent exhibits [referring particularly to Austria], as showing that art is not only an ornament, but an excellent investment when properly directed. These schools, as well as the excellent schools of Great Britain and Ireland, are under the direct control of the government, and opportunity is given pupils to perfect themselves in all art-industrial pursuits; special training being supplied for those who are fitting themselves for foremen and directors of manufacturing establishments wherein an art-knowledge is necessary. Special attention is given in various schools to local industrial demands.

The art schools of Great Britain and Ireland have been mentioned in the foregoing extract, but the typical feature of the English exhibit was the selection of certain features of schools, or of class work, and their presentation in a most attractive manner. This policy accorded very well with the unorganized and varied educational efforts, public and private, state and church, which are to the American mind inextricably interwoven in English educational administration. It certainly had the merit of clearly setting forth many admirable features of English schools.

From the Orient the great exhibit was from Japan, whose statistical charts set forth in a most graphic way the marvelous growth of education in that country since 1867, when the old system of education gave way to the western system. The development in the last ten years has to be seen to be credited.

The percentage of elementary-school attendance is nearly 92 per cent. Every group in the official classification contained Japanese exhibits, but, in accordance with the theory of the country's development, great stress was laid upon art as applied to the trades and industries. The exhibit of the University of Tokio was specially remarkable in the field of applied science. It was very easy to note the marks of American influence in every field of administrative effort.

The exhibit of the Chinese commission was interesting from two facts. It was the first exhibit of Chinese education ever made, which gave it, as coming from the oldest recorded civilization, an intense historical value; and, second, the interesting comparison between the old education and that introduced by means of foreign schools in the seaport towns. Little progress has been made by the latter compared with the field of possibilities, and the contrast with the supremacy in Japan of western methods is striking.

The exhibits of the Latin-American nations were attractive and instructive, particularly Cuba, where the steady growth from the impetus given by American occupation is gratifying, and in Argentina, where the progress of public instruction in the more thickly settled section, and the growth of normal schools, are highly creditable. Brazil showed great unevenness, ranging from the excellent administrative system of the province of San Paulo to practically nothing in the northern provinces but unorganized private effort. The same may be said of Mexico, but in each of the four countries were many beautiful and progressive exhibits from higher educational institutions.

Such is a brief résumé of the more prominent features of the foreign exhibits. Those of you who attended the exposition know well their wealth of material, to which could have been given months of careful study; and their installation, which was characteristic in a high degree of the individuality of the nation. We feel confident that an opportunity has been given for comparative study which will not occur again in our generation, and we shall rest highly content if the educational public deems it worthy in a remote degree of the high ideals which governed the inception of the Exposition of 1904.

II. THE AMERICAN EDUCATIONAL EXHIBIT, EXCLUSIVE OF ELEMENTARY EDUCATION

ELIPHALET ORAM LYTE, CHAIRMAN OF GROUP ONE AND OF THE DEPARTMENT
JURY, DEPARTMENT OF EDUCATION, AND MEMBER OF THE SUPERIOR JURY

There is a limit to the utility of the laboratory method in acquiring the art of teaching. Experience is a dear teacher often, and always when the experiment must be made upon the growing and aging mind. What has been accomplished by others blazes the way for us. All exhibitions of the products of man are educational, both in teaching us what has been done and in showing us what may be done, and thus saving time and energy that

we might otherwise expend in doing again what has been done, or in trying to do what cannot be done.

The most striking characteristic of the Louisiana Purchase Exposition was the predominance of the educational idea, not only in the Educational Department, but also in most other departments. While the exhibits of school work in the Educational Department seemed in many cases to be almost too exhibitional—if I may use the word—it is true that many of the exhibits in the various other departments of the exposition were largely educational. The erection of a separate building in the most conspicuous part of the exposition grounds devoted to educational purposes was in harmony with the dominant idea seen and felt in all departments. The incarnation of this idea at St. Louis was one of the most flattering testimonials which the world has offered to the profession of teaching, and its effects will be seen in the greater dignity with which the vocation of teaching will be regarded in the twentieth century.

World's fairs crowd upon us so fast that the recollection of one has not lost its vividness before the next one treads upon its heels. The changes made in any department of progress can consequently be seen without effort. In some respects St. Louis repeated Chicago, which in turn repeated Philadelphia. But there were many new and striking features in the educational department at St. Louis. The rural-school exhibit stood out as never before, as witness Indiana and Pennsylvania; the great high schools of the great cities commanded respect and admiration; and many other institutions devoted to general education and numbers of special schools showed new methods and marked improvements on older ways. Too much credit cannot be given to Hon. Howard J. Rogers, chief of the Department of Education, for his labors in providing a suitable building for education, in arousing the country to the importance of the exposition, in securing from all classes of educational institutions representative products of their labor, and in the intelligence and skill displayed in so arranging the entire exhibit that it was easy for a student to obtain an intelligent idea of it. The division of the exhibit into eight groups and twenty-six classes enabled the student to find what he desired to see without waste of time. These eight groups consisted of:

Group I, Elementary Education, with its four classes: (1) kindergarten; (2) elementary grades; (3) training and certification of teachers; (4) continuation schools, including evening schools, vacation schools, and schools for special training.

Group II, Secondary Education, two classes: (5) high schools and academies, manual-training high schools, commercial high schools; (6) training and certification of teachers.

Group III, Higher Education, five classes: (7) colleges and universities; (8) scientific, technical, and engineering schools and institutions; (9) professional schools; (10) libraries; (11) museums.

Group IV, Special Education in Fine Arts, two classes: (12) art schools and institutes; (13) schools and departments of music, conservatories of music.

Group V, Special Education in Agriculture, one class: (14) agricultural colleges and departments, experiment stations, instruction in forestry.

Group VI, Special Education in Commerce and Industry, four classes: (15) industrial and trade schools, evening industrial schools; (16) (a) business and commercial schools,

(b) higher instruction in commerce; (17) education of the Indian; (18) education of the negro.

Group VII, three classes: (19) institutions for the blind, publications for the blind; (20) institutions for the deaf and dumb; (21) institutions for the feeble-minded.

Group VIII, five classes: (22) summer schools; (23) extension courses, popular lectures and people's institutes, correspondence schools; (24) scientific societies and associations, scientific expeditions and investigations; (25) educational publications, text-books, etc.; (26) school furniture, school appliances.

One could not help receiving the impression from some of the exhibits that the serious purpose of the Department of Education was possibly not fully appreciated by all exhibitors. Some exhibits seemed to have been hastily gathered together, without a well-defined thought of the real object of the exposition. Many exhibits seemed to show that the intention of the exhibitor was to exhibit a finished product, with the steps in the process of making the product hidden, instead of laying bare, or revealing the processes by which the exhibit was brought to the state in which it was shown. Some exhibits might almost be said to have been too perfect for school exhibits. But many of the exhibits were illuminating in clearness, and gave the educator an opportunity of learning what was done in the different fields of educational activity, that left little to be desired.

The public high schools of the country have made remarkable progress in the past decade, and, as exhibited at St. Louis, present lines of work that indicate that the molders of these "people's colleges" are fully alive to the increasing demands made upon them by the busy business world. It was natural that in an exhibition of school work, manual training, color-work, and photographs should be largely in evidence. The reasons for this are obvious. Manual training, drawing, and photography mix the mental and the physical, and easily lend themselves to the exhibitor's art; while the more purely mental subjects are less easily displayed in cases or charts. If one did not remember this fact, one would think that time is wasted in our public schools in manual training. And yet a careful examination leads one to see that probably manual training does not receive an undue share of school time. Much of the work in manual training deserved praise; some was excellent, as, for example, the exhibits from Philadelphia and one or two other places; some was mediocre; and a few exhibits were uneducational in both purpose and execution. Two or three leading manual-training schools showed products of so great value that it was easy to see that the old apprentice system of learning a trade has been most admirably supplanted by the training in wood- and iron-work given by the public schools of manual training and mechanic arts of our large cities. But this side of manual training, as shown at St. Louis, is not the important side. One could see that this branch is used, with the other branches of school work, to develop the youth, to train his creative and artistic powers, and to give his mind control of his body, to teach his physical powers to obey his mental powers.

It is impossible, of course, to show in an exhibition more than a small part

of the real work of a college or university. But even here the scientific spirit of the age made itself felt, and there were fine displays of equipments for laboratories in which the secrets of nature were revealed to the student, for engineering, for medicine and surgery, etc. The literary side of college work was shown by the volumes exhibited by professors and students, by charts, histories, photographs, etc. Permit me to quote from an article in the *Educational Review* for December, by Miss Anna Tolman Smith, a member of the jury of one of the leading groups in the Department of Education:

The complete models of site and buildings presented by several universities, notably by the University of Wisconsin, Washington University, and the University of New York, excited universal admiration. Harvard showed a fine model of its students' stadium and, on the scientific side, a remarkable representation of intestinal digestion as seen under the Röntgen rays, and a case of the exquisite Blaschka glass models for botanical study; Columbia, a model of the beautiful new library building, with the majestic statue of Alma Mater in the foreground; and Yale suggested the highest outcome of university life by portraits of famous alumni. For æsthetic effect, pure and simple, the exhibits of the University of Michigan and of Columbia University surpassed all their sister-institutions, while the University of California excelled in photographic representations. The transparent views of her mining school, including class, laboratory, and field operations, afforded the highest example of this mode of exhibit as regards technical finish and illumination.

But the special value of the university exhibits was in the conditions they illustrated rather than in their actual material. The lavish equipments answer to the expansion of knowledge and man's increased control over the forces of nature; beauty of environment and of architecture, to the hunger of the spirit for ideal things. Lessons such as these could not fail to be caught by the mere casual observer, while the nature of the subjects selected for representation brought clearly to mind the lines of recent progress in matters and methods of university instruction.

The American exhibit of special education in fine arts, while it showed that we have something to learn from foreign countries, was highly creditable to us. In the entire exhibit one could not help noting with pleasure the growing tendency to combine the beautiful and the useful, or rather to beautify the useful, so that many objects of utility were clothed in a beautiful dress, thus showing, as quoted by my distinguished predecessor on the program, that "art is not only an ornament, but an excellent investment when properly directed." To quote from the report of the chairman of the jury of Group IV to the department jury:

In our own schools we find the same strivings as in foreign countries, but, lacking government support, and working without the same sympathy and help, they have as yet been unable to produce that perfection of workmanship and execution which we find in some of the foreign schools. This does not mean that we do not find the most excellent results in the handicrafts, as taught in the American schools, but opportunity is not here offered on the same terms to young workers in the art industries by which they may perfect themselves in their trade or profession.

A volume might be written upon the exhibit in Group V, Special Education in Agriculture. Let me quote from the report made by the chairman of the group jury:

In the exhibits illustrating special education in agriculture by far the most notable was the "Collective Exhibit of Sixty Colleges of Agriculture and Agricultural Experiment Stations of the United States." Nowhere on the exposition grounds, perhaps, were the processes of education more completely exemplified, for here were model laboratories for every branch of agricultural education fully equipped, in charge of experts, and, so far as possible, actual laboratory demonstrations were carried on.

Valuable as these model laboratories were, however, they were far surpassed in interest by the research work displayed in this exhibit. A well-known educator recently said that in no field of education is there today so great an opportunity for a man to make a name and fame for himself as in the field of agricultural research. For, while the realms of the classics, of mathematics, and of pure science have been exploited through periods of time extending in some cases at least through centuries, research in agriculture is but in its beginning. The jury was much impressed by the splendid results already attained, and by the yet more splendid promise of future gains in this field. We congratulate Chief Rogers and the exposition management on the great success of this first collective exhibit of the agricultural colleges and experiment stations in the United States.

Besides this collective exhibit, the United States is represented in this group by displays from various state agricultural colleges and experiment stations. Most notable among the institutions thus shown were the agricultural colleges of Illinois, Missouri, and Tennessee. From each of these came exhibits showing original research and experimentation of a very high order.

It may be added that the beginnings of instruction in agriculture were shown in the exhibits of the rural schools of several states, and the study of the products of the earth, their planting and cultivation, and of harmful insects and their destruction, was a fruitful subject of the agricultural schools. This subject, which touches everyone so closely on its practical side, is coming to the aid of the farmer and fruit-grower, and will bring rich blessings to mankind.

The chairman of the jury of Group VI, Special Education in Commerce and Industry, said in his report to the department jury:

The exhibit of Indian schools was found limited in amount and poor in quality. The only exceptions to this statement should be made in favor of the Indian schools on reservations in the state of New York.

Negro schools were creditably represented by institutions in various parts of the South, and in states as far north as New Jersey and Missouri. In the main, these exhibits were of students' work in wood and metal for boys, domestic science for girls, and from schools for such special trades as boot- and shoe-making, textile work, etc. The amount of material represented by negro schools was large and its quality good. The jury would probably concur in the statement that the wood- and metal-work from Hampton Institute was the equal of any similar work examined. The negro schools of the state of Missouri, particularly in Kansas City and the Lincoln Institute at Jefferson City, and the negro schools of St. Louis, call for special mention. These schools show much work which seems to indicate that they have gone far toward solving the problem of industrial education for the negro.

The jury was disappointed at the limited showing of the evening-school work for the United States, but, while making this statement, desires to call attention to the excellent exhibit of the evening school of trades in Springfield, Mass., and the work centers of the city of Boston.

The exhibit of the evening schools showed that the idea of continuation schools was a prominent one with them, with classes in millinery, dress-

making, typewriting, and other branches for young persons beyond the school age.

The state institutions for the deaf and dumb and the blind from several states were represented by classes of students with their teachers, and the latest methods of teaching these unfortunate persons were illustrated almost daily. Crowds were constantly observing and studying the classes whenever an exercise was given, and were alike interested and instructed by the "living exhibit."

Of the special forms of education classified in Group VIII time will not permit me to say more than a word. The latest text-books, school furniture, and appliances were displayed, plans for extension schools and vacation schools were exhibited, and correspondence schools explained their *modus operandi* to large numbers of interested listeners. In text-books and school furniture America seemed to lead the world, and showed striking advancement over Chicago ten years ago.

No report can be made of the exposition without at least a reference to the charts and statistical tables that were found everywhere and that were of great value to the student. Of the foreign exhibit it is not within my province to speak. Our own country presented charts and tables that were studied by large numbers. Thru the wide influence of the Bureau of Education, exerted here as elsewhere to the great good of our schools, the charts were sufficiently uniform in plan and matter to form a valuable basis of comparison in the data given by them, and the information presented by them became doubly important as a consequence.

It is to be regretted that it is possible to present here only a superficial view of this marvelous exhibition of the work of American teachers. While defects were seen and might be pointed out, the Educational Exhibit as a whole made a most profound impression upon the thoughtful student, and will prove a source of encouragement and inspiration to the teachers of the land for many years to come. The predominance of the tendency of American education in all grades of schools toward reaching an end which is expressed in a material creation is most marked, and probably is an evidence of the impression that the mine and mill, factory and foundry, are making upon the education of our youth.

In a country that has no national system of public education, the striking resemblances of the state public systems must excite comment. This resemblance was seen not only in public-school systems, but also in the exhibits of the most advanced institutions of learning, and confirms the opinion of the optimist that American schools are working in harmony with the intangible, yet none the less real, American idea, that has lived thru the generations, and that is leading our beloved nation upward to the goal of a free, united, peaceful, prosperous, God-fearing, and man-loving people.

As we contemplate that marvelous array of cities and states, of empires and republics, presenting to the gaze of the world the choicest products of

the choicest minds of the world, forgetting for the while the intense rivalries that have long existed, remembering only that each city, each state, each empire, each republic, brings its best gifts to teach its fellows, and comes to its fellows in humility to learn what better there is to learn—as we contemplate all this, we feel that, below or above the bickerings of business and the strife of war, there exists a universal brotherhood, which is typified by the wonderful exhibition just closed at St. Louis; and we realize that the whole world is not only wiser, but also better and nobler, because of the Universal Exposition at St. Louis.

III. LESSONS FROM THE UNITED STATES EXHIBIT OF ELEMENTARY EDUCATION

BEN BLEWETT, MEMBER OF THE JURY OF AWARDS, GROUP I, ELEMENTARY
EDUCATION

POSITION ACCORDED EDUCATION

Those of you who did not realize the fact thru the exquisite pleasure of seeing it have been told time and again how the scheme of organization of the Universal Exposition at St. Louis recognized education as the alma mater of modern manhood, and enthroned her in her own magnificent palace, established in the seat of highest honor. You know how the whole world, the islands of the sea, and the great empires vied with each other in showing what they were doing for the development of intellectual and moral power thru the training of their children and youth. You know the artistic form and the vast extent of the installation that made suitable setting for this, the most significant part of the exposition. These things need, at this time, but be mentioned, not reviewed.

It was no accident that gave to education this recognition, unapproached in the previous universal exhibitions. The recognition but measured the growth of an influence that had become a dominant power in the life of men, in every occupation, in every land. In other palaces you saw the processes of national living; in the Palace of Education and Social Economy you might discern the animating principles of these processes as shown in the national ideals toward which the youths were trained. One stood in open-eyed amazement before the displays made by Japan in industries, manufactures, and arts; yet the explanation of her marvelous achievements was complete to one who studied her scheme of education and its development.

Education was accorded its honorable position on its merits, and to educators was given the most difficult problem to be worked out by exhibitors.

Mind manifests its power thru material forms that attract at a glance and that, in large measure, may be comprehended without weariness. Even one uninitiated in the uses of machinery can quickly see the import of the rotary steam-engine. The processes thru which the powers of the intellect, of the

will, and of the soul are unfolded and trained are much more difficult to illustrate in ways that will seize the eye and be easily understood. To illustrate these processes was the problem given to the educators, and its solution was accomplished with unparalleled success.

INSTALLATION

In the Palace of Education, Group I was assigned to elementary education under four classes:

1. Kindergarten.
2. Elementary grades.
3. Training and certification of teachers.
4. Continuation schools, including evening schools, vacation schools, and schools for special training.

The display from the United States in this group had distinct significance; first, in its evidence of the existence of an American system of education; second, in the demonstration of the treatment of the peculiar and complex problems of metropolitan schools; and, third, in the promise of a brighter future for rural schools. All the conditions of actual schoolroom life were realized as nearly as could be.

One state presented models showing the development of school buildings, from the log cabin, thru successive advances, to the modern high-school building. Another showed a modern rural-school building, in size and equipment just as it would be used. Other states, thru biogens, thru moving pictures of large size, and thru photographs of almost every conceivable typical school condition, left little for the imagination to supply. One city, daily for a period of six months, showed living classes of children engaged in such schoolroom work as could be conducted under such distracting conditions.

Graphic charts gave, in forms easily read, historic and statistical facts, and the relation of the various parts in lesson plans and courses of study. The photographic illustrations were a distinct improvement over that old type which showed rooms of children very conscious of the fact that their pictures were being taken. In these the photographer had caught characteristic groups of children at typical school work; and every inch of the picture told its tale to the examiner. The selected and typical work of individual pupils, and the corrected or uncorrected work of whole classes, either in written exercises, in drawings, or in the materials employed in manual training—all these made it possible for an earnest investigator to get close to the purpose of the work, its method and its results.

There were several distinct schemes of installation in the different states: first, that in which the work was grouped by towns and counties; second, that in which it was grouped by subjects, the work in any subject being collected from all parts of the state; third, that in which it was grouped by subjects, a subject being assigned to some one town; fourth, four large cities made exhibits independent of the other parts of their respective states. Twenty-nine states and three territories were represented.

Here was the state that justly boasts of its public school established over two hundred years ago, and by its side the vigorous young territory that stands knocking at the door of the Union. Here was the great metropolis with all its complex life and here the rural school of the wilderness into which only the pioneers had as yet pushed. And here were all the stages of institutional development lying between the widely separated extremes.

AN AMERICAN SYSTEM

That the participation in the exhibition was so universal excited the greatest surprise and admiration, and was most impressive in the evidence it gave of the existence of an American system of education. With the school unit of organization being, as it is in almost every state, the small district with its local board, and with no central authority to direct or even suggest plans for shaping and strengthening the work, a chaos of plans seemed inevitable. Yet the direct opposite of this was plainly the actual condition of the work. From Massachusetts to Louisiana, from Pennsylvania to California, from New York city to the rural school of Arizona, the same purposes dictated the general scheme of the courses of study, the same pedagogic philosophy determined the relation of the several parts of the work in this general scheme; and the differentiations were only such as local conditions and individuality in administration made inevitable. One whose estimate was formed by that which attracted the eye easily, and who had no opportunity for close examination, would tell you that manual training was receiving an unwarranted attention—an attention beyond that given to other material or apparatus for educating. But this impression did not remain with one who read the outlines of courses of study, or examined those parts of the exhibits which, from their nature, need not and could not be conspicuously installed.

Although the school journals, the reports of administrative officers, and the frequent coming-together in great meetings have kept American teachers in close touch with each other, and presumably familiar with the actual practice, still this assembled evidence of unity in work was startling in its conclusiveness. France and Germany, with their highly developed centralization of control, showed no closer recognition of a common directive principle, nor a greater uniformity of results. The United States has evidently accomplished this end thru the healthy incentive of friendly rivalry and thru sympathetic co-operation. The creed of the American schoolmaster could be read in each unit and in the display as a whole as plainly as if it had been printed on illuminated tablets:

1. It is our function to direct the natural and balanced development and training of the intellect, will, and soul of the child, giving to the spirit the power to comprehend the environing world and to react upon it.
2. Under the conditions of our social institutions, there are but few artificial barriers of custom which can prevent the individual from selecting the life that he wills to follow,

and for which he has the innate or trained faculty. No social caste obstructs his path, and no tradition binds him as an apprentice to the trade of his forefathers or father.

3. The education of our children must then give them flexibility for adaptation, strength to choose and persist, and a sympathy that shall go out to the lives of all men.

4. The process of being educated is not alone the process of being acted upon. This receptivity has its complement in the reaction of the pupil which expresses itself sometimes thru language, sometimes thru music, and sometimes thru the grosser materials that must be shaped by the hands.

PECULIAR PROBLEMS OF METROPOLITAN AND RURAL SCHOOLS

Certain features of the exhibit, however, were emphasized by their divergence from a scheme that in most respects was homogeneous for the entire country. Although the genius of our institutions demands a training for the children which shall throw down any artificial barriers that might bar their entrance into any attractive field of life, and tho the schools in every quarter of our country, under the shaping of this genius, are remarkably similar in type, still broad differences in conditions have developed characteristic modifications of the common type.

Two of these modifications must be noticed in a paper that hopes to present the salient lessons of the exhibit. One relates to the conditions met in the administration of the modern metropolitan school system; the other, to the conditions met in the administration of rural schools. The two conditions are as far apart as the poles. One is the product of the abnormally contracted life of the great metropolis; the other, the product of the natural, but unorganized life, of the rural districts. These two fields of activity are attracting the attention of the best talent for organization and development.

METROPOLITAN PROBLEMS

The mere mention of the annual expenditure for public schools made by New York city startles one. Twenty-five million dollars is an immense sum of money; yet a study of the uses to which this money is put makes us lose our admiration for the amount expended in our admiration for the kind of work that it does. Annually the increase in the number of pupils seeking admission to the schools is about thirty thousand. Additional accomodation and instruction for this number must be provided. This is in kind the same difficulty that every growing town has to meet, the difference being only one of degree and increasing in arithmetical ratio only. But the conditions that are produced directly by this growth of population are so complex that the difficulty of handling them increases in geometrical ratio.

The great mass of humanity compacts by centripetal force till life in its congested portions is distorted out of all semblance to natural health. A home becomes a few square feet of standing-room in a caravansary, and the child is deprived even of the solace of a neighbor's cellar door for a sliding place; no refuge anywhere; the sky, the far-off roof of an artificial canon; the earth, a floor of granite; his neighbor, the fellow who crowds him.

This seems like tragedy to us who, when children, looked thru clear air up to the sun and talked with the fairies under sheltering trees. How can you educate into decent citizenship a child pent up in this way? Here is a question peculiar to the great city. And it should be the glory of our profession that there have been hearts that throbbed at the pathos of it all, and brains that joyed in contending with the difficulties.

The public schoolhouse must be made the place where the child may truly live. The floor rooms and the roof garden are his parks. Yet better still are the playground where, from the piers, he may look out upon a space that seems limitless to him, or where he may come in contact with the earth, tho its extent be only a city block. The evening schools, recreation centers, vacation schools, historical excursions—all these are skillfully devised to attract the youth away from suggestions that degrade to the things that interest, entertain, and cultivate his better nature. A few quotations from the report of Assistant Superintendent Evangeline E. Whitney will give some idea of what is being done to help city youths to right living:

Only those acquainted with life as it is in tenement districts can realize what these spacious, well-warmed, and well-lighted class-rooms mean to the children of the street, of whom none ought ever to knock at their doors in vain. But our limitations necessitate directing efforts chiefly to boys who have left school, to become wage-earners, and who nightly roam the streets searching for amusements. Before reaching his teens every boy of this class undoubtedly belongs to a group or gang—for “the boy is a gregarious animal”—especially when fate makes him a city resident. A peculiar bond of sympathy will hold a dozen or more lads together so that for months or years they will act as a unit. If the leader has a strong bias for crime, Herculean tasks of mischief may be accomplished. In one of our centers a boy recently said to the principal: “Say, I want to tell you something—but don’t tell the rest of the gang—you have broken up a gang of thieves by keeping and interesting us fellows.” That lad revealed a double secret, for the power that holds the boys is the fulcrum on which all efforts for turning them into good citizens must rest.

In the buildings where shower-baths could be taken, this luxury was used as an incentive for securing obedience and fair play. Only the good boys stood chances of getting tickets, but the bath never lacked patronage. One school reported 1,125 making successful application in one afternoon. In the fifteen swimming-pools, the supervisor reported that 1,652 boys and girls took the required number of lessons and learned how to swim.

The roof playgrounds were the happiest places, I think, in the city. Thousands of feet, nimble and slow, climbed the long stairs night after night, whether skies were bright or lowering. There for three blissful hours the people would play games or watch them, talk or dance, sing together, or listen to the band music. The program this year was supervised by Dr. Damrosch, and had fewer numbers of the rag-time order than in former years. Favorite airs from good operas and classical selections were interspersed with popular melodies. One night a poor woman, touched by some pathetic strain, stepped up to the leader and said: “I don’t expect to go to the cemetery but once; won’t you please give us a jig?” To refine and elevate taste is the work of the roof as well as of the ground, and it is gratifying to note that in the general appreciation of good music—in neater dress and more decorous manners—a higher standard was reached than ever before.

Not all of the schools were in the congested districts. It was felt that the children of the well-to-do, remaining in town through the summer, were just as much entitled to share these special advantages as were those who excited our pity. Schools in the so-called good neighborhoods were well patronized. If they turned the attention of even a few boys

and girls toward the vast fields of industrial pursuits, which tomorrow will call for as well-educated artisans as do the professional walks of today, these summer efforts will be richly recompensed.

The following is Miss Whitney's tribute to the teachers in the recreation centers:

The workers who patiently toil here month after month are the most heroic people I have ever met. I know several who spend freely their leisure time and money in efforts to raise the down-trodden and teach the ignorant; they have visited every tenement and family within their districts, and their experiences are more thrilling than those published by sensational reporters; but with them confidences are too sacred to be made public. Having intimate knowledge of the temptations, sorrows, and struggles of those among whom they labor, they learn how to win them, how to infuse higher ideals of life, and, by extending the sympathy and good-will of the new world, cause many of the ugly prejudices and customs of the old world to disappear. Here the youth of Latin, Slav, and Hebrew races meet as comrades, and in learning to speak a common language gather some understanding of the duties and privileges of American citizenship.

RURAL PROBLEMS

The condition of the rural school is the problem that involves the welfare of more people than any other. The importance of this problem lies both in the number immediately affected and indirectly in the potency of these lives in giving character to the nation. However enticing it may be, the life of the great towns is artificial and misshapen by the pressure of the great throngs. In its atmosphere the human forces are devitalized and dwindle into abnormal weaknesses. This is so true that the great enterprises of the city are sustained only by the infusion of the strength of men who have held the plow handles or wielded the ax.

The old story of the giant Anteus, like all great myths, is but the embodiment of a natural law. To get his strength and to hold his strength, the child must touch his mother earth, must struggle with the cold and with the heat, must know how the plants grow, must experience how the knot yields to the skillful wedge, must wrestle with labors that test his endurance, and must feel the joy of his own masterfulness. The demands of his life develop in the country boy a self-reliance and a faculty for adaptation which, though hidden under a cloak of awkwardness, give him a power not possessed by the child who has not had this natural training. It is from such people that the leaders of the world come.

The great centers of population act as maelstroms which gather into their swirling rush all that the outermost circles of their influence can reach. To counteract this tendency, to hold the youth on the farms, so to organize his life there that his natural longing for social intercourse will be satisfied—to accomplish these ends, some of the strongest efforts of our school-masters are being made.

The exhibit from Winnebago county, Ill., gave the most striking evidence of this activity, and its spirit glows in the words of County Superintendent O. J. Kern:

My fundamental proposition is that the country child is entitled to every whit as good an educational opportunity as that enjoyed by the most favored city child attending the public school. To have this equality of educational opportunity, the country people must spend more money in a better way.

In his address at the dedication of the first consolidated school building in Winnebago county, Eugene Davenport, dean of College of Agriculture and director of Experimental Station, University of Illinois, said:

All people should be educated in two environments and from two standpoints. One is the world at large—general and broadening; the other is that in which his life has unfolded and his individuality developed, and in which in all likelihood his future will be cast. The only sufficient reason for changing one's environment at the school age is the certainty that the future calling is to be different from that of the family, and then something of educational value has been lost if the transplanting has taken place too early. It is better not to turn the back upon the things of childhood until we can look out upon the world through the eyes of a man. The consolidated school is the only solution for the educational necessities of country people.

This new agriculture, therefore, demands three achievements in the way of education. One is a better training in the technique of the profession in order to make the best farmers possible of the individuals who occupy our lands; the second is that this education shall be secured without disrupting the country home; and the third is that, when it is over, the product shall be a normal country child, to the end, if he remains in the country, he will make a good country man, and that, if he later goes to the city, he goes intelligently and for a purpose, in which case he will make a good citizen.

I hope now that you will meet these needs by doing the natural thing; and what I mean is this: I hope that this will not be a city school transplanted into a corn-field. I hope it will be a country school, surrounded by all that will make it attractive—beautiful, and filled with all that will make it effective.

Why should this not be a city school? Is not a city school as good as a country school? Yes, for city people; but a city school for country people is as far from what is best as would be a country school for city people. It is not that one is better than the other, but it is that they are different. The city school has been long developing, and it is to be assumed that it has come to meet fairly well the conditions and needs of city people. Now, the conditions and needs of country people are not less and they are not greater, but they are different. I would, therefore, have in such a school a good portion of agriculture, shop practice, household arts, and of science in general. Why? Because these are specially characteristic of country life. Some of them are also characteristic of city life, some of them are not; the city people will look after that; but in the meantime it remains for us to put into country schools the things that are characteristic of country life—those things that give it character, flavor, distinctness—that make the differences by which we distinguish it as country life.

A number of the states have already achieved noticeable progress in revolutionizing the condition of the rural schools. They have declared that the unsightly and unsanitary one-room district school must be abandoned, because it is unsightly and unsanitary; and in its stead must rise the modern building, equipped for comfort and health, and with rooms enough and children enough for efficient classification of work. This consolidation puts the school a long distance from some pupils. These pupils must be transported to and from school at public expense, and to make this feasible good roads must be built. This consolidated school, they tell us, will require fewer teachers for the

same number of pupils taught in the abandoned one-room buildings, and for the same total of expenditure for salaries will secure a higher grade of professional skill. The incidental expenses are reduced, altho the cost of transportation has been added.

A single example will demonstrate the superiority of the consolidated school as a business proposition alone. The report of La Grange county, Ind., for the school year 1903-4, shows the schools of the eight townships consolidated in fourteen buildings. Thirty-eight old schools had been abandoned. The number of teachers had been reduced by thirty-one, with a saving in salaries of \$16,051.60. Add to this a saving in fuel and repairs, and there is a gross saving of \$12,911.60. From this subtract an expense of \$6,170.86 for transportation of children, and there remains a net saving of \$6,734.74.

The new school radiates its influence in all directions. The lawn and garden surrounding it are part of its science and art work, and from them and the decorations of the rooms taste develops and is carried into the homes.

The school library brings to the children the best of the world's thinking and feeling, and expands the horizon of their sympathies and desires. The building becomes a social center for the community, offering opportunity, thru clubs or lyceums, for the discussion of questions that touch the business, the recreations, and the culture of their membership.

A scientific knowledge of the elements with which he is working makes nature the farmer's willing benefactor. The field and the flocks return to him an abundance. Better roads and the telephone minimize distances, and there is no longer the isolation that drives men to the towns for the companionship which the social instinct demands for them and their children. The youths are at home upon the land, and feel that their lives may be completer here than in the shops or factories of the cities.

This is the vision of faith of the modern county superintendent. And thus, thru their faith and their works, he and his brother in the crowded city, brighten the lives of children, and become potent factors in shaping national character.

TOPIC: MEANS OF INCREASING THE EFFICIENCY OF OUR PUBLIC-SCHOOL WORK

I. PROVIDING BETTER TEACHERS

J. W. CARR, SUPERINTENDENT OF SCHOOLS, ANDERSON, IND.

Some years ago I was chairman of a church committee to purchase a new pipe-organ. We were an ambitious congregation, and nothing but the biggest and the best would suffice. We purchased a magnificent instrument—three

manuals, tracker, pneumatic action, 1,944 pipes, and all the necessary swells and stops; cost, \$5,000. It was a "thing of beauty," and we expected it to be a "joy forever." The congregation was pleased; the committee was delighted.

But somehow things did not go well. Sister Jones, the old organist, would not touch the new-fangled thing. "Too much machinery and too much show," she said. Of course, we were adverse to going outside of the congregation for an organist. So we tried Minnie Wright, the deacon's daughter; but Minnie could not manipulate the stops and swells. We next tried Josie Grayson, an orphan girl who really needed the place. Now, Josie could play with her hands, but when it came to playing with her feet also, she could not do it. We next tried Seth McGraw, who had been to college and who, in addition to his musical ability, was able-bodied and strong. Seth put all the power on the motor, pulled out all the stops, and kicked and pawed with might and main. The organ shrieked and bellowed and roared. As for noise, the bulls of Bashan were outclassed. But as for music—well, it requires more than a big organ and a big man to produce that. The congregation was disappointed, disgusted, and fast becoming desperate. They said that the organ was too big, too complicated, and that it had at least nineteen hundred pipes too many. There were charges of mismanagement and even fraud against the committee, and hints that "something might be doing." Now, Indiana lies in the north central-portion of the lynching belt of the United States, so the committee felt a trifle uncomfortable.

To my way of thinking, there is a marked similarity between the musical experience of this congregation and the educational experience of many communities in this country. We have built great schoolhouses and prepared elaborate courses of study, with more manuals, stops, and swells than characterized the great organ of Newtown. The old course of study, which was so simple that even Sister Jones could play it by ear, has given place to a new, elaborate, and highly organized course which is difficult—entirely too difficult—for the Minnie Wrights and Josie Graysons, no difference if the one is a relative of some member of the school board and the other is the daughter of a poor widow. It requires something more, too, than an able-bodied man to get proper results from the course of study, even if he has been to college and played full-back on the football team. He may make a great ado about it, but the results will be very similar to Seth McGraw's music on the pipe-organ—calculated to incite a riot.

It is this weak and poor attempt to carry out the course of study that causes many good people to cry out against expense and the so-called fads in the public schools, and to sigh for the good old times when we had only the three R's, and when *anybody could teach school*. There is no doubt in my mind but that the old-time teaching of reading, writing, spelling, and arithmetic was superior to some of our attempts to carry out the modern course of study, with all its "enrichments" and "culture studies," and a little reading, writing, and spelling taught incidentally. But this does not necessarily mean

that the course of study is radically wrong. It more likely indicates our lack of skill in carrying it out. After listening to the feeble attempts of Minnie, Josie, and Seth, a majority of the Newtown congregation was ready to use the big organ for kindling wood and to prosecute the committee for the misappropriation of funds. They longed for Sister Jones and the old reed-organ.

But, before consigning the organ to the scrap-pile, the committee decided to make one more attempt. Hitherto they had employed only such persons as they could get *cheap*. This time they agreed to give the organist *fifty dollars* a week. Such extravagance! Would they ever receive forgiveness? But the new organist wrought miracles. The feeble and discordant notes gave place to hymns and anthems of praise. Now it was a joyful *Te Deum*, as when David danced before the Lord; now it was a mournful lamentation, like the exiles weeping by the waters of Babylon; anon it was a benediction, sweet and solemn, as when the Master spoke "Peace" to the raging waves of Galilee; and when at last he played old "Coronation," it seemed that the angels came down among the people. That congregation had never heard such music before. The committee had been vindicated. There was nothing the matter with the organ either. It only needed the master's touch. From that day it was not too big nor too grand nor too costly for that congregation. The return of Sister Jones and the old reed-organ was now an impossibility. They had heard real music.

What is needed, above everything else in our public schools, is the master-hand that can bring unity, harmony, and results out of our modern course of study. The course is not too rich nor too complex nor too elaborate to suit the tastes and to meet the needs of our enlightened and progressive people. The difficulty has been, and still is, that the art of teaching has not progressed as rapidly as the building and equipment of schoolhouses and the development of the course of study. What the public schools need even more than the committee needed the master-organist is the master-teacher—the man or the woman who knows his instrument and knows his art.

But we could not go backward if we would. We may sigh for the old curriculum and the citizen teacher of the olden time, but they will not return. We might as well attempt to turn back the hands on the clock of fate as to attempt to bring them back. We live in a different age, and our people have different hopes and different aspirations. The Newtown congregation could never have gone back to the little frame house and the old reed-organ after they had occupied the new stone church and listened to the grand music of the new pipe-organ. So it is not a question of desire, it is not a question of expediency, it is not a question of expense; but it is a necessity that sufficient number of competent teachers be provided to fill the American public schools. This is the first and chief requisite for increasing the efficiency of our public-school work.

I am aware of the fact that there are other educational problems whose

proper solution would greatly increase the efficiency of our school work. But the solution of most of these problems would follow as a *result*, if we once solve the greater problem—the supplying of a sufficient number of well-equipped teachers for the public schools. To illustrate: The course of study needs elaboration, elucidation, and especially elimination. But the educational doctrinaire can no more do this work properly without the guidance and assistance of the practical teacher than John Locke could evolve a suitable scheme of government for the American colonies. There is the problem of carrying out the course of study, after it has been formulated, so as to get the best results. But no number of rules or regulations will enable amateurs, or other persons poorly equipped for their work, to do this properly. There is also the problem of the recognition and proper development of the individuality of pupils while teaching the mass in classes; but it is folly to speculate on this problem unless we place master-teachers in the schoolroom. There is still a greater problem. It is the use of the course of study, the discipline, the playground and the child's whole range of school experiences so as to develop properly his moral and religious nature, resulting in the formation of right character. But this miracle can no more be wrought without the child coming into contact with a noble personality than Simon Magus could purchase the gift of the Holy Ghost.

In making this special plea for better teachers and more of them, I am aware of the fact that I have said nothing new. Indeed, it is about the oldest and the tritest thing that could be said. But it is what ought to be said and what must be done, if the American public schools are not to prove the greatest disappointment of the age. The gospel is old, but nothing new has been, or ever will be, found to take its place.

How is a sufficient number of well-qualified teachers to be obtained for our public schools?

Create a greater public desire for good teaching by demonstrating the difference between the counterfeit and the genuine article.

Break down the Chinese walls that seem to surround many towns and cities, and employ good teachers wherever they may be found.

Eliminate politics, nepotism, favoritism, and the whole brood of like *isms* from the management of school affairs.

Magnify the office of the teacher.

Make the tenure of position for good teachers absolutely secure; absolutely insecure for poor ones.

Promote for efficiency; dismiss for inefficiency.

Protect professional teachers from ruinous competition with non-professionals.

Pay teachers in proportion to the services rendered. According to the *New York Sun*, the "dog-catcher" of the city of Washington, euphoniously styled the "pound-keeper," receives \$1,500 a year; grade teachers, \$500 a year. Whenever the American people are willing to expend as much for great

teachers as they do for great school buildings, then we shall have great schools, and the next important step will have been taken to improve the efficiency of our school work.

And so, in closing, I wish to make one appeal. I wish to appeal to the superintendents of the United States to use their utmost endeavor to secure a higher degree of efficiency among teachers. I wish to appeal to school officers everywhere to subordinate personal interests to the welfare of the public schools, and to employ none but the best teachers available. I wish to appeal to the teachers themselves, not only to make the best preparation possible for their daily work, but to strive continually for clearer insight, broader sympathy, and greater power, in order that they may do the most possible for the children intrusted to their care. I wish to appeal to the great American press—the greatest press in any country—to use its mighty power in building up a public sentiment that will demand a competent teacher for every child. I wish to appeal to the fathers and to the mothers of the nation not to be contented with any person but the best—the best in character as well as in scholarship—to teach their children. And, finally, I wish to appeal to the great American people to render such moral and financial support to the public schools as will enable them to employ and to maintain the best teachers, thereby making it possible for the public schools to attain the highest degree of efficiency.

II. ADEQUATE LEADERSHIP, PROGRESSIVE TEACHERS, AND FEWER SUBJECTS

CARROLL G. PEARSE, SUPERINTENDENT OF SCHOOLS, MILWAUKEE, WIS.

The topic we are asked to discuss this afternoon is one which everybody feels qualified, and a great many people feel called upon, to discuss, though much of the counsel which is offered to us reminds one of that offered to the man whose horse is back-stepping or rearing or has fallen in the street. And since the public-school system has not yet attained perfection, we shall doubtless not only continue to receive counsel on the subject from all our friends, but shall do as we are asked to do this morning—discuss it as a business matter among ourselves.

Alexander the Great, or some other ancient notable who was a successful warrior, is reported to have said: "I would rather have an army of deer lead by a lion than an army of lions lead by a deer." This is his way of expressing the value of proper leadership; and proper leadership is just as important in matters educational today as in matters industrial or political, and just as important in any of these lines as it was in the days of Alexander; and one of the great needs of our public schools is more adequate leadership on the part of those who fill positions as superintendents and principals. This is not to say that the persons who are doing this work are not of as great ability or as good intentions as those who fill positions of leadership

in other lines of business. It is to call attention to the fact that in such places the schools today need, as much as any one thing, trained leadership.

There are schools without number where the scholastic qualifications needed by the teacher or the principal or the superintendent can be obtained; colleges and universities, collegiate institutes and normal schools, are all ready to supply this side of the equipment. There are, too, many institutions in which teachers are trained in the principles and practice of instructing children. But when it comes to the broader and more responsible duties of school administrations, there has as yet been developed no institution in which young men or women planning to enter this particular department of education can receive the necessary training. The only way that has so far been opened is the time-honored way of experience—"exposure." The young man has been obliged to begin his work without any adequate preparation, and has learned what he could by the actual practice of the duties of such a position. What he has learned he has learned from the the result of his own experience. He has not been able to profit by the experience of others, as he would be if he entered most other professions.

To be a successful administrator of schools, various sides of educational work must be understood. The head of a school system needs to know the financial side of school management—how school revenues are gathered and should be expended. He should know something of the development and operations of the minds of children, as well as of the subjects of study which will develop their minds and characters in the most satisfactory way. This he must know in order that he may include the proper subjects in the course of instruction, and may arrange those subjects to the best advantage and in the proper order. He must have proper standards of school work and accomplishment; he must know how to direct and supervise the work of others. These and many other things are necessary to his success; and just now there is no place where he can learn these things, even theoretically, before beginning his work. The need of training for the profession of law or medicine, civil or mechanical or electrical engineering, is universally recognized, and ample provision is made for it; but for this profession, which is more important, so far as future welfare of the community is concerned, than any one of these, proper training has so far been left entirely to chance.

Strangely enough, there is almost no literature upon the subject; the volumes which treat of it are so few that they can almost be told on the fingers of one hand; and the treatment which it receives in current periodical literature is insufficient. To supply even this lack would do something toward improving the quality of the work done in the schools of the country.

Another way in which the average quality of work in American schools may be bettered is for the corps of instructors to realize more fully the need for keeping alive intellectually, and for keeping abreast of the times, both in a general way and educationally. It is so easy for teachers, as well as for those who oversee and direct their work, after having followed the employment long

enough to become reasonably familiar with its outward forms and processes, to rest back upon the technical skill so far acquired; this enables them to do the work day by day in a mechanical way, but without proper thought or that originality which is so desirable. If in some way those engaged in teaching could be impressed with the importance of a thoughtful attitude toward all new improvements of education, and a habit of questioning the methods and processes used; or could consider more frequently what improvements might be brought about; if this duty could be seen and met by all engaged in the work of education, the results in our schools would be much improved. To this should be added the value to the teacher of keeping alive his own intellectual life and his interest in the things of the mind and in the affairs of the world; this in order that he may be a better citizen of the world, and thus a better citizen of his community, as well as a well-rounded practitioner of his profession.

Another way in which we may improve the efficiency of our work is to present to the pupils in our schools fewer subjects of study, and fewer items in these subjects, than is the general practice today. If one of us goes into a large department store and walks casually thru it, he gets very little impression of the contents of the store; it requires many such visits to get even a general knowledge. If we meet a crowd of people, one thousand or two thousand, we must meet them many, many times in order to get a very good knowledge of even a part of them; but if we enter a room which contains only a few objects, a few visits will give us a pretty thoro knowledge of what the room contains; and if we meet a small party of people for a reasonable number of times, we have not only a good knowledge of the individuals making up the company, but a pretty good knowledge of their characteristics and personalities. It is so with our subjects of study in the schools.

I remember a conversation with a teacher working in a large city, who was discussing nature study as taught in her school. She said that the requirements for "nature study" were so many and extensive that no time was available to study nature; all it was possible to do was to place the "nature-study outline" on the blackboard and have the children commit it to memory. If, however, instead of such a long list of items in nature study, this teacher had been permitted to take for the year spent in her grade, a bird and a flower and a tree and perhaps one or two other interesting objects in nature, and spend the year upon them with her class, the pupils would have grown not only into a pretty good knowledge of the particular things studied, but into some general interest in nature and into the habit of observing the things in nature.

In the same way we sometimes try to familiarize children with literature and the work of great authors; we present to them in kaleidoscopic fashion brilliant selection after brilliant selection from the works of one after another of the galaxy of the writers who have delighted us at different times during the ages. As a result, the child has only a confused impression of the bril-

liancy and magnificence of the selections presented to him. He gets no adequate knowledge of, and no satisfactory acquaintance with, any author, or with the works or the characteristics or the message of any of those whom he has looked upon so briefly. If, instead of covering so many authors, he had been permitted to dwell upon the works of some good author for a year, until he had become familiar with the writer's characteristics, and his friends, and the notable events of his life, with the writings and the message which these contain, and with the characteristic note sounded in them, he would have acquired strength from the study and a liking for the author and the author's work. This would not only have been a pleasure to him thru life, but a standard to judge of other authors, and a suggestion that he might acquire familiarity with their works. The carrying out of such a plan as this thru the grades of the common schools would put the child into intimate touch with a limited number of our best English authors, and would be of far more value than the desultory glance at a great number of authors which we now so frequently give. What is true in "nature study" and in the study of our authors is equally true in many other subjects in our curriculum.

Those children who attend schools in cities and large towns may have their school work much improved, and their strength and usefulness after leaving school materially increased, if we will cultivate in them more than we do the power of initiative and of independent judgment in the use of minds and hands; if we will develop in them greater self-reliance. Our town life furnishes so little for children to do outside of the schoolroom, so little with which they may employ themselves, and particularly so little in which they may employ their hands and cultivate the habit of doing things, of studying out ways to do things, that we are coming to recognize more and more the necessity for cultivating this side of the child's powers in the schools. Hence the growing tendency toward giving children things to do in school or suggesting things for the children to do with their hands as a part of their school work. Where a boy lives out among the things of nature, and has his horse and his dog, his boat upon the lake, his playhouse which he builds for himself, his sled which he makes for his coasting, he has his constructive quality developed and strengthened. He learns to use the natural things about him for his pleasure and the promotion of his purposes. But where the boy has no place to be but in the house or upon the paved street, there is little which he can do to develop this side of his nature. Our methods in school, too, are sometimes shaped too much to secure drill—promptness of response, rather than thoughtfulness on the part of the pupils and ability to accomplish things independently. Now, if our courses of study were so planned as to include more of those subjects in which children cannot rely on the answer given them by the teacher or by the book, but require the answer to be worked out by their hands or by independent thinking, the quality of self-reliance will be increased, and the general efficiency of our boys and girls will also be increased.

DISCUSSION

CLARENCE F. CARROLL, superintendent of schools, Rochester N. Y.—The first speaker of the afternoon took as a major topic "Providing Better Teachers," affirming that as the teacher so is the school. This is true, but ought to be assumed without discussion. The second speaker referred at length to the "Training of Teachers." This brings us much nearer to our subject, which is "How to Improve the Public Schools." It would have been, not only entertaining, but helpful, to the superintendents present, had Superintendent Pearce given some account as to his methods of training his teachers. I shall assume that this topic calls for an informal discussion, and that the experience of superintendents is in order. Acting upon this theory, I shall venture to refer to the method of training the teachers in service adopted in Rochester.

Instead of the institute week found in many states and cities, the teachers of a given grade are called together on Friday for an entire day. At this meeting the superintendent and his primary supervisor set forth such suggestions or directions as may seem desirable. The supervisors of special subjects are also allotted a part of the time. The most important feature of this institute day is found in the class recitations which are observed by the teachers present. One part of the hall, in which the meetings are held, is organized as nearly as may be possible in the form of a schoolroom. Classes best illustrating methods or principles are brought before the teachers. Sometimes several lessons upon a given subject are presented, sometimes a variety. Suggestions from the lessons are freely discussed later.

The influence of these meetings, especially of the grade lessons, is very powerful and far-reaching in the system. It provides regulated visitation on a large scale, and affords the most excellent opportunity to present the philosophy and theory of education with the best illustrations that can be provided. Indeed, the lesson may be made a demonstration of a general principle.

At least three series of these grade meetings are held in each school year; that is, the first grade, for example, is three days in session under the conditions prescribed above. This system was organized before I assumed charge of the schools, and therefore I claim no credit for originality, except to say that in the schools of Worcester, Mass., we had for many years such class recitations and grade meetings, held, however, usually after school or during a part of the afternoon school session.

Superintendent Pearce referred at length to the study of literature in the schools. I shall venture to present a bit of experience upon this point.

From the primary grade thruout, literature has become a large element in school instruction everywhere. Folk-lore, traditions, and classic myths constitute the bulk, or a large part, of our best reading-books. We are likely, however, to pass so rapidly over this vast, delightful realm of childhood as to leave only vague impressions.

A seventh-grade class recently gave *The Lady of the Lake* at an institute meeting. The pupils had become familiar with every part of the story, with the setting, geographical and historical. Each pupil could repeat pages of the poem, and in the form of dialogue the pupils were able to dramatize effectively almost every act and scene. They were supplied with paraphernalia of the Scottish chiefs, and were dressed in their costume. They entered seriously into the play, showing no evidence of self-consciousness, which is always visible in every superficial effort of this kind. The head of the English department of the high school was present and pronounced the work to be, from his standpoint, of the very highest character. The pupils had studied this play for its content avoiding, for the most part any technicalities, and yet their written reproduction, illustrated and illuminated from the art side, was certainly creditable as composition exercises. The most interesting thing, however, that I can say with reference to this dramatization was that these pupils had studied *The Lady of the Lake* intensively for several months. Other shorter selections had been taken up for the time, but this play was made their principal

business and afforded numerous exercises in oral language, in written composition, in art, and in free constructive work in connection with manual training.

It may be of interest to the members of the Association to know that for the coming semester the sixth, seventh, and eighth grades of the entire city will make such an intensive study of some longer poems selected from a list of eight or nine productions formerly a part of the high-school curriculum; that is, these literary productions, instead of being a part of the high-school work, will now be relegated to the grammar grades. The particular order in which these will be taken up in each grammar-school building will be determined by the principals and the teachers.

We have come a long way to this meeting, from the East and from the West. It is always a disappointment to the professional superintendent that so little is said that bears directly upon the class-room. Upon this program, as upon other programs, we have devoted a half-day to school organization, another half-day to child labor, another to the St. Louis Exposition, and so on. The program is useful to the superintendent of larger cities, and interesting to all; but it touches only in spots the real business at hand. If a company of physicians or a company of lawyers should travel thousands of miles and discuss only the construction of hospitals or jails, or the mechanical operation of forces and influences that support and control these institutions, they would be railed upon by an interested and critical public. The lawyer discusses rather the increment of law, and the physicians discuss disease germs, antiseptics, pathology, and remedies. These are constructive arts and our profession should be based upon constructive art. Whenever such a professional discussion is launched in this body, there is breathless attention, and the deepest interest is shown. This is not intended as a criticism upon the program nor upon this body. I speak a deep conviction, which I know is voiced by many present, that we need often to discuss questions of the schoolroom which are pressing upon us in our daily work.

The question of the individual pupil; of the physical life of the schoolroom; of free construction as a part of education; of grouping children in a class-room; of individual instruction as opposed to group instruction; such vexed questions as the teaching of reading by so-called phonic systems; of grade examinations, and of many others, are upon our hands, and yet they are seldom mentioned here.

You will recall that at the Atlanta meeting a year ago a lady spoke upon her experience in the class-room. I can safely say in this presence that nothing so impressed this audience or was so well remembered as were the words of wisdom based upon her experience.

The whole question of the self-activity of the child bears down upon us with tremendous weight. Those of us who live in cities and have families of our own know very well that our hardest problem is in trying to find proper stimulus for self-activity and proper opportunity for its exercise. The city child is at a serious disadvantage, however well trained in school; however well dressed and entertaining, he is likely to lack power when he has finished his school course. The reason for this is chiefly because city life is limited in its opportunity and in its incentives to independent effort.

I trust the time will come when the public school will provide as much time for manual training and free construction work as it gives to the study of books. This principle is the secret of the attempt of the southern schools for the uplifting of the negro. This principle has found a place in our schools, but has advanced so painfully and so slowly that it has affected but little the status of the city boy.

It is the business of this organization to address itself seriously to some of these problems which we carry upon our hearts, and with which we are earnestly struggling at home.

But the question before us is: What can we do to improve the public schools? I hope my suggestions have not been off the question. I am simply pleading that the marvelous strength and judgment and the wisdom of this great body be so directed that the American child shall be benefited by our deliberation, and that we shall not waste our time upon questions of less importance.

III. CHANGING THE VIEW-POINT¹

WILLIAM I. CRANE, SUPERINTENDENT OF SCHOOLS, MARSHALLTOWN, IA.

(AN ABRIDGMENT)

THE VIEW-POINT

The view-point which we hold in any matter of thought or of action determines our opinion or conduct with reference to that matter. In all judgments, the human mind must have a measuring unit. It cannot judge correctly of extension, capacity, weight, of good, of joy, or of beauty, except by the possession and application of a correct measuring unit. In matters of opinion and action, one's view-point is his measuring unit. It governs his opinion in all cases. It therefore governs his actions; for these are guided by his opinions. A battle is a very different thing to victor and to vanquished; yet it is the same battle. In our school work, our courses of study and our teaching are the necessary sequences of our view-points.

There are two view-points held generally by school people. The one which prevails directs the chief attention toward the subjects of instruction, with little regard for the child. We hear much of teaching arithmetic, geography, English, and Latin, but little or nothing of teaching the child. This is not a mere quibble; for the advocates of the old view-point believe that if the course of study be properly hammered into the child, the child must be properly prepared for life. To them the child exists for the system, and not the system for the child.

The other view-point is that the system exists for the child, and that a course of study can be rationally determined only by a study of life and of the child's needs in meeting the conditions of that life. It holds that traditions and customs count for nothing, but that the child and the human ideal are all. It holds that the so-called courses of study should be simply prescriptions suggested by a diagnosis of the child's needs.

If we study the purposes of our work, we shall find that the old view-point has led us far astray; and that the best thing we can do to improve the work of our schools will be to study carefully the view-points before we go farther. If we do so, we shall find that in life we need qualities more than we need learning, which is the main purpose of the old view-point. The men we admire are the men of qualities. But in our educational plans we forget this fact and plan for *learning* almost to the exclusion of *qualities*.

KNOWLEDGE

Knowledge is clearly subordinate to qualities. It is to qualities what a carpenter's tools are to his skill. It is indeed necessary, but always secondary. It is most easily acquired, not by itself, but while doing. Facts acquired

¹Since this paper as presented exceeded the limits allowed for publication, the following abridgment has been made by the Editor. The changes from the text have been almost altogether confined to the omission of illustrations.—EDITOR.

while doing have glue on them—and in them. I rejoice that modern science is rapidly crossing Pizarro's line to the new and true view-point; that she is walking hand in hand with nature and talking with her face to face. I shake hands with you, brother of the college and the high school, who has realized that books are only *about* things; that they are not *things*, and cannot take the place of things.

The tragedy of the race was when men, who had lived next to things, began to fancy that if all that men knew could be gathered into contrivances called books, and the children shut in a building with these books, they could learn all about the world on which gravity chains us, without the trouble of ever looking at the things themselves.

When I was a little boy I was once studying in geography the animals of the Rocky Mountains. Just then a boy rushed in breathless, and said that there were "four men outside with three big bears." The teacher shut the door and cracked me on the head for looking out over the high window-sill. And yet those men had brought to our door the very real things concerning which we were studying. But school was about book bears, not real bears.

Once in the University of Cincinnati I saw a young woman assiduously studying an oyster. Perplexed, she looked up and asked the professor a question about the thing which she was studying. The professor walked to her table, looked carefully at the oyster, and answered her. Why didn't she ask the oyster? Even the professor had to do so. The oyster was the court of last resort, and it was in session before her; but the old view-point had so walled in her vision that she could not even see the decision before her eyes.

To read things out of books requires a former experience of things. Let us go back to *things*.

THE "ESSENTIALS"

The old view-point takes much stock in what its advocates are pleased to call the "essentials." By this are meant the "three R's," especially "rithmetic." This word "essentials" has been so long accepted that few seem to think of questioning it. Sometime we shall wake up to the fallacy of these so-called essentials, and we shall be as much surprised as was Monsieur Jourdain when he discovered that he had always been talking prose.

From the old view-point, if the money for the schools should run short, the first thing to be cut out of the course of study would be manual training. Then the public would dispense with music. But they would hang on to arithmetic like a Chinaman to his queue. And yet, strange to say, a fair examination would show that if we had to dispense with any study, many parts of arithmetic should be the first to go, and manual training the very last. An ounce of manual training is worth a pound of arithmetic both for utility and for manual training; and trained creative power is worth a library of arithmetics.

Has it occurred to us that creative designing has always preceded computation in the history of the race? *Chair* existed before *three* chairs. Number did not arise in human consciousness until things designed and made had occurred. And yet in our schools there is almost no attempt to develop the power to design or to create mentally, while years of precious time are wasted on useless arithmetic and worse than useless Latin, another of our precious "essentials."

The old view-point takes but little cognizance of the child. We do not say, "Teach the child;" we say, "Teach arithmetic, teach geography, etc." Yet nothing can be taught except an animate thing. The old view-point has no tenable purpose. Its chief concern is to have the children complete a traditional course of study. It immolates our children on the altar of our ancestral traditions.

Every system must stand or fall by its results. What are the results of the old or traditional view-point? It is safe to say that they have not been good. The average high-school graduate is but ill prepared for life; and to prepare for life is what a school should do, or it is a failure. In fact, school often sequesters the student from life.

One's education is not in what he can recite of books. It is the "gumption" he has when he has forgotten his books. But our course of study does not contain this commodity. Knowledge comes, but gumption lingers:

The old view-point smoothes the way and arouses us from our slumber with the touch of a rabbit's foot with the claws removed. Then comes life's rude awakening. We are ill prepared for the shock with which she awakens us, for our path has been carefully cleared of difficulties and hardships. We have had little practice in surmounting obstacles. So we sit down on a milestone of life and wait for them to get out of the way, while the rightly trained boy sets his jaw and clambers over regardless of torn hands and bruised knees. So our boys pull back and whine at hardships; they quit at a tough proposition in geometry where the life-qualities of initiative, pluck, and perseverance are required. They will buck the line in football, but they will not buck the line between two points. The habit of bucking the line will be worth more than the knowledge of geometry. But the old view-point calls for the geometry only. Let us study life for the basis of our course of study. It will teach us to quit smoothing the way; it will teach us instead to put rocks and hurdles in it; and will teach us to put a strong but gentle hand on the shoulder of the boy and whisper in his ear with a loving voice: "Now, Jim, don't squeal!"

A naturalist was watching a butterfly get out of its chrysalis. He watched the poor thing in its agonizing efforts to escape to the realms of air. At length it got its body out beyond the attachment of its wings. Then began a horrible struggle to escape into life. The tender-hearted naturalist, overcome by his sympathy, picked up the chrysalis and tenderly helped the struggling occupant to liberty. But he had for the moment forgotten that the

ichor of white blood of the butterfly is driven into the muscles and filaments of its wings by this very struggle. That butterfly never sailed the seas of air on gauzy wings; it had been helped too much.

THE NEW VIEW-POINT

The better view-point teaches us to ask a few questions before requiring the children to do things. *Why* should a child do this or that? *Why* should he work in a "pin-drop" silence? Life isn't thus. A bank bookkeeper must figure on, even tho there be a dog-fight outside the rail, and make no mistakes. But he can't learn to do so in a "pin-drop" school. The better view-point tells the teacher that a good school should have the movement of business in it, if the pupils are to learn to work amid the bustle of life.

Why should all the pupils stand and move alike? It is pretty, I admit; but does it tend toward the true purpose? Life isn't that way. Such school discipline may make good Russian soldiers, but it will not make men and women of initiative and individuality. The best school I have ever seen was one in which there was absolute freedom and individuality of movement.

We do these things because it is "customary." It is like grandmother's medicine; it is "good for the child." But grandmother did not know the therapeutic effect.

Why should children be stuffed with more things than they can assimilate? Men tack the feet of geese to the floor and stuff them willy-nilly with balls of food. That will do when one's purpose is to make enlarged goose livers, but it is a poor way to teach children how to live. "Cover the ground," the watchword of the old view-point, would make a better sign over the gate of a cemetery.

Some one objects: "Your plan is impossible in the present graded system." His question proves my proposition that we sacrifice the child to save the system.

No intelligent human act can ever begin without a purpose. In all rational doing there are at least four steps; namely:

1. The formation of a purpose.
2. The determination of the steps necessary to attain the purpose.
3. The finding of means to take the steps to attain the purpose.
4. The application of the means to enable one to take the steps to attain the purpose.

Yet we begin with number four, or the application, with juvenile haste, of traditions which are not means; to take steps which have not been determined upon; to attain purposes which have not been thought of. No wonder we fail. No wonder that our product is not fitted for life.

We are like the little girl who started out to draw a picture—not a picture of anything, but just a picture. After many futile efforts, she sighed and said: "I dess I'll put a tail to it and call it a dog."

We should first determine carefully and thoughtfully that the true purpose of a school is to fit the pupils for true living. A school has no right to exist

if its operation does not tend toward this end. Then we should carefully study life to determine what would fit the children for their lives. We should find out from this study what qualities and what knowledge they would need. Then, with these as our purposes, we should carefully work out the steps necessary to attain these purposes. Then we should look around for means to aid the children in taking these steps. These means would be a "course of study," as it is called. I should prefer to call it a *course of living*. Then we should apply these means carefully, always remembering that the ultimate principles are those of evolution and that the children, and not ourselves, should go thru the processes. Children cannot possibly be wisely interested in a state of passive receptiveness.

How contrary to every principle of the attainment of qualities is it when teachers will persist in going thru the processes themselves! For example, a teacher desires her pupils to learn to think and "to speak on their feet," as we say. Yet the teacher does all the talking. It is just the same thing as if Lou Dillon's trainer should hitch her to the fence while he ran around the track to make her swift.

In the better view-point, the schoolroom will be considered the practice ground for processes for the children, for processes planned to attain certain qualities necessary to fit the child to live. And what a pruning there will be! What a brush-pile of arithmetic, names of capes, ancient languages, and memorized but not comprehended definitions! And what joy as the children, with long-suppressed shouts, dance around that bonfire!

We shall teach them to follow directions as a first quality necessary for life. We shall teach them initiative, and how to plan, and to will and to be prompt; how to care for their bodies, and many other things without which life must be a failure. We shall not be content until these things are habits, not mere possessions of knowledge. We shall diagnose our patients day by day as does the physician who has the true method.

We shall give them the rational freedom which is demanded by both their self-activity and the conditions of life. We shall cease to be jug funnels, and become directors of the energies of children. We shall walk hand in hand with the children thru the dark valleys of processes. We shall climb *with* them, not *for* them, the rocks and mountains of the difficulties of life. We shall diagnose before we treat. We shall learn from the piano teacher that the pupil, and not the teacher, must do the practicing.

O let us break down the wall of tradition of the old view-point! Let us remember that books are only *about* things, only men's opinions about things. Let us lead our children, as did the immortal founder of the kindergarten, back to things, back to realities. Let us purpose more wisely. Let us not treat till we have diagnosed. Then we shall no longer treasure our normal school notebooks of devices; for every stick and stone and leaf and living thing will, in response to our search for a means to attain a clear life-purpose leap up and say, "Take me!"

DISCUSSION

J. F. KEATING, superintendent of schools, Pueblo, Colo.—The great objection to the paper just read is that it does not represent the educational thought and spirit of this representative body of educators. The paper will give the impression abroad that the educators of this country are opposed to manual training, domestic science, and other practical phases of school work; whereas the fact is that they have long ago accepted these reforms and are adopting them as rapidly as conditions will permit. It is this misrepresentation of the attitude of the great teaching forces of the country that calls for direct and positive refutation. Here, too, we must challenge the statement that the children get too much arithmetic. Too much time may be spent in the learning the little they get, but it remains to be proved that any of them have an excessive amount of arithmetical training.

Neither is the statement true that honor men are failures in life. The fact is that the great leaders come from those who stand in the front ranks of their classes. The statement of the paper, carried to its logical effect, would discourage effort and place a premium on the mediocre and the trifier. The best answer to all this is the progress of this country whose citizenship has received its training in the public schools.

It is time to substitute constructive criticism for such destructive criticism.

In this regard the paper of Superintendent Carr has the right ring. He proposes, as one means of increasing the efficiency of the schools, paying teachers salaries that will encourage preparation for their work, and will also invite to the ranks of the profession the best minds. Everything possible should be done to promote this idea.

GEORGE H. MARTIN, secretary, State Board of Education, Boston, Mass.—The view-point presented by Mr. Crane is not wholly new. It has been presented many times before this body, and the superintendents of the county are wholly in sympathy with it and have been endeavoring to modify school practices in accordance with it.

How far they have succeeded may be inferred from the testimony of the members of the Mosely Commission, many of whom in their reports express their interest in American methods of instruction as tending to develop initiative, self-direction, and independence. They found less bondage to text-books in America than in England.

It would appear from this testimony that things are not quite so bad as Mr. Crane has represented in his paper, and that the members of this department may take courage and go forward.

SOME OF THE CONDITIONS WHICH CAUSE VARIATION IN THE RATE OF SCHOOL EXPENDITURES IN DIFFER- ENT LOCALITIES

W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION, WASHINGTON, D. C.

THE POLITICAL ECONOMY OF SCHOOL FINANCES

Political economy has borne the name of "the dismal science." It has deserved this name when it stood for Malthusianism—the doctrine that the world will in time become so thickly populated that there will not be food enough to support the people. "Population increases in a geometric ratio, while food increases only in an arithmetical ratio." This is a dismal outlook surely. The doctrine which this suggests is:

Let there be no charities, and no studies with a view to public hygiene. For it is the support of the poor, and the prevention of pestilence and famine and epidemics, that will hasten the dreadful day when the strong will struggle with the weak for a morsel of food—the strong getting the morsel and the weak growing weaker from hunger.

Such a political economy is not only dismal, but it is subversion of all moral ideals of the race of men. No thoroughfare to civilization on that road; only retrogression to savagery; for it says that “vice and crime are beneficent checks to the increase of population”!

People of this generation need not be told that the one hundred years following the publication, in 1798, of the Malthusian doctrine of overpopulation was a progressive demonstration of its falsity; for it was found that food increased in a geometric ratio, while population fell to an arithmetic ratio, on the whole, in the most highly civilized populations, as in France and generally in families of wealth and nobility.

Then there was another dismal doctrine—a theory of rent, advanced by Ricardo about the year 1820. The richest soils are first taken possession of by man; the less fertile soils later when the rich lands have all been taken up. Then rent begins; the rich soils demand enough rent to make up the difference in value of crops between them and the poorer lands, which may be had free by the people who will take them. By and by all the rich soils will be occupied—and all the poor soils, too, for that matter—and human labor will be rewarded by a continually decreasing product of food and creature comforts.

This Ricardian view assisted Malthusianism in discrediting the ideas of a Christian civilization that sent out its devoted missionaries, “from Greenland’s icy mountains to India’s coral strand,” to deliver the lower and lowest races from error and superstition, and all manner of savagery. At home this Christian civilization preached other-worldliness; and if it practiced worldliness, it did it in the name of other-worldliness. And what has been the verdict of the century following Ricardo? An age of rapid transportation has followed an age of exploration and discovery. We have learned that the soils of northern Europe, of which Ricardo wrote as the rich soils first taken possession of, are as nothing in the matter of fertility to the soils of the tropical regions as yet scarcely occupied by man. The Amazon valley, with its two million square miles, alone, when cultivated to its full capacity, will supply ten times the food and clothing needed by the present population of the entire globe.

The age of machinery has come upon us—a new Avatar succeeding upon the Avatar of hard labor and physical drudgery; and men are called up higher into directive power out of mere muscular labor. The intelligent mind armed with science—the tools of the mind—is commanding the forces of nature; the elemental powers of heat and electricity, reinforcing the bodily force of man by multipliers of ten, one hundred, one thousand; annihilating, by commerce and its means of transportation, the intervals of distance that

separate man from man in space to such an extent that food, clothing, and shelter come everywhere they are wanted; and a myriad of natural productions that were formerly not property, but only a useless incumbrance where nature had placed them, now by transportation become real wealth to the distant people who need them.

At the beginning of the nineteenth century political economy was a dismal science. At the end of the nineteenth century everybody is buoyant with hope, so far as food, clothing, and shelter are concerned; a plenty is in sight even for the poorest races of mankind, and possibilities of migration are right at hand for any countries that are really overpopulated. Gladstone estimated in 1870 that labor-saving machinery was doubling the world's production of wealth once every seven years. Eight millions of laborers in Great Britain, armed by machinery, were at that time producing as much as one or two hundred millions of laborers of the entire world at the beginning of the nineteenth century. This was the cheerful response of political economy at the end of the nineteenth century to the dismal Sphinx-riddle propounded by Malthus and Ricardo at the beginning of that century.

Altho there are dismal enough doctrines preached even at the end of that century, they are not doctrines of starvation, but only of relative poverty with plenty to eat and wear. Luxury and an abundance of creature comforts, it says, shall be forbidden to the poor household. Henry George thought that the persistence of poverty in the midst of advancing wealth is due to private ownership of land. But careful investigation has shown that the rental of land in the United States is a small burden, only one-eighteenth of the annual earnings of the people in 1880—two and one-fifth cents per day, as against an actual average production of more than forty cents a day for each inhabitant. A grain of economy or thrift on the part of individuals will compensate for all the rental of land in the United States. Even in Great Britain the land value had not doubled in eighty years, altho the values of other property—houses and machinery and means of transportation, and creature comforts—had increased seven times.

Land for the purposes of mere agriculture is everywhere cheap; it is only for building purposes that land commands a high price. The land on which New York city stands is worth one-seventh of all the land in the United States. The same amount of acreage on a rich borderland can be had for thirty thousand dollars, but the land of New York city is assessed at three billion dollars, and is worth much more in market; it is worth one hundred thousand times as much per acre for international business purposes as for mere agricultural land without a city market near by for its produce.

Karl Marx, the father of recent socialism, in his famous work on *Capital*, about 1870, wrote the German words which I translate as follows: "Along with the constantly diminishing number of great capitalists who monopolize the instruments of production, there is a constantly increasing mass of misery, oppression, bondage, deformity, and extortion." But this law of Karl Marx,

which has been adopted by Henry George in the terse form of the epigram, "The rich are growing richer, and the poor are growing poorer," has not been found to be valid even in England, where Marx made his generalization; for the income-tax returns showed in 1885 that the class of the very poor had decreased by the transfer of a large number to the lower middle class, which lower middle class was nearly three and one-half times as large in each million of the population as it had been thirty years before. The same transference of the lower middle class into the higher middle class had been going on, and from the higher middle class to the wealthy class, and so on to the very wealthy class, so that there were three times as many in each of the higher classes per million as thirty years before.^{*} And the average earnings of the lowest class, that of people who get less than \$750 per family and do not pay an income tax, had nearly doubled in thirty years (it had been \$265 in 1851, and had risen to \$415 in 1881). It had increased whether measured in money or in the comforts of life that can be bought for the increased wages.

The question of present annual earnings, in the form of wages, salaries, or profits from a business, is only a single one of the many items that have to be considered in the year's income. There goes down from the savings of a people a certain amount of wealth from one year to another and from one generation to another. The people that come after do not have to earn this money over again, but they have the annual use and benefit of it as an inheritance. Thus the previous generations, in so far as they were thrifty and accumulated property in the form of permanent improvements, assist the later generations to live. Public buildings, business houses, and dwelling-houses belong to this kind of property; also highways, bridges, railroads, canals, water-works, sewers, ships and steamboats, etc. The rental of these buildings and the use of the railways as a means of transportation, as well as the improvements on the farms, appear in the annual output of productions; but the actual rental value of the dwelling-houses is a separate affair, and must be added to the bulk of productions as tho it were actual earnings for the year. The growth of the United States in production has been carefully estimated and re-estimated by the directors of the United States census. The bulk of the wealth transmitted from year to year did not amount to any considerable sum until after the introduction of steam navigation on rivers, lakes, and the ocean, and after the first building of railroads. This had begun and was an appreciable item by 1850, when the valuation of the United States was reckoned at 7 billions of dollars. In the decade 1850 to 1860 this had increased to 16 billions; in twenty years—that is, by 1870—to 30 billions; in 1880, to 44 billions; in

^{*} See Leoni Levi, *Wages and Earnings of the Working Classes* (London: John Murray, 1885), pp. 48 and 58; also see Robert Giffen, *The Progress of the Working Classes*, "Economic Tracts" No. 16 (New York).

Leoni Levi reports incomes from \$750 to \$1,500 in 1880 as three and one-half times as many as in 1850; incomes of \$1,500 to \$2,500, three times as many; incomes of \$2,500 to \$5,000, two and one-half times as many; incomes of \$5,000 to \$10,000, two and one-half times as many; incomes of \$10,000 to \$15,000, two and three-quarter times as many. The laboring class, whose annual incomes are less than \$750, averaged \$265 in 1851, and in 1881, \$415. One hundred and eighty thousand of these had ascended to the class of incomes between \$750 and \$1,500, during the thirty years after 1850.

1890, to 65 billions; in 1900 it is estimated by some at 94 billions of dollars. The average amount of property in 1850 for each inhabitant was therefore \$308; in 1860, \$514; in 1870, \$780; in 1880, \$870; in 1890, \$1,036; in 1900, \$1,235.¹

This property, which is transferred from one generation to another, consisting of the machinery of production, and of improved farms, city buildings lots and buildings, includes nearly all of the taxable property in a community, and it will be seen at a glance what a difference in that power which capital gives there is in the United States owing to increase of the taxable wealth of 1850 over that of 1900. The taxable wealth of 1900 is \$1,235 per individual inhabitant, while that of 1850 was only \$308. The individual of 1900 is represented by four times as much realized wealth, and therefore can bear a burden of taxation equal to four times that of 1850 with greater ease, because the larger the income from vested property, the greater the tax possible without stinting the individual in his necessities.

In 1880, after studying the census and such other sources of information as then were accessible as to the earnings and taxable property of the United States and Great Britain, I constructed a table stating as nearly as I could ascertain the actual annual income of the nation from various sources for the years 1850 and 1880. When the census report of 1890 had become available in 1895 and 1896, I continued the comparison so as to include 1890. It is not yet quite time to construct such a table for the year 1900, but two of the three most important items have been accessible for some time, and I have partially reconstructed my table so as to include 1900 in four of its items, agricultural and manufacturing items being accessible in the census returns. The items needed are the statistics of the productions of mines, freight by water, fisheries, and a number of small items.

There is no study more illuminating in political economy than the study of the actual earnings of a people in the several classes of productions. The actual total earnings of the United States in 1890 I made to be 51.5 cents per day per inhabitant. This was an increase over the earnings of 1880, which summed up 44.5 cents per day for each person. The earnings for 1850, calculated on the same basis, but with less reliable data to go upon, were 30 cents a day for each person; for 1900, 58.12 cents.

¹ See United States Census for 1890, *Wealth, Debt, and Taxation*, p. 14.

PER CAPITA WEALTH IN THE UNITED STATES FROM CENSUS REPORTS, 1850-90

	1890	1880	1870	1860	1850
The United States.....	\$1,036	\$ 870	\$ 780	\$514	\$308
North Atlantic Division.....	1,232	1,209	1,243	528	363
South Atlantic Division.....	579	495	384	537	333
South Central Division.....	569	435	334	598	290
North Central Division.....	1,129	932	735	436	208
Western Division.....	2,250	1,291	843	434	187

I insert the results of my studies in the two tables following:

TABLE I
EARNINGS PER DAY PER INHABITANT OF THE UNITED STATES IN 1900

	Value for 1899	Per inhabit- ant per Day
Value of farm products	\$3,742,129,357	\$0.135
Value of manufactured products	5,656,521,284	.203
Value of mineral products (estimated)	704,469,710	.0254
Value of products of fisheries (estimated)	55,476,039	.002
Freight earnings (land)	1,052,602,235	.038
Drayage, etc. (estimated at 18 per cent. of freight earnings)	189,468,402	.0068
Freight earnings (water) estimated	166,428,129	.006
Expressage (estimated)	55,476,040	.002
House rent (estimated)	1,109,520,795	.040
Furniture rent (estimated)	416,070,298	.015
Railroad building (estimated)	360,594,258	.013
Household manufactures not reported (estimated)	1,109,920,795	.040
Agricultures not reported (estimated)	1,109,920,795	.040
Miscellaneous (partly estimated)	415,680,325	.015
Total earnings per inhabitant per day		\$0.5812

TABLE II
EARNINGS PER DAY PER INHABITANT OF THE UNITED STATES AT DIFFERENT EPOCHS

	1850	1880	1890	1900
Agricultural, including live stock	\$0.1200	\$0.1450	\$0.1080	\$0.1350
Manufactures as reported	.580	.1080	.1840	.2030
From transportation in enhanced value of products ..	.120	.370	.470	.528
Agricultural products consumed in the household and not reported	.320	.410	.400	.400
Household manufactures not reported	.480	.440	.400	.400
Building of railroads	.075	.180	.130	.130
Mining, fisheries, and miscellaneous	.025	.220	.424	.424
House and furniture rent	.200	.300	.400	.550
Total cents per day for each person	\$0.3000	\$0.4450	\$0.5144	\$0.5812

A city that has a history extending back for eight generations has accumulated vast property in the way of buildings and improvements, graded streets, sewers, bridges, water-works, etc., and can realize a large sum of money for the support of its city government, charities, schools, etc., from a comparatively small tax rate. In considering school finances, one must remember that the borderland, with the unfinished condition of its public and private property, has by far more needs for taxation for the purpose of public and private improvements than the old and thickly settled states; while, on the other hand, it has a small assessed value to be taxed even for the absolutely necessary expenses of the year, without counting in any investments for new public works. Contrast the city of Boston with St. Louis, Kansas City, or even Chicago. The population of Boston is estimated at 621,000 people for the year 1905; its assessed valuation of all taxable property and its real valuation are the same—one and one-quarter billions of dollars (\$1,237,038,851). Chicago has more than three times the population (1,968,800) and less than one-third of the assessed valuation (\$411,424,280) of the taxable prop-

erty. The real value of the property of Chicago, however, is something more than two billions of dollars (\$2,057,121,400); for it is assessed at only one-fifth of its true value; its tax on the real value of its property is about one and one-sixth per cent., against one and one-half per cent. in Boston. The Boston tax yields about \$30 per inhabitant; the Chicago tax yields about \$11 per inhabitant. The population of St. Louis is estimated at 750,000; it is assessed at \$466,201,650; but its true value is \$666,000,000. Its annual tax is about one and one-third per cent. on the true value, and yields \$13.60 per inhabitant.

City land can reimburse itself, whatever its rate of taxes, from the rentals paid by its tenants. If the business is sufficient to afford the rental, the lessee can afford to pay it. If not rented or rentable, the property must fall in value until it reaches an assessable value which can be covered by the rental; for the rental must cover the proper interest on the real value of the property, and its annual taxes; if not, the assessment must be corrected. This is the weak point in the single-tax theory; for the agriculturist cannot recover his tax from the crops he raises, having to compete with all other localities. But the city has its reason for existence in local conditions, which force a transfer of merchandise there, it being necessary to collect and redistribute at that point. Whatever profits are made by collection and redistribution create the rental price of the land which must be used there for commerce and the accompanying manufactures, and this real value cannot be arbitrarily affected.

Inequality of the census divisions as regards the amount of wealth: In 1890 the total real wealth of the South Atlantic Division of states per individual was \$579. This is not quite one-half of the average value in the North Atlantic Division, which was \$1,232. The per capita wealth in the South Central Division was \$569. In the North Central Division the wealth equaled \$1,129 per individual—almost exactly one-half of the amount of wealth per inhabitant in the Western Division (\$2,250). The average inhabitant of the South Atlantic Division would procure by taxation, at the rate of 1 per cent. on the taxable wealth, less than one-half as much money for schools as the average inhabitant would procure in the North Atlantic Division. And in the North Central Division, where the taxable wealth is nearly the same as in the North Atlantic Division, the amount procured by a 1 per cent. tax would be one-half what each inhabitant of the Western Division of states would procure at the same rate of tax. If we compare these census divisions as to their annual earnings in agriculture and manufactures, the disparity is quite as great, for the daily earnings of each inhabitant in the South Central Division for 1900 amounted to 5.6 cents for manufactures, and 14.9 for agriculture, which makes 20.5 cents earnings for each inhabitant per day; while the North Atlantic Division produced 38.4 for manufactures, and 6.4 for agriculture—a total of 44.8 cents per day for each inhabitant. That of the South Atlantic Division was nearly the same as that of the South Central Division, being 20.3 cents per day per inhabitant. (See Table III.) Therefore, in these two most important items of production the inhabitant of the Gulf states or

TABLE III

	Manufactures.—Amount Earned per Day by Each Inhabitant		Agriculture.—Amount Earned per Day by Each Inhabitant	
	1890	1900	1890	1900
UNITED STATES.....	\$0.184	\$0.203	\$0.085	\$0.135
North Atlantic Division.....	.357	.384	.049	.064
South Atlantic Division.....	.075	.097	.079	.106
South Central Division.....	.048	.056	.103	.149
North Central Division.....	.163	.187	.103	.186
Western Division.....	.152	.175	.122	.193
NORTH ATLANTIC DIVISION—				
Maine.....	.183	.230	.067	.108
New Hampshire.....	.277	.348	.073	.106
Vermont.....	.148	.221	.110	.175
Massachusetts.....	.508	.471	.028	.033
Rhode Island.....	.525	.561	.028	.034
Connecticut.....	.459	.504	.051	.067
New York.....	.384	.389	.055	.069
New Jersey.....	.313	.379	.044	.051
Pennsylvania.....	.291	.345	.046	.066
SOUTH ATLANTIC DIVISION—				
Delaware.....	.267	.278	.084	.110
Maryland.....	.210	.226	.056	.081
District of Columbia.....	.263	.278	.004	.008
Virginia.....	.063	.086	.059	.109
West Virginia.....	.054	.091	.060	.105
North Carolina.....	.030	.061	.075	.115
South Carolina.....	.031	.051	.112	.128
Georgia.....	.049	.060	.110	.114
Florida.....	.071	.110	.075	.084
SOUTH CENTRAL DIVISION—				
Kentucky.....	.093	.091	.081	.130
Tennessee.....	.049	.060	.071	.119
Alabama.....	.041	.055	.107	.122
Mississippi.....	.018	.033	.138	.160
Louisiana.....	.060	.077	.121	.131
Texas.....	.042	.047	.120	.188
Arkansas.....	.025	.044	.106	.138
Oklahoma.....	.005	.018	.016	.257
Indian Territory.....	....	.012	....	.162
NORTH CENTRAL DIVISION—				
Ohio.....	.224	.254	.078	.132
Indiana.....	.121	.178	.118	.170
Illinois.....	.272	.295	.101	.150
Michigan.....	.161	.178	.083	.124
Wisconsin.....	.167	.201	.085	.153
Minnesota.....	.155	.140	.119	.200
Iowa.....	.066	.078	.105	.323
Missouri.....	.150	.150	.083	.142
North Dakota.....	.029	.031	.268	.463
South Dakota.....	.018	.030	.147	.359
Nebraska.....	.066	.107	.132	.320
Kansas.....	.060	.079	.140	.300
WESTERN DIVISION—				
Montana.....	.065	.274	.107	.265
Wyoming.....	.058	.072	.085	.295
Colorado.....	.144	.182	.071	.136
New Mexico.....	.015	.037	.029	.128
Arizona.....	.027	.286	.042	.138
Utah.....	.061	.082	.053	.134
Nevada.....	.040	.053	.124	.335
Idaho.....	.025	.033	.102	.248
Washington.....	.171	.199	.091	.157
Oregon.....	.171	.132	.139	.211
California.....	.211	.212	.177	.218

of the South Atlantic states produced as daily earnings less than one-half what the inhabitant of the North Atlantic Division produced. The North Central Division produced 18.7 in manufactures, and 18.6 in agriculture, making a

total of 37.3 cents per inhabitant per day, as against 44.8 in the North Atlantic Division. The Western Division averaged 17.5 in manufactures and 19.3 in agriculture, making 36.8 cents per day per individual—half a cent per day less than the North Central Division.

The less received from taxation at a given rate for public expenses—say, school expenditure—the more the individual must pay from his own earnings; that is to say, if he is to expend an equal amount with a census division that possesses a greater amount of assessable wealth per capita. Hence, if the inhabitants of the South Atlantic and South Central Divisions, possessing less than one-half of the amount of assessable wealth per capita, are to continue their schools for the same length as the school session in the North Atlantic Division, and if they are to pay as high salaries as in that division, a very large sum would have to be made up from the annual earnings of the individuals, or else a rate of taxation nearly double that in the North Atlantic Division must be adopted. But the individual earnings in that section, as it appears, are less than one-half those in the North Atlantic Division, and any tax paid by the individual for schooling is to the average citizen of the South a far greater burden than in the northern community.

I quote here from my annual report for 1902 a series of tables, showing a comparison of 1880, 1890, and 1903, as to the true valuation of real and personal property in the several states, together with the amounts expended for current expenses of public schools, and also for the three epochs, 1880, 1890, and 1903, showing the number of cents actually expended on each \$100 of true valuation of all property. The amount on the \$100 valuation varies from 53 cents on the \$100 in New Jersey to 22.5 cents in Connecticut. Contrasting this with the South Atlantic Division, as to the amount of school expenditure per \$100 of true valuation, the South Atlantic Division expends from 43 cents in West Virginia down to 14 cents in North Carolina, the average for the whole division being 23 cents on \$100, while it is 27 cents in the North Atlantic Division. Taking these figures in connection with those above discussed—namely, the fact that the assessment in the North Atlantic Division is more than twice as great as in the South Atlantic Division—it will be seen that the amount of money raised by the rate percentage in the South is less than one-half of that raised in the North. In the North Central Division the amount expended on \$100 varies from 47.5 cents in North Dakota to 16 cents in Wisconsin, and the average is 27.5 cents. The Western Division varies from 40 cents on \$100 in Utah to 10.3 cents in Wyoming and Nevada. (See Tables IV–IX).

The next set of tables (X–XV) shows the average monthly salaries of teachers for the different sections of the United States and the average number of days' schooling given. Here we find the results of the figures as to daily earnings and as to amount of taxable property. The North Atlantic Division, with its double of daily earnings and double the amount of taxable property, gives \$58.64 per month for its male teachers and \$39.50 for its female teachers,

as against \$30.84 per month for male teachers in the South Atlantic Division and \$29.02 for the women teachers. The salaries of teachers in the South Central Division average considerably more than for the South Atlantic Division, the men getting \$43 a month and the women \$35; but another item comes in here: the average length of the school term in the South Central Division is 105 days, while in the North Atlantic Division it is 178½ days. The school term in the North Atlantic Division is practically a scholastic year; hence the male teacher in the North Atlantic Division can be hired by the year and can depend upon his salary for his yearly support; while in the South the period of schooling includes about one-half of the days (105) in the regular scholastic year, and hence the teacher must shift to some other employment to make up his years' income. The North Central Division pays, on an average, \$5 less per month than the North Atlantic Division to its men teachers (\$53.96 against \$58.64).

The next set of tables (XVI-XXI) shows the expenditure per capita of average attendance for various school purposes. In the whole United States the amount expended for buildings and sites is \$4.19, as against \$14.21 for salaries. But the North Atlantic Division, having the most wealth and the highest rate of earnings per day, leads with an average of \$8.09 for buildings and \$20.16 for salaries of teachers. The South Atlantic Division spends about one-seventh as much for buildings and sites, and a little more than one-third as much for salaries. The Gulf States expend one-tenth as much for buildings as the North Atlantic, and a trifle more than one-third as much for salaries of teachers. The North Central Division expends not quite one-half as much per capita for buildings and sites as the North Atlantic Division, and only three-fourths as much as the North Atlantic for salaries. The Western Division expends a trifle more for salaries, and about three-fourths as much for buildings.

It is well known that the number of persons five to eighteen years of age is a larger fraction of the whole population in the South than it is in the North; there are more children and fewer adults to support them. The total amount expended for schools on an average for the whole nation is \$11.17 for each person five to eighteen years of age, and \$11.32 for each adult male. In the North Atlantic Division the amount raised for each person between five and eighteen years of age is \$18.13. The amount for each person of school age (five to eighteen) in the South Atlantic Division is \$4.18, and the amount per adult male is \$5.56. The amount raised in the South Central Division is only \$3.94 for each person of school age. The amount for each person of school age in the North Central Division is \$12.75. The Western Division in its amount per individual of school age exceeds that of the North Atlantic, being \$20.16 for each person. The number of children of school age in the population is a larger percentage of the whole than it is in the North Atlantic or any of the other divisions.

It is noteworthy that all of the southern states are increasing their pro rata of manufactures—steam- and water-power are reinforcing the power of the

hand. North Carolina has doubled its manufactures per inhabitant in the last decade, rising from 3 to 6.1 cents per day; and the whole South Atlantic Division has increased from 7.5 to 9.7 cents per day for each inhabitant. But agriculture has gained in the same ratio and keeps much in advance of manufactures. In the South Central Division, the great cotton states, agriculture predominates still more over the manufactures, although even there the manufactures have increased 17 per cent. faster than the population.

A political economy that sees the gradual, but continuous, growth of man's conquest of nature for human purposes; that sees how man's use of the instruments of civilization unites all peoples into one by commerce; that avails to elevate all who study it into a theoretical understanding of the ultimate purpose of the conquest of nature, which is to unite all peoples by religion into a participation of the same view of the world—the Christian view of the world—this sort of political economy is not the dismal science of Malthus and Ricardo, of Karl Marx and Henry George, of Schopenhauer and Nietzsche.

TABLES IV-IX

Showing: (1) true valuation of real and personal property for 1880, 1890, and 1903 (1880 and 1890 taken from census reports; 1903 calculated from data given in *World Almanac*, 1905); (2) expenditures for public schools (excluding debt paid) for 1880, 1890, and 1903; (3) amount expended for public schools on each \$100 of true valuation of all real and personal property for 1880, 1890, and 1903.

TABLE IV
THE UNITED STATES

True Valuation of Real and Personal Property			Expenditure for Public Schools (Excluding Debt Paid)			Expended for Public Schools on Each \$100 of True Valuation of All Real and Personal Property		
1880	1890	1903	1880	1890	1903	1880	1890	1903
\$43,642,000,000	\$64,829,040,611	\$97,142,708,523	\$78,094,687	\$140,506,715	\$251,457,625	Cents 17.9	Cents 21.7	Cents 25.9

TABLE V
NORTH ATLANTIC DIVISION

State	True Valuation of Real and Personal Property			Expenditure for Public Schools (Excluding Debt Paid)			Expended for Public Schools on Each \$100 of True Valuation of All Real and Personal Property		
	1880	1890	1903	1880	1890	1903	1880	1890	1903
Me.....	\$ 511,000,000	\$ 489,134,128	\$ 559,093,487	\$1,067,991	\$1,327,553	\$ 1,952,083	20.9	27.1	34.9
N. H.....	363,000,000	325,128,740	363,167,582	565,339	844,333	1,167,464	15.6	26.0	32.1
Vt.....	302,000,000	265,567,323	275,429,141	446,217	711,072	1,093,238	14.8	26.8	30.7
Mass.....	2,623,000,000	2,803,645,447	5,171,268,181	4,983,900	8,286,062	15,170,070	18.9	29.6	29.3
R. I.....	400,000,000	504,162,352	676,458,765	526,112	884,966	2,855,370	13.2	17.6	27.4
Conn.....	779,000,000	835,120,219	1,575,341,188	1,408,375	2,157,014	3,526,615	18.1	25.8	22.4
N. Y.....	6,308,000,000	8,576,701,991	16,922,900,288	10,266,977	17,543,880	41,418,095	16.3	20.5	24.5
N. J.....	1,305,000,000	1,445,285,114	1,481,320,550	1,873,465	3,340,190	7,824,147	14.4	23.1	52.8
Pa.....	4,942,000,000	6,190,746,550	9,689,140,474	7,369,682	12,928,422	24,354,888	14.9	20.9	25.1
Total.....	.....	.....	\$36,714,119,656	.....	.....	\$98,362,976	....	....	26.8

TABLE VI
SOUTH ATLANTIC DIVISION

State	True Valuation of Real and Personal Property			Expenditure for Public Schools (Excluding Debt Paid)			Expended for Public Schools on Each \$100 of True Valuation of all Real and Personal Property		
	1880	1890	1903	1880	1890	1903	1880	1890	1903
Del.....	\$136,000,000	\$ 175,678,795	\$ 200,000,000	\$ 207,281	\$ 275,000	\$ 453,670	15.2	15.7	22.7
Md.....	837,000,000	1,085,473,048	1,313,902,873	1,544,367	1,910,663	2,549,497	18.5	17.6	19.3
D. C.....	220,000,000	343,596,733	441,085,362	438,567	905,777	1,540,279	19.9	26.4	34.9
Va.....	707,000,000	862,318,070	883,005,583	946,109	1,604,509	2,137,365	13.4	18.6	24.2
W. Va.....	350,000,000	438,954,881	563,219,516	707,553	1,198,493	2,403,555	20.2	27.3	42.7
N. C.....	461,000,000	584,148,999	1,083,432,350	376,062	714,900	1,523,041	8.2	12.2	14.1
S. C.....	322,000,000	400,911,303	486,686,664	324,629	450,936	1,046,144	10.1	11.2	21.5
Ga.....	606,000,000	852,409,449	1,029,893,769	471,029	1,190,534	2,240,247	7.8	14.0	21.7
Fla.....	120,000,000	389,489,388	420,378,061	114,895	510,353	792,919	9.6	13.3	18.9
Total.....	.....	.....	\$6,421,598,178	.....	.....	\$14,686,717	....	....	22.9

TABLE VII
SOUTH CENTRAL DIVISION

State or Territory	True Valuation of Real and Personal Property			Expenditure for Public Schools (Excluding Debt Paid)			Expended for Public Schools on Each \$100 of True Valuation of all Real and Personal Property		
	1880	1890	1903	1880	1890	1903	1880	1890	1903
Ky.....	\$902,000,000	\$1,172,232,313	\$1,419,268,885	\$1,069,030	\$2,140,678	\$2,662,863	11.9	18.3	18.7
Tenn.....	705,000,000	887,956,143	818,053,881	744,180	1,526,241	2,159,444	10.6	17.2	26.4
Ala.....	428,000,000	622,773,504	768,759,031	500,000	890,000	1,057,906	11.7	14.3	13.8
Miss.....	354,000,000	454,242,688	474,143,670	830,705	1,109,575	1,868,544	23.5	24.4	39.4
La.....	382,000,000	495,301,597	640,883,451	411,858	817,110	1,551,232	10.8	16.5	24.2
Texas.....	825,000,000	2,105,576,766	2,925,911,994	1,030,000	3,178,300	5,682,123	12.5	15.1	19.3
Ark.....	286,000,000	455,147,422	657,313,442	287,056	1,016,776	1,550,697	10.0	22.3	23.4
Okla.....	.....	.....	.....	.....	.....	1,179,409	....	....	....
I. T.....	.....	.....	.....	.....	.....	481,516	....	....	....
Total.....	.....	.....	\$7,704,334,352	.....	.....	\$18,193,734	....	....	23.6

TABLE VIII
NORTH CENTRAL DIVISION

State	True Valuation of Real and Personal Property			Expenditure for Public Schools (Excluding Debt Paid)			Expended for Public Schools on Each \$100 of True Valuation of all Real and Personal Property		
	1880	1890	1903	1880	1890	1903	1880	1890	1903
Ohio.....	\$3,238,000,000	\$3,951,382,384	\$4,373,955,555	\$7,166,963	\$10,602,238	\$15,691,039	22.1	26.8	34.9
Ind.....	1,681,000,000	2,095,176,626	3,318,158,875	4,491,850	5,245,218	9,216,082	26.7	25.0	27.8
Ill.....	3,210,000,000	5,066,751,719	6,769,068,618	7,014,092	11,645,126	20,266,618	21.9	23.0	29.9
Mich.....	1,580,000,000	2,095,016,272	3,670,000,000	2,775,917	5,349,366	8,777,252	17.6	25.5	23.9
Wis.....	1,139,000,000	1,833,308,523	4,380,902,406	2,177,023	3,801,212	7,009,159	19.1	20.7	15.9
Minn.....	792,000,000	1,091,851,927	2,487,150,437	1,328,429	4,187,310	6,774,336	16.8	24.7	27.2
Iowa.....	1,721,000,000	2,287,348,333	2,790,576,443	4,484,043	6,382,953	9,834,319	26.1	27.9	35.2
Mo.....	1,562,000,000	2,397,902,945	3,356,330,067	2,675,364	5,434,262	8,363,128	17.1	22.7	24.9
N. Dak.....	.....	337,006,506	450,786,480	.....	626,049	2,140,565	.....	18.6	47.5
S. Dak.....	118,000,000	425,141,299	524,868,888	245,000	1,199,630	1,847,813	20.8	28.2	35.2
Neb.....	385,000,000	1,275,685,514	1,965,194,960	1,108,617	3,376,332	4,390,751	28.8	26.5	22.3
Kan.....	760,000,000	1,799,343,501	1,991,238,952	1,818,337	4,972,997	4,804,593	23.9	27.6	24.1
Total.....	.....	.....	\$36,078,291,681	.....	.....	\$99,115,625	....	....	27.5

TABLE IX

WESTERN DIVISION

State	True Valuation of Real and Personal Property			Expenditure for Public Schools (Excluding Debt Paid)			Expended for Public Schools on Each \$100 of True Valuation of all real and Personal Property		
	1880	1890	1903	1880	1890	1903	1880	1890	1903
Mont.....	\$ 40,000,000	\$ 453,135,209	\$ 613,651,848	\$ 78,730	\$ 364,084	\$1,236,253	<i>Cents</i> 19.7	<i>Cents</i> 8.0	<i>Cents</i> 20.1
Wyo.....	54,000,000	169,773,710	245,773,363	28,505	225,000	253,551	5.3	13.3	10.3
Colo.....	240,000,000	1,145,712,267	2,447,368,421	395,227	1,681,379	3,100,855	10.5	14.7	12.7
N. Mex.....	40,000,000	231,459,897	220,171,400	28,973	85,000	300,531	5.9	3.7	13.6
Ariz.....	41,000,000	188,880,976	302,185,580	61,172	181,914	397,972	14.9	9.6	13.2
Utah.....	114,000,000	349,411,234	375,264,320	132,194	394,685	1,496,056	11.6	11.3	39.9
Nev.....	156,000,000	180,323,668	202,794,657	220,245	161,481	209,484	14.1	9.0	10.3
Idaho.....	29,000,000	207,896,591	562,282,391	38,411	169,020	826,598	13.2	8.1	14.7
Wash.....	62,000,000	760,698,726	1,029,175,789	112,615	958,111	3,580,742	18.2	12.6	34.8
Oreg.....	154,000,000	590,396,194	619,856,746	307,031	805,979	1,526,366	19.9	13.7	24.6
Cal.....	1,343,000,000	2,533,733,627	3,605,840,141	2,864,571	5,187,162	8,170,165	21.3	20.5	22.6
Total.....	.....	.....	\$10,224,364,656	.....	.....	\$21,098,573	....	....	20.6

TABLES X-XV

Showing: (1) average monthly salaries of teachers; (2) average length of school term in days; (3) average number of days' schooling given for every child five to eighteen years of age (for 1902-3 unless otherwise indicated).

TABLE X

THE UNITED STATES

Average Monthly Salaries of Teachers		Average Length of School Term in Days	Average Number of Days' Schooling Given for Every Child 5 to 18 Years of Age
Males	Females		
\$49.98	\$40.51	147.2	71.8

TABLE XI

NORTH ATLANTIC DIVISION

State	Average Monthly Salaries of Teachers		Average Length of School Term in Days	Average Number of Days' Schooling Given to Every Child 5 to 18 Years of Age
	Males	Females		
Maine.....	\$ 37.37	\$ 27.60		
New Hampshire (1901-2).....	43.58	29.11		
Vermont.....	47.16	29.68		
Massachusetts.....	145.27	54.61		
Rhode Island.....	119.06	51.90		
Connecticut.....	102.44	45.26		
New York.....	.....	.....		
New Jersey.....	.....	.....		
Pennsylvania.....	44.82	34.11		
Average.....	\$58.64	\$39.50	178.5	92.3

TABLE XII
SOUTH ATLANTIC DIVISION

State	Average Monthly Salaries of Teachers		Average Length of School Term in Days	Average Number of Days' Schooling Given to Every Child 5 to 18 Years of Age
	Males	Females		
Delaware (1889-90)	\$36.60	\$34.08		
Maryland .....	.....	.....		
District of Columbia (1897-98)	94.48	64.31		
Virginia	34.56	27.20		
West Virginia .....	.....	.....		
North Carolina	26.72	24.28		
South Carolina (1897-98)	25.96	23.20		
Georgia .....	.....	.....		
Florida (1901-2)	39.68	33.67		
Average	\$30.84	\$29.02	118.0	49.0

TABLE XIII
SOUTH CENTRAL DIVISION

State or Territory	Average Monthly Salaries of Teachers		Average Length of School Term in Days	Average Number of Days' Schooling Given to Every Child 5 to 18 Years of Age
	Males	Females		
Kentucky	\$50.00	\$30.18		
Tennessee	41.00	33.70		
Alabama	31.00	27.00		
Mississippi	33.54	29.46		
Louisiana	36.25	31.43		
Texas	56.00	42.30		
Arkansas	36.17	32.75		
Oklahoma	31.93	26.20		
Indian Territory .....	.....	.....		
Average	\$42.97	\$34.79	105.6	43.9

TABLE XIV
NORTH CENTRAL DIVISION

State	Average Monthly Salaries of Teachers		Average Length of School Term in Days	Average Number of Days' Schooling Given to Every Child 5 to 18 Years of Age
	Males	Females		
Ohio	\$45.00	\$40.00		
Indiana (1901-2)	66.80	48.00		
Illinois	65.83	55.62		
Michigan	54.76	38.72		
Wisconsin	81.93	40.78		
Minnesota	55.40	38.87		
Iowa	45.99	32.60		
Missouri	44.55	42.00		
North Dakota	45.46	39.00		
South Dakota (1901-2)	40.03	33.52		
Nebraska	52.03	40.84		
Kansas (1901-2)	44.24	36.55		
Average	\$53.96	\$41.09	156.9	83.6

TABLE XV
WESTERN DIVISION

State or Territory	Average Monthly Salaries of Teachers		Average Length of School Term in Days	Average Number of Days' Schooling Given to Every Child 5 to 18 Years of Age
	Males	Females		
Montana.....	\$ 76.80	52.04		
Wyoming (1894-95).....	73.68	43.36		
Colorado.....	60.63	53.04		
New Mexico (1901-2).....	64.77	64.77		
Arizona.....	80.33	67.53		
Utah.....	71.11	48.31		
Nevada.....	108.69	63.64		
Idaho.....	63.00	53.00		
Washington.....	57.54	40.82		
Oregon.....	51.30	40.02		
California.....	97.21	80.44		
Average	\$70.82	\$59.35	146.3	85.3

TABLES XVI-XXI

Showing: (1) amount raised for each person five to eighteen years of age; (2) amount raised per adult male; (3) progress of School expenditure: total amount expended for schools.

TABLE XVI
THE UNITED STATES

Amt. Raised for Each Person 5 to 18 Years of Age	Amt. Raised per Adult Male	Progress of School Expenditure: Total Amount Expended for Schools				
		1870-71	1879-80	1889-90	1899-1900	1902-3
\$11.17	\$11.32	\$69,107,612	\$78,094,687	\$140,506,715	\$214,964,618	\$251,457,625

TABLE XVII
NORTH ATLANTIC DIVISION

State	Amt. Raised for Each Person 5 to 18 Years of Age	Amt. Raised per Adult Male	Progress of School Expenditure: Total Amount Expended for Schools				
			1870-71	1879-80	1880-90	1899-1900	1902-3
Me.....	\$12.70	\$ 9.39	\$ 950,662	\$1,067,991	\$1,327,553	\$1,712,795	\$1,952,083
N. H. (1901-2).....	11.20	7.65	418,545	565,339	844,333	1,052,202	1,167,464
Vt.....	13.59	10.07	499,901	446,217	711,072	1,074,222	1,093,238
Mass.....	22.98	16.97	5,579,393	4,083,000	8,286,062	13,826,243	15,170,070
R. I.....	16.13	12.77	401,160	526,112	884,966	1,548,675	1,856,376
Conn.....	15.78	11.73	1,496,981	1,408,375	2,157,014	3,189,249	3,526,615
N. Y. (1901-2).....	20.61	16.40	9,607,904	10,296,977	17,543,880	33,421,491	41,418,095
N. J.....	15.27	12.94	2,302,341	1,873,465	3,340,190	6,608,692	7,824,147
Penn.....	16.02	14.74	8,479,918	7,360,682	12,928,422	21,476,995	24,354,888
Average....	18.13	11.32					
Total....			\$29,796,835	\$28,538,058	\$48,023,492	\$83,910,564	\$98,362,976

TABLE XVIII

SOUTH ATLANTIC DIVISION

State	Amt. Raised for Each Person 5 to 18 Years of Age	Amt. Raised per Adult Male	Progress of School Expenditure: Total Amount Expended for Schools				
			1870-71	1879-80	1889-90	1899-1900	1902-3
Del. (1899-'00)...	8.10	\$7.34	\$153,500	\$207,281	\$275,000	\$453,670	\$453,670
Md. (1900-1)...	7.58	7.82	1,214,720	1,544,367	1,010,663	2,803,032	2,549,407
D. C.	24.21	17.40	373,535	438,567	905,777	1,076,620	1,540,270
Va.	3.52	4.61	587,472	946,109	1,604,509	1,989,238	2,137,365
W. Va.	7.62	9.08	577,710	707,553	1,198,493	2,009,123	2,403,555
N. C.	2.11	3.18	177,498	376,062	714,000	950,317	1,523,041
S. C.	2.32	3.79	275,688	324,620	450,936	894,004	1,040,144
Ga.	2.74	4.05	202,000	471,020	1,190,354	1,980,010	2,240,247
Fla. (1901-2) ..	4.58	5.36	129,431	114,895	516,533	765,777	792,019
Average... Total....	\$4.18	\$5.56	\$3,781,581	\$5,130,492	\$8,767,165	\$12,921,797	\$14,686,717

TABLE XIX

SOUTH CENTRAL DIVISION

State or Territory	Amt. Raised for Each Person 5 to 18 Years of Age	Amt. Raised per Adult Male	Progress of School Expenditure: Total Amount Expended for Schools				
			1870-71	1879-80	1889-90	1899-1900	1902-3
Ky.	\$3.94	\$4.81	\$1,075,000	\$1,069,030	\$2,140,678	\$3,037,908	\$2,662,863
Tenn.	3.14	4.14	758,000	744,180	1,526,241	1,751,047	2,150,444
Ala. (1901-2) ..	1.50	2.21	370,000	500,000	890,000	923,464	1,057,006
Miss. (1900-1) ..	3.35	5.07	950,000	830,705	1,100,575	1,385,112	1,868,544
La.	3.20	4.54	531,834	411,858	817,110	1,135,125	1,551,232
Tex.	5.15	7.13	650,000	1,030,000	3,178,300	4,465,255	5,682,123
Ark.	3.54	5.00	520,000	287,056	1,016,776	1,369,810	1,550,607
Okla. (1901-2) ..	5.70	6.61	.....	.....	.....	686,095	1,179,409
Ind. T.	3.14	4.31	.....	.....	.....	.....	481,516
Average... Total....	\$3.65	\$4.98	\$4,854,834	\$4,872,829	\$10,678,680	\$14,753,816	\$18,193,734

TABLE XX

NORTH CENTRAL DIVISION

State	Amt. Raised for Each Person 5 to 18 Years of Age	Amt. Raised per Adult Male	Progress of School Expenditure: Total Amount Expended for Schools				
			1870-71	1879-80	1889-90	1899-1900	1902-3
Ohio.	\$14.06	\$12.76	\$6,831,035	\$7,166,063	\$10,602,238	\$13,335,211	\$15,691,039
Ind. (1901-2) ..	11.86	11.45	2,897,537	4,491,850	5,245,218	8,182,526	9,216,082
Ill.	14.16	13.34	6,656,542	7,014,092	11,645,126	17,757,145	20,266,618
Mich. (1901-2) ..	12.76	11.61	2,840,740	2,775,917	5,340,366	7,207,691	8,777,252
Wis. (1901-2) ..	11.21	12.05	1,932,539	2,177,023	3,801,212	5,493,370	7,009,159
Minn.	13.81	14.02	960,558	1,328,420	4,187,310	5,630,013	6,774,336
Ia.	15.51	15.52	3,269,190	4,484,043	6,382,053	8,406,522	9,834,319
Mo.	8.43	9.00	1,749,049	2,675,364	5,434,262	7,816,050	8,363,128
N. D.	17.18	17.25	23,000	245,000	626,040	1,526,000	2,140,565
S. D. (1901-2) ..	14.73	16.25	.....	.....	1,199,630	1,605,623	1,847,813
Neb.	13.11	14.03	365,520	1,108,617	3,376,332	4,403,222	4,390,751
Kans. (1901-2) ..	10.36	10.92	904,323	1,818,337	4,972,967	4,622,364	4,804,563
Average..... Totals.....	\$12.75	\$12.55	\$28,430,033	\$35,285,635	\$62,823,563	\$86,165,827	\$99,115,625

TABLE XXI
WESTERN DIVISION

State or Territory	Amt. Raised for Each Person 5 to 18 Years of Age	Amt. Raised per Adult Male	Progress of School Expenditure: Total Amount Expended for Schools				
			1870-71	1879-80	1889-90	1899-1900	1902-3
Mont.....	\$20.68	\$10.99	\$ 35,600	\$ 78,730	\$ 364,084	\$ 923,310	\$1,236,253
Wy. (1899-1900).....	12.02	7.01	7,000	28,504	225,000	253,551	253,551
Colo. (1901-2).....	29.82	21.41	67,395	395,227	1,681,379	2,793,648	3,100,855
N. M.....	5.18	5.63	4,900	25,277	85,000	343,429	300,531
Ar.....	10.76	7.76	.....	61,172	181,914	299,730	397,972
Utah.....	15.18	20.37	117,000	132,194	394,685	1,094,757	1,496,056
Nev. (1901-2).....	27.05	13.76	85,000	220,245	161,481	224,622	209,486
Id.....	18.06	15.51	19,003	38,411	169,020	400,943	826,598
Wash.....	22.25	14.91	35,000	112,615	958,111	2,375,753	3,580,742
Oreg. (1901-2).....	18.75	14.13	160,000	307,031	805,079	1,594,420	1,526,366
Calif.....	21.42	13.35	1,713,431	2,864,571	5,187,162	6,909,351	8,170,165
Average.....	\$20.16	\$14.28					
Totals.....			\$2,244,329	\$4,267,673	\$10,213,815	\$17,212,614	\$21,098,573

TABLES XXII-XXVII

Showing: (1) expenditure per capita of average attendance: (a) for sites, buildings, etc.; (b) for salaries; (c) for all other purposes; (d) total per pupil; (2) average daily expenditure per pupil: (a) for salaries only; (b) total. (3) per centage of total expenditure devoted to—(a) sites, buildings, etc.; (b) salaries; (c) all other purposes; (4) expenditure for schools per capita of population; (5) same per capita of average attendance.

TABLE XXII

THE UNITED STATES

Expenditure per Capita of Average Attendance				Average Daily Expenditure per Pupil		Per cent. of Total Expenditure Devoted to—			School Expenditure per Capita of—	
For Sites, Buildings, etc.	For Salaries	For All Other Purposes	Total per Pupil	For Salaries Only	Total	Sites, Buildings, etc.	Salaries	All Other Purposes	Population	Average Attendance
\$4.19	\$14.21	\$4.35	\$22.75	9.7 Cents	15.5 Cents	18.4	62.5	19.1	\$3.15	\$22.75

TABLE XXIII

NORTH ATLANTIC DIVISION

State	Expenditure per Capita of Average Attendance				Average Daily Expenditure per Pupil		Per cent. of Total Expenditure Devoted to—			
	For Sites, Buildings, etc.	For Salaries	For All Other Purposes	Total per Pupil	For Salaries Only	Total	Sites, Buildings, etc.	Salaries	All Other Purposes	
Me.....	\$4.10	\$13.24	\$2.70	\$20.04	Cents	Cents				
N. H. (1901-2).....	2.92	15.02	5.75	23.69	9.3	14.0	20.4	66.1	13.5	
Vt.....	3.93	14.47	4.05	22.45	10.7	16.9	12.3	63.4	24.3	
Mass.....	7.24	23.67	8.13	39.04	9.3	14.5	17.5	64.5	18.0	
R. I.....	8.20	21.86	6.51	36.57	12.7	21.0	18.6	60.6	20.8	
Conn.....	4.73	18.57	6.28	29.58	11.3	19.0	22.4	59.8	17.8	
N. Y.....	12.14	25.82	6.66	44.62	9.8	15.7	16.0	62.8	21.2	
N. J.....	7.09	19.96	7.08	34.13	13.7	23.7	27.2	57.9	14.9	
Pa.....	5.88	14.20	7.47	27.55	10.4	17.9	20.8	58.4	20.8	
Average.....	\$8.09	\$20.16	\$6.94	\$35.19	8.5	16.6	21.4	51.5	27.1	
					11.3	19.7	23.0	57.3	19.7	

School expenditure per capita of—

a) population.....\$ 4.44

b) average attendance.....35.19

TABLE XXIV
SOUTH ATLANTIC DIVISION

State	Expenditure per Capita of Average Attendance				Average Daily Expenditure per Pupil		Per cent. of Total Expenditure Devoted to—		
	For Sites, Buildings, etc.	For Salaries	For All Other Purposes	Total per Pupil	For Salaries Only	Total	Sites, Buildings, etc.	Salaries	All Other Purposes
Del. (1899-'00).....	\$3.13	\$11.05	\$3.75	\$17.93	<i>Cents</i> 6.5	<i>Cents</i> 10.5	17.5	61.6	20.9
Md. (1900-1).....	.94	15.08	2.79	18.81	7.9	9.9	5.0	80.2	14.8
D. C.	8.66	25.10	6.73	40.49	14.4	23.3	21.4	62.0	16.6
Va. (1900-1).....	.92	7.46	1.13	9.51	6.1	7.8	9.6	78.5	11.9
W. Va.	2.42	9.47	3.57	15.46	7.7	12.6	15.7	61.2	23.1
N. C. (1901-2).....	.52	3.78	1.36	5.56	4.3	6.5	9.2	66.7	24.1
S. C.	.34	4.38	.28	5.00	4.8	5.4	6.7	87.8	5.5
Ga.	.76	6.33	.13	7.22	5.4	6.1	10.5	87.6	1.9
Fla. (1901-2).....	1.31	7.90	1.20	10.41	7.6	10.0	12.6	75.9	11.5
Average	\$1.15	\$7.57	\$1.45	\$10.17	6.4	8.6	11.3	74.4	14.3

(1) School expenditure per capita of—

a) Population.....\$ 1.34

b) Average attendance.....10.17

TABLE XXV
SOUTH CENTRAL DIVISION

State or Territory	Expenditure per Capita of Average Attendance				Average Daily Expenditure per Pupil		Per cent. of Total Expenditure Devoted to—		
	For Sites, Buildings, etc.	For Salaries	For All Other Purposes	Total per Pupil	For Salaries Only	Total	Sites, Buildings, etc.	Salaries	All Other Purposes
Ky.....	\$0.95	\$ 7.16	\$ 0.48	\$ 8.59	<i>Cents</i> 8.0	<i>Cents</i> 9.5	11.1	83.3	5.6
Tenn.....	.62	5.17	.51	6.30	5.4	6.6	9.9	82.1	8.0
Ala. (1901-2).....	*	3.96	.45	4.41	3.9	4.3	*	89.7	10.3
Miss.....	.23	6.75	1.03	8.01	5.5	6.5	2.9	84.2	12.9
La.....	.64	8.06	1.26	9.96	6.2	7.7	6.4	80.9	12.7
Tex.....	1.43	10.66	.69	12.78	9.2	11.0	11.1	83.5	5.4
Ark.....	.64	6.22	.41	7.27	6.8	7.9	8.8	85.6	5.6
Okla.....	2.98	8.29	2.62	13.89	9.3	15.6	21.4	59.7	18.9
Ind. T.....	*	14.61	17.86	32.47	9.2	20.5	*	45.0	55.0
Average	\$0.83	\$7.24	\$0.85	\$8.92	6.9	8.4	9.3	81.1	9.6

* Included in "expenditures for all other purposes."

School expenditure per capita of—

a) population.....\$1.22

b) average attendance.....8.92

TABLE XXVI

NORTH CENTRAL DIVISION

State	Expenditure per Capita of Average Attendance				Average Daily Expenditure per Pupil		Per cent. of Total Expenditure Devoted to—		
	For Sites, Buildings, etc.	For Salaries	For All Other Purposes	Total per Pupil	For Salaries Only	Total	Sites, Buildings, etc.	Salaries.	All Other Purposes
Ohio.....	\$2.73	\$16.36	\$ 6.45	\$25.54	<i>Cents</i> 9.9	<i>Cents</i> 15.5	10.7	64.0	25.3
Ind. (1901-2).....	2.37	13.76	5.97	22.10	9.4	15.1	10.7	62.3	27.0
Ill.....	5.76	16.30	4.78	26.84	10.2	16.8	21.5	60.7	17.8
Mich.....	3.69	13.23	4.96	21.88	8.0	13.3	16.9	60.5	22.6
Wis.....	4.73	15.39	4.73	24.85	8.5	13.8	19.0	61.9	19.1
Minn.....	6.70	16.79	2.48	25.97	10.6	16.4	25.8	64.6	9.6
Ia.....	3.42	17.42	6.60	27.44	10.9	17.1	12.5	63.5	24.0
Mo.....	3.68	11.34	2.96	17.98	7.8	12.3	20.5	63.1	16.4
N. D.....	6.22	17.86	13.71	37.79	11.0	25.2	16.5	47.2	36.3
S. D. (1901-2).....	3.01	15.50	6.86	25.37	11.7	19.2	11.9	61.1	27.0
Neb.....	4.29	16.54	4.02	24.85	9.9	14.9	17.3	66.5	16.2
Kans. (1901-2).....	1.91	12.12	3.56	17.59	9.6	14.0	10.9	68.9	20.2
Average.....	\$3.96	\$15.00	\$5.02	\$23.98	9.6	15.3	16.5	62.6	20.9

School expenditures per capita of—

a) population.....	\$ 3.61
b) average attendance.....	23.98

TABLE XXVII

WESTERN DIVISION

State or Territory	Expenditure per Capita of Average Attendance				Average Daily Expenditure per Pupil		Percent. of Total Expenditure Devoted to—		
	For Sites, Buildings, etc.	For Salaries	For All Other Purposes	Total per Pupil	For Salaries Only	Total	Sites, Buildings, etc.	Salaries	All Other Purposes
Mont.....	\$11.66	\$20.71	\$6.91	\$39.28	<i>Cents</i> 19.4	<i>Cents</i> 36.7	29.7	52.7	17.6
Wyo. (1890-'00).....	2.86	18.69	4.72	26.27	17.0	23.8	10.9	71.1	18.0
Colo. (1901-2).....	4.55	21.40	9.29	35.24	14.0	23.0	12.0	60.7	26.4
N. M.....	1.62	8.22	1.69	11.53	9.3	13.1	14.0	71.3	14.7
Ariz.....	5.30	19.35	8.17	32.82	15.1	25.6	16.2	58.9	24.0
Utah.....	6.05	12.92	7.26	26.23	9.2	18.7	23.0	49.3	27.7
Nev. (1901-2).....	2.58	31.80	5.15	39.53	20.4	25.4	6.5	80.5	13.0
Idaho.....	*	13.21	10.83	24.04	10.6	19.4	*	54.9	45.1
Wash.....	14.04	17.96	3.42	35.42	15.5	30.5	39.6	50.7	9.7
Ore.....	3.54	16.34	3.89	23.77	10.6	15.5	14.9	68.7	16.4
Calif.....	4.90	26.61	6.87	38.38	15.1	21.8	12.8	69.3	17.9
Average.....	\$6.15	\$20.32	\$6.38	\$32.85	13.9	22.5	18.7	61.9	19.4

* Included in total expenditure per pupil.

School expenditure per capita of—

a) population.....	\$ 4.80
b) average attendance.....	32.85

THE GROUP MORALITY OF CHILDREN

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[AN ABSTRACT]

Social psychology is restating problems of life which for more than a century and a half have been formulated in terms of an abstract individualism. The new view regards social groups as unities in which persons live, and from which they get their meaning. To "place" a stranger is to relate him to various groups, and then to read into him what one knows of these groups. The group not only molds and cozens, but consciously coerces the person into conformity. Moreover, the ideals and standards of a group change with a changing environment. In time of war military heroes eclipse the captains of industry who in days of peaceful prosperity are exalted for emulation.

Children's lives are largely spent in juvenile groups, nursery groups, play groups, "gangs," schools, classes. By these associations children are formed and modified in important ways. The child, like the savage, is conventional, and suffers keenly from ridicule. He is coerced by his group standards. The "tattle-tale" is to the child group what the "scab" is to the labor union. The child's group changes its values in adjustment to the conditions it confronts. Under a tyrannical and exacting teacher, sullenness and rebellion will be social virtues, natural means of protection against a common enemy. To a sympathetic and friendly instructor a class will respond by exalting co-operation and courtesy.

Children recognize the existence of adult groups—the Olympians, as Kenneth Graehme calls them—with their own peculiar, and too often unalluring, views of life. A child is "goody-goody" when he conforms, not to the ideals of his comrades, but to these grown-up standards. One aim of modern education is to substitute for the direct—and largely futile—imposition upon children of these mature ideas, the indirect and sympathetic control of child-life by fostering the growth of the worthy ideals which germinate in these juvenile groups.

It behooves all who deal with children to study carefully their social organization; to look at the world thru their eyes; to live with them, not to lord it over them; and ever to remember that we adults with all our wisdom are but "children of a larger growth."

CHARTER PROVISIONS AS RELATED TO THE ORGANIZATION OF SCHOOL SYSTEMS

WILLIAM H. MAXWELL, SUPERINTENDENT OF SCHOOLS FOR THE CITY OF NEW YORK

In any consideration of the regulations that ought to be inserted in a city charter with regard to the public-school system to be conducted for the people resident within the city's borders, the fundamental principle to be borne in

mind is that the state, and not the city, is primarily responsible for public education. In all the duties imposed on the city regarding education, whether they pertain to the physical side, as in the building and maintenance of school-houses, or to the intellectual and moral side, as in teaching and supervision, the city acts only as the agent of the state. The members of the board of education, whether they are elected by the people or appointed by the mayor, and the executive officers of the board, such as the superintendent of schools and the superintendent of buildings, are primarily state officers and only secondarily city officers.

Like all other social and political distinctions, this principle has its roots in a remote antiquity. Among the laws attributed to Solon in Athens is one enjoining on parents to have their children instructed in music and gymnastics, and providing also that no son was bound to support his father in old age if the father had neglected to have the son instructed in a trade at which he could earn his living. In Sparta the state charged itself with the entire education of all male children after six years of age. Plato, and more particularly Aristotle, made education one of the chief functions of government. Every European country has now its ministry of public instruction, charged with the duty of providing and enforcing popular education. A long series of decisions in the courts in several of our states has enunciated and confirmed the principle. The most recent, and perhaps the strongest, of these decisions was rendered only a year ago by the Court of Appeals of New York. In expressing the unanimous judgment of the court, Judge O'Brien wrote as follows:

We have seen that the policy of this state for more than half a century has been to separate public education from all other municipal functions, and intrust it to independent corporate agencies of its own creation, such as school districts and boards of education, with capacity to sue and be sued in all matters involved in the exercise of their corporate powers.

This view of the law is in accord with the fitness of things. No agency less extensive and less powerful than the state has the necessary authority and the necessary resources to provide and to enforce universal education. All history shows that, when education is not provided and enforced under the authority of the law, it is poorly provided and never enforced.

It would scarcely be worth while to occupy your time and attention with this principle, were it not that there is constant necessity to restate the fundamental truths on which our institutions are constructed. In the storm and stress of modern life, in the emulation among individuals and communities, the respective rights and duties of the state and of local authorities are either forgotten or mingled in inextricable confusion. Such is the condition of thought today in many places with regard to the attitude of the state, on the one side, and of local authorities, on the other side, toward public education. The time was in the older states when the local community was entirely willing that the state should do as it pleased regarding education, as long as the local tax-

payer was not called upon to pay the bills. A striking example of this disposition was the attitude of the Free School Society of New York city, which came into being just a century ago. That society proposed to found schools for poor children that were not under instruction in the schools of any religious sect, and to support them by voluntary contributions with such aid as might from time to time be obtained by grants from the state. In his address delivered at the opening of the society's first school building in 1809, De Witt Clinton, great statesman tho he was, argued against local taxation for the support of public schools on the ground that such taxation would set the people against education. Having instanced the tax for free schools in Pennsylvania, he went on to say: "The people of Pennsylvania are therefore interested against a faithful execution of the plan, because the less that is applied to education, the less they will have to pay in taxation." How false this view was, the history of public schools testifies. As the school tax has increased, instead of becoming interested against public schools, the people have become interested in and for public schools. And this sentiment is altogether natural. People are always interested in what they are paying for, and particularly when the object of their disbursements is so near to them as the education of their own children. Such an opinion as that expressed by De Witt Clinton is possible only where free schools are regarded as charity schools—schools for those who cannot afford to pay for the tuition of their children. With the advent of a broader view of the objects and possibilities of public education, such opinions tend to disappear. When men begin to understand—and the generality of men do not yet fully understand—that public schools are the people's schools, that they are for all, rich and poor alike; when they realize that one of the prime objects of public education is to provide, as far as public education can provide, equal opportunities for all; and when they bring home to themselves the profound truth that democratic institutions will remain democratic only on condition that the people remain enlightened; then will they take a keen interest in their own schools. But in every community there are those who realize these things only in part; in every community there are forces that would use the schools for wrong or selfish purposes.

These persons may perhaps be divided into two classes: first, those whose opinions have not advanced beyond those of De Witt Clinton, and his friends who founded the Free School Society of New York, and who argue that, as free public schools should be only for the children of the poor, their work should be confined to the rudiments of an English education—the three R's, so to speak; second, those who believe, tho they proclaim their faith by their acts rather than by their words, that the position of teacher, principal, or superintendent is one of the spoils of office, and should go to whoever has the requisite political influence to obtain it. The complete triumph of either class would set education in any community back at least a generation.

When the community is unable or unwilling to protect itself and its public schools against these evil influences, it has a right to the protection of the state,

exercised thru the state's proper officers. In view of the duties to be performed and the dangers to be avoided, the functions of the state regarding education may be regarded as threefold:

First, either to provide education for all, or to require that suitable education be provided by each community.

Second, to provide, or to require the community to provide, the means of enforcing education upon all children; because the man who fails to give his children education commits a twofold crime—a crime against his children, whom he deprives of much of the happiness and success of life, and a crime against society, whose strength and prosperity are diminished by the ignorance of any of its members.

Third, to provide such laws and such machinery as will protect the schools against the attacks either of foolish doctrinaires or of unscrupulous politicians.

There is one great danger, however, in the exercise of the state's educational functions; namely, that, if too much dependence be placed upon the state, local spontaneity and local effort may be discouraged. The best means hitherto found to enable the state to reinforce, without discouraging local authorities, is the enactment, by its legislative branch, of laws laying down minimum requirements, and the making of regulations by its educational officers which have the force of law. These laws may either be general enactments, or they may be embodied in city charters. They should embrace at least the following provisions:

1. The limits of age within which all children must go to school.
2. The minimum extent of school buildings which each community must provide in order to accommodate its school population.
3. The minimum amount of time to be spent in academic studies and professional training by candidates for teachers' licenses.
4. The establishment of institutions in which such training may be given.
5. A method of appointing teachers that shall eliminate political, social, and every other consideration, except that of merit.
6. A sure and certain means of raising revenue that shall increase as population increases.
7. A minimum salary for teachers that shall be in some degree commensurate with their training and with the social position they ought to occupy.
8. Pensions for old age after physical and mental disqualification.

It should be made by law the duty of the state's educational executive officer—call him state superintendent, commissioner of education, or what you will—to see that such laws are enforced by local authorities, and to determine, always with the aid of a council of educators, minimum courses of study for all grades of public schools—elementary schools, high schools, and training schools. It follows that he should be clothed with ample authority to carry the laws into effect and to enforce his own ordinances.

The community or the municipality should always have the authority to go as far beyond the minimum requirements of the state as the people, or their representatives in a board of education, may determine. In this way the schools have the protection of the state, while local enterprise is encouraged

In proof of this statement I cite the experience of New York. In 1895 that state enacted a law laying down the minimum amount of time to be spent in academic and professional training by candidates for teachers' licenses in cities, and authorizing the state superintendent to lay down minimum courses of study for the institutions in which such training is given. There is not a city in the state that has not made requirements exceeding the minimum requirements both in duration and in extent.

It has fallen to my lot in this discussion to set forth the reasons why the state should prescribe minimum requirements with regard to the training and appointment of teachers in cities. For the present I shall confine myself to the training and appointment of teachers in elementary schools. I shall assume in this presence that there is no difference of opinion as to what should be the minimum amount of time a teacher in elementary schools should devote to training. The academic training should be not less than four years of high-school or secondary-school work, which should include English, mathematics (at least algebra and plane geometry), a foreign language, history, biology, physics, drawing, music, and gymnastics. All of these subjects are required to develop and strengthen the powers of the mind, and to provide the foundation upon which professional training may afterward be built. The minimum amount of time to be devoted to professional training should be two years.

The specific question, however, arises: Should a city of considerable size—one, say, that requires a hundred or more new teachers each year—be required by law to maintain a training or normal school for teachers? This question should be answered in the affirmative for the following reasons:

1. While it is highly desirable that a considerable proportion—say, one-fourth or one-third—of the new teachers appointed in a city school system each year should come from outside the system, yet experience has shown that in all our large cities the majority of the teachers are and must be drawn from the system itself. Local sentiment enforces this policy; necessity compels it. In any one of our rapidly growing cities it is simply impossible to obtain a sufficient number of teachers from outside to fill vacancies, and to teach the new classes which it is necessary to form each year in order to meet the increase in population. It follows, therefore, that each large city must train the greater part of its own teachers.

2. The pressure from politicians, on the one hand, to have the sons and daughters of their friends, or of those whom they desire to favor, appointed teachers, is a constant force with which we must reckon. The pressure of parents, on the other hand, to secure teacherships for their children, particularly the daughters, at the earliest possible age, is also a constant and even stronger force. These two forces acting together are ever tending to lower, or even to break down, the barriers which local educational authorities set up to exclude untrained teachers from the schools. So powerful are these forces that a city training school is in constant danger of being emasculated, if not overthrown by their corrosive strength. It should, therefore, as a necessary condition of good schools, be established and protected by law.

3. In a large city a training school for teachers is necessary to maintain educational standards. In a city school system, owing to the rapid multiplication of schools and teachers, there is a constant tendency to sag, to lower the standard of results. If anyone doubts this statement, he has only to reflect for a moment on what must be the effect of bringing a large number of inexperienced teachers—in New York it is over one thousand—each year into the schools. Of the measures that may be adopted to neutralize the demoralizing effects of too rapid growth, a training school for teachers—particularly if it embrace, as it should, a model school—is probably the most effective. Here will be a school which is always manned by teachers of experience and of the largest ability; a school which is never weakened by an influx of inexperienced teachers. Such a school is a model, a standard, a tonic for all the other schools of the system. Its establishment and maintenance under the authority of law is, therefore, demanded as one of the protective measures which the state is called upon to enact for the preservation and uplifting of its public schools.

4. City training schools are necessary, because, if I may judge from my own experience, there are very few institutions, other than city training schools, which provide the specific training that teachers in large cities require. Under the conditions of life in our large cities, the schools must supply, as far as schools may, the training which in the country is obtained by work in the home or on the farm. The country boy who does chores about the house or on the farm before and after school, who cuts firewood, or brings in water, or tends the cattle, or helps to train a colt, or who plants seeds and protects the seedlings from birds and weeds, is acquiring a knowledge, and receiving a training in the use of his hands and eyes, in judgment, in carefulness, and in executive power, which is denied to the city boy. If the crowded populations of our great cities are not to degenerate physically and mentally, the city teachers must be trained to supply in some measure the deficiency. It is not enough that a city teacher should be able to teach language and grammar and penmanship and arithmetic and geography and history and drawing. She must be a trained observer, in order to detect and to treat properly the idiosyncrasies of children brought up under peculiar and always artificial conditions; she must be an athlete, to teach gymnastics and lead in children's games; she must be a mechanic, to give boys the use of their hands thru exercises in wood and metal; and she must be expert with scissors and needle, to teach girls to sew and to make their own dresses. It is chiefly in the large cities that all these qualifications are demanded. As far as my experience goes, the city training school is almost the only institution that is turning out teachers adapted to the city's needs. The lectures of the university professor of pedagogy on the principles and history of education are admirable in their stimulating, knowledge-giving, and view-enlarging effects for teachers of experience; but they constitute a poor preparation for the young teacher, full tho his head may be with theory, when he suddenly finds himself confronted with fifty unruly urchins, who perceive their teacher's defects and limitations much more quickly than he does himself. The state normal

schools, with some exceptions, have not adapted themselves to city conditions. For the most part they are still secondary schools, with a little professional training thrown in. They have not yet risen to the height of the great argument that teaching is a profession, and requires a peculiar institution in which its intending professors shall devote their whole time and thought and energy to learning the science and acquiring the art of teaching. For the present at least, therefore, we must depend upon city training schools to develop the peculiar type of teacher which the conditions of life in our large cities demand.

For purposes both of minimum requirement and of protection, city training schools should be established under the authority of law.

We may now pass to the second part of the subject—the licensing and appointing of teachers. The theses which I lay down may be stated as follows:

1. All licenses should be probationary, and should be made permanent only after the ability to teach well has been demonstrated and the habit of skillful teaching has been acquired.

2. Teachers should be nominated and appointed and promoted by an expert, or a body of experts, as nearly as possible in the order of standing from eligible lists prepared as the result of examination by an independent board of expert examiners.

The first thesis—that teachers' licenses should be temporary and revocable until success has been demonstrated—is so obviously in the interest of the schools and the people, and, indeed, is now so generally adopted, that I shall not consume time in stating the arguments in its support.

Nor is it necessary to discuss at length the proposition that teachers should be appointed and promoted, not by laymen, but by experts in teaching and school management. If the principle of appointment in order of standing from an eligible list is accepted, the principle of assignment to duty by experts follows as a matter of course. Appointment, then, means assignment to position; and surely, if any part of the procedure requires expert knowledge, the placing of each teacher at that kind of work which she can do best, is that part.

The real crux is: Should appointments be made in the order of standing from eligible lists prepared as the result of competitive examination? To make appointments of teachers in this way is to apply to the teaching profession the principle of civil-service reform which has now been introduced with comparative success into other branches of the public service, municipal, state, and federal. Such a system is undeniably better than the system it supplanted. Said George William Curtis, before this department fourteen years ago,

Whatever foolish questions may be asked, whatever possible frauds practiced in an examination, they are wholly insignificant when compared with the unspeakable folly and the certain fraud of appointment by patronage, or mere personal and partisan favor.

Having closely watched appointment of teachers by personal and partisan favor for nearly twenty years, and having participated both in examination and appointment under the merit system for nearly six years, I am fully pre-

pared to say that the merit system is as far superior to the personal system in the appointment of teachers as Mr. Curtis found it in other branches of the public service. What are the objections that are argued against the merit system? It is said that an examination cannot determine fitness for classroom duty. Were examination the exclusive test, there might be some force in the objection; but it is not: probation is a vital condition of the merit system? Examinations, however, may be so conducted as to determine fitness very closely, certainly to exclude the grossly unfit. Every well-conducted examination consists of two parts—a written and an oral. A well-ordered written examination is an almost infallible test whether an examinee has the ability to marshal his resources at a sudden call, whether he can think clearly and coherently, whether he has an adequate mastery of written discourse, and whether he has the executive ability to adjust the task to the allotted time with due sense of proportion. All of these powers are powers which the skillful teacher ought to possess, and which may be fairly tested by a written examination. As the lawyer who cannot think of the proper argument to put forward, or the physician of the appropriate drug to prescribe, until after the critical moment, is at an enormous disadvantage, so the teacher who cannot think of the right thing to do or say, or the principal whose pedagogical knowledge is so profound that he cannot give it expression, is at as great a loss in the class-room as in the examination hall. The written examination, to serve its purposes, must, of course, be a test of whether or not the applicant has the knowledge, the power of thought, and the facility in expression that a teacher ought to have. An examination that would test mere book knowledge or memory would be practically useless for the purpose in view.

There are certain things, however, which a written examination cannot determine. It is not a certain test of moral character, or of personal charm, cleanliness, address, or even of teaching power. It does not reveal bodily deformity, sickness, faulty enunciation, or foreign accent. It is even within the limits of possibility that a man may write well who talks very badly and, hence, is unfit for teaching work. To determine these matters, other methods of examination must be resorted to. The other methods which we use in New York I shall now describe briefly:

I. An oral examination is given only to those whose marks in the written examination indicate that they are worthy of further consideration.

II. By the term "oral examination" we mean not merely the presentation and answering of oral questions, but also an exhaustive investigation of the past history and present qualifications of the applicant, both personally and professionally. The ratio of the maximum record mark to the maximum oral mark varies according to the license sought. Some licenses require little or no teaching for eligibility, as, for instance, the initial license. Other licenses require large teaching experience, and this experience must necessarily be made a matter of investigation.

Just here let me say that written statements regarding teachers must be

received and rated with the utmost care. They must be rated for what they do not say, no less than for what they say. For instance, I have before me, as I write, the record of a graduate of a largely attended normal school. The principal reports her as "good" in scholarship, as "high" in pedagogical work, as "good" in practice-teaching. He further says that his estimate of her general teaching ability is "good," and, in answer to the question, "Does the applicant speak the English language articulately and correctly?" he replies "Yes." At the close of her first year of work in New York schools the principal of the school was called upon to report upon this teacher's work under several headings, as—

Ability to comprehend instructions; skill in blackboard work; skill in questioning; thoroughness in developing subjects; use of objective illustration; self-control and manners; use of voice; control of class.

Her statement is:

Miss Blank is deficient in all these qualifications. Her imperfect knowledge and very deficient enunciation of the English language render her incompetent to control or interest any class in this department.

This is only one sample out of hundreds which I might adduce to show that school authorities often use unnecessarily roseate language in writing testimonials. Episodes of this kind have led the board of examiners to lay great stress upon what they term the "oral examination." They now lay such stress upon the mark on record, personality, and ability to speak the English language that a bad mark in any one of these particulars nullifies the whole examination.

Turning from processes of examination to results, I am happy to be able to report that recent investigations have shown—

First, that those persons who have received the highest standings at our examinations have, upon the whole, done better than those who received the lowest standings that were considered possible.

Second, nine-tenths of those whom it has been necessary to dismiss at, or before, the close of the probationary term, are to be found in the class of persons who received comparatively low standings at the examination.

Third, the examinations have been the means of bringing to the New York schools many teachers of high character and ability from other places, whose services it would not have been possible to obtain in any other way. When it is known that the teachers in a city school system are appointed as the result of competitive examination, honestly and skillfully conducted, the best teachers from all over the country will flock to that city.

I am very far from claiming that the New York system of examination is perfect. I only say that it has served the purpose for which it was intended, upon the whole, in an admirable way. Indeed, I quite agree with professor Caddell, who recently said:

To devise and apply the best methods of determining fitness is the business of the psychological expert, who will probably represent at the close of this century as important a profession as medicine, law, or church.

Some of my audience may be inclined to say that much better than the New York plan of appointment by competitive examination is the plan, which has been tried in some cities, of committing the entire matter of selecting, appointing, and promoting teachers to one man, the superintendent. If, as one of my colleagues in New York recently expressed it, a man could be found who is infinite, eternal, and unchangeable in his being, wisdom, power, holiness, justness, goodness, and truth, we should all be entirely willing to place such vast powers in his hands. As such men are not to be found, the following objections to "one-man power" are, it seems to me, not unreasonable:

I. No one man has the ability or the knowledge to perform so colossal a task in a large city. He might do it in a city of forty or fifty thousand inhabitants, but not in a city of half a million.

II. Where this plan has been tried it has not infrequently resulted in the overthrow of the superintendent who has honestly tried to perform a task, too great for any individual, under most distressing circumstances.

III. The effect upon the teaching force is not good. It is one of the weaknesses of our poor human nature that men and women will cringe before the man who has the power to aid or to injure. Teachers tend to lose independence of thought and action when they are placed absolutely in the power of a superintendent; and, just in proportion as they lose legitimate independence of thought and action, by so much is their good influence as teachers diminished.

I trust I have said enough to show that, in our large cities, training schools and the appointment or promotion of teachers as the result of competitive examination, should be established by law.

A NONPARTISAN SCHOOL LAW

EDWARD C. ELIOT, FORMER PRESIDENT OF BOARD OF EDUCATION, ST. LOUIS, MO.

In accepting the invitation of the Department of Superintendence to address it upon the subject of school legislation, I take it for granted that my chief, if not only, usefulness in that respect arises out of my experience with the St. Louis public schools. An essay upon the theory of the subject, derived from an examination of the books, is available to any person interested in the matter. It is the practical side, illustrated by the situation in one of the leading cities of the Union, which is of interest to you.

The original organization of the St. Louis public schools was under a special act of the Missouri Territorial Legislature, enacted in 1819, followed in 1833 by a more formal incorporation of the free white inhabitants of the city of St. Louis into a body politic, dignified by the formal name of "President and Directors of the St. Louis Public Schools." The city was small, having then a population of less than eight thousand people, and was divided into

four wards, representation being provided for each ward. The board was unwisely given the power to control the election of its own members. This law continued in operation until 1897, when the city had grown to nearly its present size. Various intermediate acts of the legislature had entered into the law affecting the schools, and the number of members of the board had been increased, by the addition both of representatives from new wards and of members elected at large, until it had become overburdened. The two most dangerous features of the law remained—the district or ward representation, and the power of the board over the election of its own members.

It would be a great injustice to the large number of conscientious and able men who took part in the public-school government in the long interval between 1833 and 1897 to intimate that the system was not a success; on the contrary, the results were generally good, and there was a considerable number of years in which, under the efficient administration of Mr. W. T. Harris, now your honored Commissioner of Education, when the public schools of St. Louis took the first rank. But, as the city grew in size, and became more subject to the corrupting influences which attend the expenditure of large revenues, an era of bad politics and jobbery came in, and it became apparent to thinking men that the system had been outgrown, or that its inherent faults could no longer be offset in so large a community.

A bill was submitted to the legislature providing for a board of nine members, to be appointed by the mayor, one of whom should give his entire time to the affairs of the schools, and receive an adequate salary. The remaining eight were to be appointed with reference to their special qualifications for different departments of school work. The bill failed to pass, but it served the useful purpose of calling public attention to the necessity for change, and contained the idea of individual responsibility which is at the bottom of the law operating at present. In 1897 a committee of citizens was selected, of which Mr. Frederick N. Judson, now the able counsel of the Board of Education of St. Louis, was made chairman, and the frame of the present law was prepared.

Under the new charter the board consists of twelve members, elected at large—that is to say, without individual constituency, each member representing equally the entire public of the city. The term of office is six years.

Great pains were taken to remove the schools from the influence of politics. The members are precluded from holding any other office, and must make oath that they will not be influenced by any consideration except that of merit and fitness in the appointment of officers and the engagement of employees. They receive no compensation.

The business of the schools is divided under the law into four departments, which take the names of "Instruction," "School Buildings," "Finance," and "Auditing and Supplies." Over each of these is required to be placed an administrative officer, whose position is one of great independence. To make clear its force, in its administrative portions, I call attention to the following parts of the law:

The board of education shall have general and supervising control, government, and management of the public schools and public-school property of the city.

The superintendent of instruction shall be appointed by the board of education for a term of four years, during which term his compensation shall not be reduced. The board of education may, on the nomination of the superintendent of instruction, appoint as many assistant superintendents as it may deem necessary, whose compensation shall be fixed by the board, and who may be removed by the superintendent with the approval of the board. The superintendent of instruction shall have general supervision, subject to the control of the board, of the course of instruction, discipline, and conduct of the schools, text-books, and studies; and all appointments, promotions, and transfers of teachers, and introduction of text-books and apparatus, shall be made only upon the recommendation of the superintendent and the approval of the board.

The commissioner of school buildings shall be appointed by the board of education for a term of four years, during which term his compensation shall not be reduced. He shall devote all his time to the duties of his office, and shall be charged with the care of the public-school buildings of such city, and with the responsibility for the ventilation, warming, sanitary condition, and proper repair thereof. He shall prepare, or cause to be prepared, all specifications and drawings required, and shall superintend all the construction and repair of all such buildings; shall make a report each month to the board of education, showing in detail the costs of repairs and other work for the previous month on each building, embodying therein the amount of bills outstanding for work ordered by him, and stating specifically the cases where work was done, or ordered, without public letting; shall superintend all the advertisements for bids and the letting of contracts; and shall, within the limits of appropriations theretofore made by the board of education for repairs, make all contracts for the repairs of school property, except where the cost of such repairs shall exceed the sum of fifty dollars.

Subject to the approval of the board of education as to the number and salaries, the commissioner of school buildings shall have power to appoint as many engineers, janitors, and other employees and agents as may be necessary for the proper performance of the duties of his department, for whom he shall be responsible, and whom he shall have power to remove; but the board of education may provide for a competitive examination for the positions of janitors and engineers; and when such provision shall have been made, the commissioner of school buildings may be required by the board to appoint janitors and engineers from the list obtained by such examination. He shall appoint such assistants and deputies as may be authorized by the board of education, whose compensation shall be fixed by the board; and one of said assistants shall be a trained and educated engineer, qualified to design and construct the heating, lighting, ventilating, and sanitary machinery and apparatus connected with the public-school buildings. Such assistants and deputies shall be subject to removal by the commissioner of school buildings, who shall be responsible for the proper performance of their duties.

The board shall select a competent secretary and treasurer, who shall hold office for a term of four years.

He shall exercise, subject to the control of the board, a general supervision over the fiscal affairs of the public schools of the city, the collection and payment of funds to the school depository, and the disbursement of all revenues and moneys belonging to the board. He shall have supervision, under the direction of the board, of the permanent school fund of the city and the investment thereof, and all invested property of the board. . . . He shall be the custodian of all securities, documents, title papers, books of record, and other papers belonging to the board, under such conditions as the board may direct. It shall be his duty to see that no liability is incurred or expenditure made without due authority of law, and that appropriations are not overdrawn. Subject to the approval of the board as to number and salaries, he shall have power to appoint assistants, for whom he shall be responsible, and whom he may remove.

The board shall appoint a competent person as auditor, who shall serve for a term of four years. . . . It shall be his duty to examine and audit all accounts and demands against the board, and to certify their correctness to the secretary and treasurer of the board.

The law declares that the superintendent of instruction shall be responsible for the condition of the instruction and discipline of the schools. The commissioner of school buildings is charged with the care of the public-school buildings and responsibility for their ventilation, warming, sanitary condition, and repair. It is made the duty of the secretary and treasurer to see that no liability is incurred or expenditure made without due authority of law, and that appropriations are not overdrawn. The auditor must examine and certify all accounts.

All of the officers have fixed terms of office and may be removed for cause (which involves a trial) by a two-thirds vote of the board or by the courts.

The officers have the sole power to appoint their assistants and clerks. Only the superintendent of instruction can nominate teachers. Only the commissioner of school buildings can appoint janitors. The power to discharge teachers rests practically with the superintendent. The power to remove janitors lies wholly with the commissioner. All text-books and apparatus for the use of the schools must be recommended by the superintendent. The plans for all buildings must come from the commissioner. The board cannot attend to any of these matters on its own initiative.

When the first surprise at these facts passes away, it becomes a natural inquiry: What is left for the board to do? The answer is: Only those things which lie within the qualifications of men of general intelligence and business ability, not experts in education or construction. The board may adopt rules governing the conduct of the officers in general terms, so long as such rules do not impair their expressed powers and responsibility. In this way general policies are laid down.

All contracting power rests in the board. The officers must come to it for the right to expend money. The appointment of teachers must be approved by the board, and it may, by express provision in the law, regulate the appointment of janitors under civil-service rules.

The levy of taxes, within constitutional limits, rests with it. It is the ultimate source of power, chooses the administrative officers, and, having the power of removal, is responsible to the public for their efficiency.

Supplementing the provisions of the law, and strictly within its purpose and spirit, the first board elected adopted rules which preclude the individual members from exercising any executive function, and from directing in any wise the action of the administrative officers.

Both the law and rules prohibit members from being directly or indirectly interested in contracts with the board, and the ownership of stock in a corporation dealing with the schools has been held to be within these provisions.

The twelve members are divided into four committees, permanent in char-

acter, the personnel of the committee changing only at long intervals, corresponding to elective changes. The rules provide:

The president of the board of education shall be an *ex-officio* member of all committees. He shall, upon his election, assign the other members of the board to the committees, filling each committee, as nearly as practicable, with members holding office for long and short terms. Upon each reorganization of the board and election of a president, the assignment of members to the committees shall be revised and rearranged, if deemed necessary by the president. No member of the board shall serve upon two committees, except by reason of death, absence, or other disability of a member of the board, or insufficiency in number of members to fill all committees otherwise. A new member, by appointment of the mayor, shall take the place of his predecessor upon all committees until the next reorganization of committees. When the assignment of members to the committees is made, a record thereof shall be entered in the minutes of the board. A list of the committees and their members shall be posted in the office of the secretary and treasurer, and of the superintendent.

The committees provided for shall have supervision over the departments of public-school work to which their names, respectively, apply, and all of the administrative business of the school shall be subdivided among such departments. In the event of any question arising as to which department any matter of business pertains, or of any difference of opinion between the committees as to which has charge of the same, the matter shall be referred to the president for temporary action, and to the board for permanent assignment at its next meeting. Each committee shall be responsible for the affairs of its department, and shall see that the administrative officer in charge of each department fully and adequately performs the duties pertaining to the same. To each committee shall be referred in the first instance all complaints which may be presented to the board, or any member thereof, respecting the conduct of any officer, employee, or subordinate in its department, and of any defective or insufficient service therein. All such complaints shall be considered by such committee, and acted upon by denial or reference of the same to the board, at its discretion. Each committee shall have power to present charges against any officer or employee in its department, and it shall be its duty to do so whenever it finds that there is sufficient evidence of inefficiency or misconduct on the part of any officer or employee.

The chairman of every committee shall be prepared, at all times, to make written or verbal reports to the board, when it is in session, as to any matter pertaining to its department. Each committee shall, from time to time, recommend to the board such action in respect to its department as it may deem advantageous for the interest of the schools.

Each committee has the supervision of a department, but not the slightest power to direct. Practically the committee is the adviser of the executive officer, and the intermediary of the department and the board. It keeps in touch with the affairs of the department and its necessities, and is the source of information at board meetings. If complaints are made, the committee hears them and reports. It has the power to call to its sessions any officer or subordinate, and to investigate errors and abuses. If it disagrees with the department head, it may express its disapproval to the board, and that body may act accordingly; but the member has no power, except when occupying his chair at the sessions of the board.

The board greatly facilitates the dispatch of business by requiring the substance and subject-matter of all proposed action to be forestalled in print, and handed to each member and officer a few days before the meeting.

When the law went into effect, the public mind of St. Louis was ready for

it. The people were thoroly disgusted with the effect of partisan politics upon the school revenues, and welcomed the idea of a nonpartisan administration. Fortunately for the success of the new law, the members first elected were high-class citizens, fully intent upon carrying out the law and in sympathy with its theory. Without this, during the period when its principles were new and its battles were to be fought, it might well have failed. But under honest and efficient administration it has steadily gained in public confidence. The original board was composed of eight Republicans and four Democrats. At the election held two years later this disproportion was changed, so that thereafter and until the present time the number affiliated with each party has been equal. This, of course, is in theory bipartisanship, but it is intended as non-partisanship, and has so operated in practice. When the terms of members expire, the two political parties divide the candidates, or both nominate the same persons. Among the party managers the memberships in the school board are spoken of as "non-political offices." Citizens of the best standing willingly accept election. At the present time, eight years after the original election, the board is composed of three lawyers of high standing; three business men at the head of their respective occupations; two civil engineers, one of whom has a national reputation; a physician; the manager of the leading German newspaper in St. Louis, and well known to you as the director in charge of the Department of Education at the World's Fair; a retired railroad capitalist, ripe in years and experience; and last, but not least, Dr. C. M. Woodward, director of Manual Training School, and dean of School of Engineering and Architecture of Washington University.

For officers the board has men of training and capability, among them Mr. William B. Ittner, the commissioner of school buildings, whom we regard as the leading school architect in the United States; and Professor F. Louis Soldan, superintendent of instruction, for whom my personal friendship is too close and my admiration too great to admit of commendation from me.

One of the consequences of an honest administration of the school business has been a substantial increase in the amount of money available for new buildings. A saving of three or four hundred thousand dollars a year out of jobbery and corruption has certainly been made; and an intimation from the board of education, backed by the Commercial Club of St. Louis, resulted in an amendment to the state constitution which has increased the available school revenues by nearly seven hundred thousand dollars annually. This money is rapidly going into the best school buildings which can be constructed.

The absence of district representation has been most beneficial. The educational needs of the city can be handled as a whole, without regard to local prejudices and demands. The ward worker has not been present, with his falsely pretentious claims for the improvement of his district; and no substantial complaint has been made by the people of any part of the city of unfairness in the placing of new schools.

The law and its administration have been most satisfactory and receive unstinted public approval.

Eight years is a short time within which to change the whole school aspect of a city of six or seven hundred thousand people; but that has been done in St. Louis.

If we look for causes, we must, of course, see primarily the integrity and independence of the men in charge. But the board members became available by the nonpartisan declarations of the law; and the independence of the officers was made possible by the frame of the charter. Now, for "independence" read "expert ability," given its opportunity to do unhampered work; and for "non-partisanship" read "common honesty." This is the gist of the situation. There is something radically wrong with the public conscience when it can hear patiently breaches of public trust called by the name of "party loyalty," and stealing called "politics." I am addressing the right body of men to look to for a cure in that respect. In the daily press men of like political faith are praised and flattered. Men of the opposite party are too often condemned and beaten down. The wrong is palliated and excused, if it is chargeable to our side, and the right is depreciated and minimized, if it comes from the other side. But the men and women who have the education and guidance of the children in the schools can and ought to inculcate a juster standard. The youth of the land ought to be taught that no office is filled unless it is filled unselfishly and honorably; that no politics is worth anything unless it is honest; that party loyalty is a disgrace if it means the theft of public money and the debauchery of the public service.

My experience with the St. Louis law and its operation leads me to believe that the best results can be obtained in all municipal affairs by clothing men with ample power, fully commensurate with the purposes of their offices, and holding them to full responsibility for the results to be obtained. The less machinery provided in this respect, within reasonable limits, the better it will be. There is nothing which a corrupt body of men, intent upon making public affairs a means for personal ends, more thoroly desires than a complication of law which hides the responsibility. Bureaucracy and red-tape are the meat upon which corruption feeds.

The system of checks and balances which has been so long vaunted as the protection afforded the people under the rule of democracy often fails of its purpose. This happens when it serves to restrain an officer in the exercise of his legitimate functions, or to obscure the real nature of his actions. You may remember the incident which is told of the Russian system of government, where it is said that, upon a wager, the Lord's Prayer, in writing, was pushed thru all the departments and received the official approval of the government as a document of state, without any person having stopped to read what was written. Under such a system no one is held responsible, since each official act has its prior justification.

I venture to predict that in the march of events the over-legislative process which has been going on so extensively for many years will be followed by forms of government greatly simplified and plain enough to read. The next

charter of Greater New York may be nearer a dozen pages in length than the five hundred and sixty which it now covers. I go so far in this respect as to deprecate very seriously the lengthening of constitutions of the state governments, which are incorporating into their provisions so many legal details affecting the affairs of the people that constitutional conventions become as necessary as sessions of the legislature. It would be better for the organic law to be confined practically to the bill of rights and adequate provisions for honest elections.

It is a radical mistake to frame the laws for administration by bad, or even indifferent, men. That this has been done largely accounts for the fact that the people have been willing to elect bad and indifferent men to office. It would be better to suffer for a time from the faults of tyrannical officials clothed with extensive powers, than to clog public affairs with too much machinery. The severity of the experience would inevitably result in resort to the one ultimate necessity of a republican form of government, the election of honest and competent officials. Necessity is a great teacher. I was much impressed recently, upon a visit to Texas, to see how one body of American people responded to a severe experience. After its great flood in 1900, the people of Galveston found themselves in a situation which did not admit of trifling with public funds. At the time in question the city's credit was not particularly good, and it was subject to the usual troubles in municipal affairs. But the luxury of bad government would not be afforded thereafter. The affairs of the city were intrusted to a committee of citizens which gave its services devotedly to the interests of the city. Notwithstanding the immense loss of property, \$17,000,000, and of lives, 6,000, necessary abandonment of portions of the city, the exodus of people, the loss of business, and the urgent necessity of protecting the city from the inroads of the sea by the construction of a sea wall and the raising of the level of the city itself as an entirety, the people of Galveston, I was told on my visit in November last, had all of its bills paid, a large surplus in the treasury, and an absolute credit for anything that they want. Such a result almost makes us pray for calamity.

Reverting to my subject, it may readily be conceded that the St. Louis law is not perfect. If a new school law for a large city were to be prepared, it would be best to eliminate from the form of the St. Louis law many of its detailed provisions which are not quite consistent with its theory, and which hamper rather than increase the value of its main purpose. There should be incorporated into the organic law some of the matters which now rest solely in the rules of the board; particularly the provisions which qualify the initiative of individual members and make their positions valueless for political objects. There should be emphasized, in the draft of such a law, still more strongly the power to be given to the administrative officers. Within the limits of appropriations to be made by the board, there should be left to them more completely than now appears in this law the responsi-

bility for policies, as well as for administration. Under such a system great men could be developed. A railroad president of the highest rank who has attained a leading position while still quite young in years, said to me a short time ago that no one knows what a man can do until he is given the opportunity. It was the principle upon which his success had been attained. Promising men were placed in positions of responsibility and let alone to see what they could do. No system for the administration of business affairs or of public affairs is well devised which makes automatons of its officers or employees. This fact has been discovered even in warfare. A soldier is a better soldier for knowing what he is about, and for being intrusted with the direction of all that is beneath him.

But you are quite at liberty to reject these theories. I have heard John Fiske say, with his usual clearness of mind and expression: "The power of generalization is an excellent servant, but a very bad master." The scientific way is to take the facts and to make deductions, when the accumulation in that respect is sufficient to justify a hypothesis.

CHARTER PROVISIONS AS RELATED TO THE REORGANIZATION OF SCHOOL SYSTEMS

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During the last decade changes in the laws controlling city school administration have been made which differ from previous methods in several respects.

The following are some general features of the new charters:

1. They aim at the elimination of political influences.
2. They propose to give more scope to the educational expert.
3. They attempt to locate definitely the responsibility for mismanagement.

A widely spread dissatisfaction with the administration of school affairs was the chief reason for the new charters. In not a few cities boards of education contained elements whose apparent purpose in serving was individual gain or the promotion of private interests. Persons connected with some building trade, or engaged in certain kinds of business that made the patronage of teachers a source of profit, sought places on the school board, while it became at times difficult to get the prosperous business or professional men to serve.

The erection of new school buildings and the repairs presented opportunities for improper profit which were not always neglected. In the appointment of teachers, political or social influence made itself strongly felt. There was little possibility of rescuing the children from the hands of an incompetent teacher, when the latter happened to have influential friends. In the appoint-

ment of janitors, political considerations were pre-eminent, and the lower class of ward politician found a refuge and sinecure in the janitorship of some public school.

While these evils were by no means universal, they were common enough to constitute a general danger, and to invite the best elements in the cities affected by this disease to find a cure. To these conditions the new laws owe their existence. They were to furnish the remedy for existing evils.

The boards created under the new laws are in some places appointed by the mayor; in other places they are elected by the voters. Where the mayoralty is occupied by a worthy man, the school board is, as a rule, well chosen, and the many contingencies of proper selection and nomination which the direct election by the people involves are avoided. However, where the mayor himself is an unfortunate choice, or where he is under strong party bias, his appointments are likely to be poor and objectionable. The character of the whole school board depends on the contingency of the qualifications of one man.

Where the school board is elected by the voters of the city, the tendency of the new laws is to free the nominations from political partisanship. This is often brought about by a tacit understanding between the two leading parties to have an equal representation.

Instead of the old system of ward representation, the new charters favor the election of a ticket at large, because experience has shown that it is easier to make good nominations if the candidates can be selected from the whole city, regardless of their residence in one ward or another. Each man elected on a ticket at large feels that he is the representative of every school interest in the whole city, instead of thinking of his ward as the center and limit of his duties and efforts.

Another direction in which the new charters attempt to bring about a change relates to the functions of school boards. In every large city the administration of school affairs is a business of extensive, technical, and laborious character. It requires special information, skill, experience, and, very emphatically, time. As a rule, members of school boards serve gratuitously and disinterestedly. The new charters have not adopted the proposition, so often discussed, to make these positions salaried ones, because salaried positions would be likely to attract persons who are in politics for a living, and would probably repel the class of persons who are willing to serve because of the honor of such service. But the new charters have lightened and adjusted the duties of the school board so as to make it possible for an energetic business man or professional man to serve without an undue tax on his time.

Another proposition which has been advanced is to intrust the management of public schools in large cities to a commission of five or seven men who devote their whole time to this work and receive liberal compensation for their services. This body was to be composed of experts in the various lines which are covered by the public schools. The commission was therefore to include an educator, an architect, an engineer, an attorney, and a business man.

While such an organization would place the administration into the hands of experts, it would separate it too much from the direct influence of the community, and would lessen the touch between the school administration and the people. Moreover, such a board, with the salaries and patronage controlled by it, would inevitably become the prey of politicians. The slowly accumulating skill and experience of one set of officers would be wasted by the periodic changes which are characteristic of all political offices.

If, therefore, a board of education, appointed by the mayor, or elected by the people, is the proper body for the administration of the public schools in a large city, what shall be its function, and how can its work be so constituted as to make it possible for the public-spirited business or professional man to serve without giving to this gratuitous work an undue share of his time?

The new charters answer these questions by making the functions of the school board legislative, administrative, and supervisory, while they assign the laborious executive duties to salaried chiefs of departments, whom they invest with large and independent powers, so that they can be held responsible for the conduct of their respective departments. The board controls the revenues and the annual appropriations which limit the expenditure for each line of service; it elects the officers and controls their action by rules; it approves or rejects the appointment of teachers, the recommendations for text-books and supplies; it decides what schoolhouses shall be built and repaired. But the initiative in these actions and the conduct of the daily business, it leaves in the hands of the experts whom it employs.

The gentlemen who have preceded in this discussion have dwelt on the charters of New York and St. Louis, respectively. Leaving the discussion of the general features, I desire to present a few additional details in the practical working of the new charter in St. Louis.

1. New school sites are selected and recommended to the board by a committee of officers composed of the superintendent, the architect, and the treasurer.

2. Teachers are nominated by the superintendent and appointed by the board. (The appointment of teachers and the marking of their standing by the principals will be fully discussed by Mr. Ben Blewett, assistant superintendent, in the afternoon meeting, and, in order to avoid repetition, a further treatment of this topic is here omitted.)

3. The superintendent has power to arrange the course of study, subject to the approval of the board. In actual fact, the present course of study was worked out in detail by the grade teachers and principals of the city, who met in committees for this purpose.

4. The charter prescribes that the initiative in selecting text-books is in the hands of the superintendent. He recommends, and the board confirms or rejects. A sweeping change was made in the books eight years ago, after a thousand opinions from the teachers had been solicited and received.

5. Contracts for supplies are awarded once a year. The charter requires that the awards for all educational supplies be made on recommendation of the superintendent. In practice, the selection of the proper supplies, pens, and pen-points, crayons and slates, paper and pencils, is left to the workers who are to use them every day. The workman selects his own tool. Committees of principals and teachers are formed who test the samples of the various bidders and report their recommendations to the superintendent.

6. The charter gives to the superintendent the right to appoint his own clerical force, without further confirmation. The board decides the number of clerks and their salaries.

These details show the underlying principle of the new law: The administration of the schools is intrusted to pedagogical and technical experts, under the supervision of the representatives of the people. It may be said that in the new charters the teaching profession is on trial, as far as its ability is concerned, to take an important share in the government and administration of public-school systems.

In St. Louis a new charter has been in force for eight years, and it must be judged not only by the apparent reasonableness of its provisions, but by what it has actually accomplished. It must be known by its fruit.

If the following conclusion of this paper recites briefly what has actually been accomplished in the public-school management in St. Louis during that period, I beg to disclaim any spirit of boastfulness. Other cities have done as much or more. But it is necessary for my argument to show that the practical working of an ideal law has led to material results.

Under the new charter the whole system of schools in St. Louis has been reorganized. An absolutely new type of school building, fire-proof and two stories high, has been devised. The new school plan embodies the best provisions for heating and ventilation. Buildings of this kind have been erected in every part of the city, and antiquated buildings are being gradually replaced by them. The new sites purchased are located by experts, and a whole block of ground is not considered too large for a school site. In the most recent buildings, gymnasiums and shower-baths are provided.

A new course of study, made by the co-operation of the whole teaching force of the city, has been adopted. An entirely new set of text-books has been introduced, selected by teachers and superintendent with no other consideration than the merits of the books.

A library of supplementary reading, in sets of no less than twenty-five to thirty books of each title, has been gradually placed into each school building, amounting to no less than 140,000 volumes at present.

Two large high schools, each costing about \$500,000, have been erected in the last three years. Each of these schools has the usual literary and scientific equipment of modern high schools, and, in addition thereto, a fully equipped manual-training department for boys, including bench- and lathe-work, forge- and machine-work. For the girls there is a domestic-science department, including artistic needle-work, dressmaking and fitting, millinery work, and art-work in leather, wood, and metal; the lessons in cooking are connected with the study of the hygiene of the home, and the chemistry and physiology of food.

Over fifty new high-school teachers have been appointed in the last two years, the selection being made with no other consideration than that of efficiency.

The service of the colored schools of St. Louis has been entirely recon-

structed. Their standard of scholarship is now equal to that of the white schools. The corps of teachers in the colored high school has been practically renewed in order to obtain the most efficient service. A fully equipped manual-training department has been added to it.

Manual training and domestic science have been introduced into the district school course of all the city schools. No boy leaves the schools without having had some training in the use of the ordinary tools. No girl leaves the higher grades without having had instruction in the household arts and household knowledge.

The evil of early withdrawal of children from school has, in a measure, been checked. The attendance in the higher grades has increased. The enrollment in the high schools has doubled in five years, from 1,500 in 1900 to 3,500 today.

Teachers' salaries, while still low, have been raised. In case of the ordinary grade teacher, the increase amounts to 25 per cent. The increase of the principals' salaries, in first-class schools, amounts to about 20 per cent.

The text-books in all grades, including the high school, are furnished to the children at public expense. So is all stationery used in school.

In the teaching force inefficiency is being steadily eliminated; but the teacher feels absolutely safe that her continuance in office depends on no one's favor, but on her own efficiency. The principal's position has been elevated in value and dignity. Every teacher feels that his opinion of her efficiency is of importance, and that his suggestions are heeded.

In the daily teaching a spirit of greater freedom prevails. Supervision no longer tests results only, but appreciates the methods of the teacher, and her efforts at self-culture and progress.

There has been a strong awakening of the pedagogical spirit. There are numerous grade meetings, at which attendance is voluntary; no record of attendance is kept. It is rare for such meetings not to draw a full quota. The first principals' meeting, called by the superintendent at the beginning of this year, which was open to all, was attended by 1,200 teachers. The pedagogical Society of St. Louis, which is a voluntary organization for self-improvement and professional study, and which meets every second Saturday in each month, enrolls over 1,500 members. The spirit of the whole teaching fraternity is loyal and thoroly harmonious.

The conduct of the business of the board under the new law has been free from friction. The board exercises its controlling power constantly, and scrutinizes every officer's action with great care. It uses freely its supreme power to decide the policy of the schools and to regulate it by legislation. But, at the same time, it encourages the chief officers to use their own independent judgment in the conduct of public business, within the limitations of its rules. I do not know of any friction between the board, or members of the board, and its officers. The actual condition is in full harmony with the spirit of the new law.

ROUND TABLES

ROUND TABLE OF STATE AND COUNTY SUPERINTENDENTS

HIGH SCHOOL PRIVILEGES FOR COUNTRY PUPILS

C. P. CARY, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, MADISON, WIS.

That it is desirable for the country boy and girl to have educational privileges equal to those offered city boys and girls may be taken for granted. The intelligent people of our country—and this means the vast majority of our citizens—are no longer satisfied, if indeed they were ever satisfied, with the mere rudiments of an education such as is comprised in the common-school curriculum. The education of the country boy and girl is a matter in which all are vitally and zealously concerned. It is a truism that country pupils should have every possible facility and encouragement to develop thru secondary and higher education in all their latent possibilities. Such facilities and encouragements many of them do not now have. It is the business of all persons of influence in the molding of affairs of this sort to do all in their power at this time to place the country pupil and the secondary school in the closest possible proximity. Our problem is one of ways and means.

Within the past few years numerous attempts have been made to bring the high school within reach of the country child. In some states county high schools have been established; in others township high schools have been encouraged; and in still others district high schools, all looking toward the training of the country child. The county high school has received more attention in Kansas than in any other state, and, as I am informed, the results have been satisfactory. There are some reasons, however, why a high school established with the county as the unit should not be popular. The location of the school would naturally be at some central point, and it will readily appear that if the county is of average extent, the school would in many cases be so remote from the homes of the inhabitants that the expense of attendance would probably equal, if not exceed, the expense necessarily incurred in attending some normal school, or other educational institution, offering equal or superior advantages. The burden of sustaining a county high school must, of course, be borne by the taxpayers, a very large majority of whom are in no position advantageously to avail themselves of the opportunities offered by the school. The remoteness of the homes of the patrons would certainly have a marked deterrent effect upon the attendance.

The township high school is better in respect to the matter of facilities for attendance, because the territory from which the attendance is drawn is much more limited. On the other hand, the equipment of the school for efficient work is likely to be somewhat inferior, for the reason that the support of the school depends upon a comparatively small area and consequently the burden falls with greater weight upon the taxpayers. This is not an argument against township high schools. It is simply the limitation which is found in the less thickly settled townships, where no city or village is at hand to assist in its maintenance. The town or township is a convenient unit for high-school purposes, and such schools should be encouraged in all sections of the country remote from good high schools.

In this round-table discussion I shall discuss Wisconsin conditions only, leaving to other superintendents the discussion of conditions in their own states. Wisconsin has been liberal in the encouragement of free high schools. Thirty years ago special state aid was provided for, to be paid annually to such schools, in amounts not to exceed \$500 to any one school. In 1885 the legislature made provisions for township free high schools

supported by districts comprising all the territory in a town. The legislative act provided a separate fund of \$25,000 as special state aid; and also provided that one-half the amount expended for instruction in these township free high schools should be paid to such school district each year. It was supposed that this would stimulate the organization of free high schools of this class. The result was that a very large part of the special aid for the township free high schools remained uncalled for in the state treasury. Later on the legislature provided that the unexpended balance of this fund should be placed in the district free high-school fund. This largely increased the apportionment to each district free high school organized at that time.

The total number of free high schools in the state at the present time is 248, of which 232 have adopted, and are now maintaining, four-year courses of study. The number of three-year free high schools in the state is rapidly diminishing; that is to say, they are developing into four-year schools. There are now but sixteen three-year-course high schools, whereas there were thirty-two in operation during the year ending June 30, 1904. There are also fifteen schools known as independent high schools. These schools without exception offer strong four-year courses of study. They are located principally in the larger cities, Milwaukee alone having four. It is evident that the greater the number of high schools, the more accessible they become for the rural population, provided attendance is duly encouraged.

I now come to the consideration of a law that has within the past few years worked very beneficial results in Wisconsin. This law has for its title "An Act relating to encouraging attendance upon free high schools by residents of towns and villages having no free high schools, and prescribing the conditions entitling persons to attend." This is commonly known as the high-school tuition law, and reads as follows:

The free high-school board of any free high-school district organized under the laws of this state shall admit to the high school under its control, whenever the facilities for seating and instruction will warrant, any person of school age prepared to enter such school, who may reside in any town or incorporated village, but not within a free high-school district, and who shall have completed the course of study in the school district in which he resides or one equivalent thereto.

Provision is made in another section of the statute for the payment of tuition by the town in which the pupil resides, the maximum rate being fixed at fifty cents per week. The free high-school district may charge a higher tuition than fifty cents per week, but the town in which the pupil resides is under no obligation to pay more than the rate fixed in the statute. This law is proving exceedingly stimulating and valuable in the direction of bringing high-school privileges to country pupils. The average annual increase of attendance of rural pupils at high schools prior to the passage of this law was about two hundred (the total attendance at high schools of country pupils was about 3,500), but the annual increase since the law went into operation is about five hundred, or two and one-half times as great. Based on the actual attendance, the increase for the past three years has been 1,334, or 37 per cent. This increased attendance means more of a forward movement in the matter of high-school education than appears on its face. It is well known that whenever a member of any family, or for that matter of any community, takes work in advance of the common-school course, other members of the family or community are stimulated thereby in the same direction. The free high schools are in this way extending their sphere of influence in every community that is within reach of a high school; and with 248 free high schools in the state, high-school privileges are convenient to a very large percentage of the school population.

Again, high-school graduates are in Wisconsin quite largely drawn upon, in counties where county training schools do not exist, to fill positions as teachers in rural schools. This means a large improvement over the "home product" of past years in the preparation and ability of those placed in charge of the common schools, with a consequent stimulus to pupils and encouragement for them to take high-school courses.

The number of graduates from all free high schools in the state for the year ending

June 30, 1903, was 2,441, and of this number 1,103 are reported as having taught in the public schools for the year ending June 30, 1904.

A few quotations from letters received from high-school principals and county superintendents will show how the free high-school tuition law is regarded by those who are in a position to judge. A city superintendent writes thus: "The attendance in this high-school [from the country] has nearly doubled in the past three years because of this law. Thus the poorest country pupils may have the advantage of a high-school education." Another writes: "The results of the law is that the attendance has been doubled and is rapidly increasing now, and the county superintendent tells me that a larger number of pupils finish the common-school course, their ambition being to attend the high school." It is needless to multiply examples. They are numerous. High-school principals, with rare exceptions, report an increased attendance of country pupils of from 20 to 100 per cent. in the past three years. County superintendents report that in the country schools there is an increased attendance and more interest shown. I shall quote the words of two or three of these officers. The superintendent of Dane county writes: "The effect upon rural schools has been excellent." The superintendent of Sheboygan county writes: "This law seems to have created a new incentive for the young people to complete the common school course, and secure the common-school diploma." Candor compels me to state that a few superintendents do not find the law so satisfactory. One writes: "The attendance of non-resident pupils has not increased to any great extent, if at all, because of the law. Parents bring pressure to bear upon teachers to graduate pupils, even if they are weak, because the children wish to attend high school." This last statement, however, reveals the fact that there is a powerful incentive at work, and that it draws pupils toward the high-school course.

I desire to say a few words, parenthetically, bearing upon the desirability of modifying the high-school courses in a measure to adapt them to the needs of country boys and girls. There should be, it seems to me, courses of study, which country boys and girls may at least elect, which will look toward the farm and farm life, rather than professional life. We do not want to make it necessary for a young man to go into the profession of law, for example, in order to get the practical benefits of his high-school education. He ought to be able to get the practical benefit of his four years' work in school when he turns his attention to farming. We have in Wisconsin two kinds of schools that, in some measure at least, take the place of county high schools, tho their purpose is different from that of the high school and the courses of study are shorter. I refer to the county agricultural school having a two-year course, and the county training school for teachers with a one-year course. The agricultural school, especially, may in a few years develop into the equivalent of a high school, with large emphasis on the science and art of agriculture. The county training school for teachers—and there are seven of them in active operation and well attended at this time—provides especially for training in methods of instruction in rural schools. As a rule, the students in these schools are of somewhat mature age, and some of them have already had experience as teachers. It is not probable that these training schools will, for years to come, if at any time, take upon themselves high-school responsibilities, altho review and advanced work in academic branches is necessary, and thus the education of those who attend is extended and strengthened.

STATE GRADED SCHOOLS

One of the results of the agitation for better conditions of the rural schools is the state graded school. In the year 1900 a committee that had been previously appointed by the State Teachers' Association recommended, first, that the system of direct aid to high schools be extended to graded schools not connected with high schools; second, that state inspection be provided for supervision and perfection of organization of these schools, to the end that they may become, in every sense of the word, higher rural schools, and thus bring equally to rural districts a realization of higher ideals. Later this suggestion was framed

into a bill, and in 1901 the bill became a law. Under this law, \$60,000 annually is granted as state aid to state graded schools.

In order that the schools may receive state aid, the following requirements must be met:

First, the school must be maintained at least nine months during the year, and the average daily attendance must not be less than fifteen pupils for the entire school year, in two departments, in schools of the second class, and in at least three departments in schools of the first class.

Second, the teachers employed must be competent. The principal of a state graded school of the first class must hold some form of state certificate. One assistant may hold a third-grade certificate, one a second grade, and the other assistants first-grade or state certificates. In the state graded schools of the second class the principal must hold a first-grade certificate, or a state certificate of some form. When third-grade teachers are employed, one year's experience in teaching is required.

Third, the schoolhouse, grounds, and accessories shall be ample, and free from unsanitary features, and the furniture and equipment shall be adequate for meeting the needs of the school.

Country schools of one department have been stimulated to organize state graded schools of two departments. Graded schools of two departments have pushed on and organized schools of three or more departments. The larger graded schools have organized high schools.

Thruout the state these schools are being equipped with all necessary apparatus. In many instances systems of heating and ventilating are being put in. The work has been organized and graded in conformity to the state course of study. Better teachers have been procured at higher salaries. Sanitary conditions of school buildings and outbuildings have been greatly improved, and the general tendency in these schools has been toward a steady advancement.

The course at the present time correlates well with the high-school course. Thoroughness in the common branches, followed by systematic study of the higher branches in the larger schools, has been a wonderful incentive to the smaller schools to add to their teaching forces in order to carry advanced work, and to the larger schools to push on and establish high schools. I attribute it to the results of the work accomplished in the graded schools that more high schools have been established within the last two years than any equal length of time in the history of the state.

The marked increase in the number of state graded schools, the increased efficiency and growth of each individual school, together with the establishment of such schools in remote farming sections, supplementing the large one-room school, and causing in other instances two or more schools to unite to form a state graded school, verifies the statement that no educational law passed in recent years has done more to advance the cause of education than the state graded school law of 1901.

To restate briefly, in slightly modified form, what I have already said, the laws in our state give every facility for organizing high schools. Almost any group of people, regardless of district boundaries, may decide to organize as a free high-school district. The only conditions for securing state aid are that they must have within the district twenty-five or more pupils prepared to take up the high-school work, as determined by the examination given under the direction of the state superintendent, and must organize and conduct the school according to statutory enactment. The demand for high-school privileges is rapidly growing, and every year finds the interest in and demand for secondary education spreading to the more remote districts. The county high school has not made any headway in Wisconsin, and probably will not do so, because of the fact that in nearly every community there are already convenient high schools that serve the purpose. Township high schools exist in about a dozen places in the state. Many more would doubtless be desirable, but the idea has not thus far met with a hearty response from the people. The reason for this is that in most of the townships of the state there are villages and small cities as centers of population. These are frequently located at one edge or one corner of the township, and consequently there are many inhabitants situated so far from the high-school building that it would be necessary, in case of attendance of their children

to make arrangements for board and lodging. They often claim that they may as well make arrangements for attendance at high schools in the district, or for attendance upon some of the state normal schools. Upon the whole, the best thing we have found for extending high-school privileges, and for stimulating country pupils to remain in school until they have completed the common-school course, and then moving on to the secondary schools, is the law requiring the township in which the pupil resides to pay the tuition at the high school.

REPORT OF THE COMMITTEE ON INTERSTATE RECOGNITION OF HIGH GRADE TEACHERS' CERTIFICATES

To the Members of the Round Table of State and County Superintendents:

A meeting of the committee, appointed by this Round Table at Atlanta, in February, 1904, to consider the "interstate recognition of high-grade teachers' certificates," and to report at the next meeting, was held in the Palmer House, Chicago, Ill., December 14 and 15, 1904.

The following members were present: State Superintendents G. W. Nash, of South Dakota; W. T. Carrington, of Missouri; C. P. Cary, of Wisconsin, and E. A. Jones, of Ohio. Superintendent W. W. Stetson, of Maine, was unable to attend. Superintendent Nash, chairman of the committee, presided, and Superintendent Jones was appointed secretary.

The chairman presented the results of his correspondence with the educational departments of the different states. From the letters read it appeared that, while many of the certificating authorities were in favor of a limited recognition of certificates from other states, they had no legal authority, under present statutes, for such action.

After much informal discussion, it was unanimously decided to recommend:

1. That such legislation be secured as will authorize state departments of education to indorse and validate state certificates of high grade issued by departments of education in other states.

2. That a certificate be so recognized which has been issued under the direction of the state department upon the following conditions:

On examination in reading; orthography; penmanship; arithmetic; grammar; composition; political and commercial geography; United States history; civics; physiology; elementary algebra; physical geography; scientific agriculture; literature; pedagogy (including principles of method, management, psychology, and history of education); any two of ancient history, mediæval and modern history, English history, advanced American history; any one of botany, zoölogy, geology; any one of physics, chemistry, astronomy; either geometry or advanced algebra; and any one of rhetoric and advanced English literature, Latin, Greek, German, or French.

In addition to the foregoing, an applicant for such certificate shall pass an examination in some academic or professional subject in which he has specialized, and one other allied subject, the two taken together being an equivalent of the last two years of undergraduate work in the chosen subjects in a college of high rank.

Provided, that a diploma from any approved college having a course of study in which at least four years' work above an approved four-year high-school course is required, may be accepted in lieu of an examination in the subjects named, if the applicant has in his college course pursued pedagogical studies for at least two years. In case the holder of such diploma has not taken the required work in pedagogy, the deficiency may be made good by examination.

Provided, further, that a diploma from any state normal school having a course of study in which at least two years' work above an approved four-year high-school course is required may be accepted in lieu of an examination in the subjects named.

Those who apply for such certificate by examination shall submit evidence of at least forty months' successful experience in teaching. Applicants who present diplomas shall after graduation teach for at least two years on a provisional certificate before being entitled to the permanent certificate.

G. W. NASH, of South Dakota, *Chairman*;
 E. A. JONES, of Ohio;
 W. T. CARRINGTON, of Missouri;
 C. P. CARY, of Wisconsin;
Committee.

ROUND TABLE OF CITY SUPERINTENDENTS

CONDUCTED BY F. B. DYER, SUPERINTENDENT OF CITY SCHOOLS, CINCINNATI, O.

TOPIC: THE MERIT SYSTEM OF APPOINTING AND PROMOTING TEACHERS

- I. The advisability of a merit system of appointing teachers, and the difficulties in the way.
- II. Methods of ascertaining fitness of candidates, and of rating them for appointment.
- III. Methods of promoting teachers on merit. Should there be promotion by grades?
- IV. The influence of promotional examinations, and of other methods of promotion based upon efficiency and scholastic advancement.

THE MERIT SYSTEM IN ST. LOUIS

BEN BLEWETT, ASSISTANT SUPERINTENDENT OF INSTRUCTION, PUBLIC SCHOOLS,
 ST. LOUIS, MO.

It seems quite impossible that one should now seriously raise the question whether any criterion but merit should determine the appointment and promotion of teachers. It seems axiomatic that, if a teacher is to be chosen for the training of children, the most capable and the best-trained persons that could be obtained for the money available should be employed. The importance of the interests involved would suggest this as the only logical procedure, and this is the procedure that wise men follow in the administration of all business enterprises. A teacher should be selected because of her peculiar fitness for the work to be done, and for no other reason.

Fitness determined by competent authority.—What constitutes this peculiar fitness is a complex question, which can be properly answered only by competent and responsible judges. Those who are to make the selection should, thru professional training and an extended experience, know the essential qualifications of a skillful teacher and the requirement of the particular work to be done. They should, further, be held responsible for their selections, that errors if made, may be traced to the source and the responsible party be made to bear the burden of his mistakes. If the superintendent, to whom is intrusted the direction of the schools, is not to have the power of nominating all teachers, how can he be held responsible for results? On the other hand, if this power is given him and his selection proves to be inefficient, the responsibility is traced back directly to him, and the remedy is quickly suggested and easily brought about by removing the cause of the mistakes.

The promise of fitness.—That the teacher selected must be peculiarly fitted for the work to be done, does not mean that no one must enter upon the work of teaching until she be sure that her first efforts will be rewarded with eminent success. All strength has its period for development and has its beginning in weakness. The one who judges of

fitness must take all this, with a thousand other things, into consideration, and be able to foresee the possibilities that lie concealed under the cloak of inexperience, to recognize the power that will develop with experience. Few mistakes will be made if the choosing of teachers is assigned to experts, and they are held responsible for their selection.

Degrees of efficiency.—But even when these selections have been wisely made, and all the teachers chosen prove to be valuable, still different degrees of efficiency are sure to manifest themselves, and the recognition and classification of these ranks should be left to the same competent and responsible authority that recommended the original appointment.

Degrees of compensation.—These differences in efficiency suggest and justly demand difference in compensation. The increased experience is in itself an increase in value, and, consequently, if the teacher is retained there should be an annual increase of salary for a certain number of years, altho she were not advanced by promotion to a higher rank. A growth in power that is unusual should be recognized by promotion to a rank receiving a higher class of salary, and there should be an annual increase in salary in this new rank for a certain number of years. Still a third rank would give opportunity for a greater degree of efficiency as it manifests itself in the second rank. The natural selection in these three ranks suggests logically a decreasing number of teachers in each rank in the ascending scale and an increasing schedule of salaries in the ascending ranks.

Security in tenure.—One of the fundamental conditions of success in the educator of children is a spirit loosed from annoying anxieties, and a teacher should be absolutely secure in her position, provided her work is valuable. She should have no occasion to feel that her fate is at the mercy of the narrowness, prejudices, or whims of a principal or superintendent. The character of these officers should be a sufficient guaranty against any littleness, and boards of education should see to it that the superintendents are large-minded men. The feeling of security in tenure, however, is not dependent upon an appointment for a long term, but upon the certainty of repeated reappointments as long as efficient service is rendered; and there are some pronounced advantages to both the teacher and the public in appointment for a short term, a year for instance. Under this arrangement it is possible to dispense with the services of an undesirable teacher simply by not reappointing her, and such teacher is by it saved from the notoriety of a dismissal after a more or less public announcement of the reasons for dismissal.

Principals of schools.—The same general principles that govern the selection, appointment, promotion, retention, or discharge of assistants apply to principals of schools, with the modifications naturally suggested by the difference in rank. As the principal must be intrusted with the responsibilities of administrative duties, his position presupposes experience with ripened knowledge and judgment, and less tolerance should be accorded to deficiencies that may appear in his work.

To recapitulate:

1. A teacher should be appointed because of her promise of proper fitness for the work to be done.
2. The right of nomination should be vested in the superintendent.
3. Her salary should increase with increasing value of services, within the limits of available funds.
4. She should feel assured of retention as long as her work is efficient.

A practical application of these principles has already been made under the following plan:

Eligible list.—For supplying the new teachers needed, a list is prepared from one or both of two sources of supply. One of these sources is the training class maintained by the city; the other, the teachers from out of the city, who are selected thru diplomas, certificates, or the result of written and oral examinations, submitted as evidence of their preparation and experience. The candidates from the city training class are put on the list in the order of the date of their graduation and of their standing in their several classes. The candidates not coming from the city training classes are placed on the list in the order of relative strength, as nearly as a competent authority can determine from the evidence submitted.

Assignment to work.—Assignment to teaching positions in the lowest rank are made from the eligible list, arranged as just described in the order in which the names appear on the list. The young teacher acts in the capacity of a substitute for a period of several months, which is used as a term of probation, and she is not regularly appointed as a teacher until this time of probation is completed, and her efficiency has been attested by the principal of the school and the visiting supervisor. When these conditions have been complied with, her appointment is recommended by the superintendent, and his recommendation is approved or rejected by the board of education.

Promotion.—After the teacher has been assigned to her school, the principal becomes the responsible officer of the board of education in promoting her success, and in making an impartial and sufficient report in regard to her work; and his report is worthy of, and receives, respect. Should he recommend promotion or discharge after consultation with the supervising officers, his recommendation is approved by the superintendent and made part of his report to the board.

Principals.—The plan does not include a training school of grades suitable for preparing men and women for administrative school work; consequently, the material for these positions must be selected from the graduates of the universities or teachers' colleges, or from candidates who have had successful experience in this class of work in other places. Because it is not practicable to have as complete an eligible list for this class of positions as for assistants, and because it is neither proper nor practicable to depend upon a probationary trial as an introduction to their work, the superintendent is left very free in selecting his candidate for a principalship vacancy. After the principal has been appointed by the board, his efficiency is estimated thru the observation of the superintendent and his assistants. When a vacancy in a more important position occurs, the nominee for the position is selected by a conference of the superintendent and his assistants, and the choice is determined by the best qualifications, including length of service, as shown in the record of his work.

Records.—To eliminate as far as possible reliance upon the unaided memory of supervising officers, a system of records is kept on file in the office of the superintendent. In this file there is a card placed for each teacher when she enters the service. The card shows the date of her entrance upon the work, her previous training, and the three reports made upon her work annually by the principal. These reports from the principals cover six points:

1. Management of children.
2. Instruction.
3. Attention to details of school business.
4. Scholarship.
5. Professional zeal.
6. Personal qualifications.

Their ranking on each point is classed as "excellent," "good," "medium," or "unsatisfactory," and is indicated by the initials *e*, *g*, *m*, or *u*. In addition to this abbreviated marking recorded on the card three times a year, the principal makes each year a detailed report on each teacher who has come under his supervision that year for the first time, or upon any of his former assistants who remain with him and whose work has so changed as to merit a changed report. In this detailed report the principal writes out his reasons for the markings given under six heads. As supplementary to the marking card, a teachers' department file is kept, into which is placed correspondence, notes of supervisors, records of peculiar incident, or other information that form important evidence of the teacher's weakness or strength. Where papers of this kind are filed, the envelope containing them is numbered, and the number is placed on the teacher's card, so that the card shows their existence and tells where to find them readily. A record of the principals, similar in character, but differing somewhat in detail, is made from the reports of visiting superintendents. These records not only aid the memory of officers who have known the whole of the work

of a teacher, but are of the greatest value where principals and superintendents change, these records standing as important evidence of what the teacher has been to the school.

The following outline of the report on principals, made by assistant superintendents of instruction, indicates the scope of the records of merit:

1. *Personality*.—What is his scholarship? Is he active and industrious? Are his personal habits in every way such as you would expect from a teacher? Does he bear a good reputation concerning payment of his debts? Is the school of which he has charge, in your opinion, too large for his abilities?
2. *Professional qualifications*.—Is he a progressive principal, in the sense that he adapts himself readily to modern methods of management and instruction? Does he give any attention to other work that interferes with his school work? How does his present work compare with work observed heretofore? If there is any change, to what do you attribute it? Would you recommend his continuance in his present position?
3. *Practical work with regard to instruction and discipline*.—What is the quality of the discipline of the school? What is your estimate of the educational work of the school of which he has charge? Does he give sufficient attention personally to class-room work? Is he amenable to direction from his superior officers, without difficulty or sensitiveness?
4. *Business qualifications*.—Has he good executive ability? Is his care of the premises, text-books, and other school property sufficient? Are the reports required by the instruction department satisfactorily rendered in points of candor, regularity, and completeness? Does he lend willing and intelligent support to the rules of the board?
5. *Relation to teachers*.—Does he secure the respect and co-operation of his teachers? Does he show the necessary frankness and directness in his professional intercourse with them? Does he give them proper support in the discipline of their rooms? Is he efficient in training his teachers, thru his general influence, teachers' meetings, etc.
6. *Relation to the community*.—Is his relation to parents and community satisfactory? Is he courteous and considerate in his manner? Is he well adapted to the class of children and parents in the locality of his school?

OUTLINES OF METHODS OF APPOINTING AND ADVANCING TEACHERS IN VARIOUS CITIES

THE BALTIMORE METHOD

JAMES H. VAN SICKLE, Superintendent of Schools, Baltimore, Md.—In Baltimore the responsibility of the superintendent in the appointment of teachers is set forth in the following charter provisions:

It shall be the duty of the superintendent of public instruction and his assistants, as examiners, to ascertain, by appropriate committees, appointed as hereinbefore provided, the training, knowledge, aptness for teaching, and character of every future candidate for the place of teacher, and to report to the board of school commissioners graded lists of those whom they deem qualified for appointment, from which graded lists all nominations of teachers shall be made by the superintendent of public instruction and his assistants to the board of school commissioners.

All such nominations of teachers shall be made in the order in which the names of the nominees appear upon such graded lists. In the preparation of these graded lists the superintendent of public instruction and his assistants shall ascertain by competitive examinations the relative qualifications of those candidates who desire appointment, and shall place the names of the accepted candidates upon said graded lists in the order of their relative qualifications, so ascertained by such competitive examination.

After a substitute period, the applicant, if successful in substitute work, is appointed, for one year on trial. If successful in the work in the trial year, the appointment becomes permanent, and removal can be effected only upon "charges made and trial had." Salaries increase automatically by annual increments, until the regular minimum salary is reached. Further promotion depends upon superior efficiency, as determined by observation of regular schoolroom work and an examination, the character of which is left to the superintendent of schools.

The superintendent is required to make annual report to the board of the work of teachers thus selected for promotion. The board thus has the power from year to year to determine whether all such teachers are entitled to remain upon the promoted list.

The plan of promotion embraces a careful record of efficiency of all teachers in the service made annually by the principals. The various items entering into the record of efficiency have been copied from the St. Louis plan. Any teacher admitted to the examination must have the approval of the principal and the superintendent of schools. Promotion does not depend upon the grade in which the teacher works, nor does it mean a transfer to a higher grade. It is open to teachers in the primary grades and grammar grades alike. The plan of examination aims not to withdraw the teacher's interest and attention from the work in which she is engaged from day to day, but to make it possible to secure promotion by study and thought in fields that will contribute to her increased efficiency in the grade in which she teaches. To this end, she is allowed to choose a subject from a list of subjects approved by the superintendent, and to prepare a thesis. The examination consists in an oral defense of the thesis before the board of examiners, consisting of the superintendent and two assistants, the examination lasting from twenty to forty minutes, and embracing references to at least two standard educational books which the teacher has studied carefully.

In the past three years 250 teachers have thus been selected and promoted, and about twenty-five vacancies in the list have been filled. As the advance in salary available was not large, \$100, it did not seem best to make promotion dependent upon extremely rigid requirements as to examination, the main purpose of such examination being accomplished by the impetus given to professional study both on the part of those invited to take the examination, and upon the part of others who look forward to the time when they may have the same opportunity. An examination conducted in this way attains a dignity that the ordinary examination lacks, and it affords the superintendent and his associates an opportunity to know more fully the professional equipment of a teacher than is possible by the observation of schoolroom work alone or by the ordinary written test. The most important qualification insisted upon is superior skill in regular schoolroom work. Those who do not manifest this skill are not invited to take the examination.

THE DENVER METHOD

L. C. GREENLEE, Superintendent of Schools, Denver, Colo.—We are fortunate in Denver in having a great number of applications from teachers of other cities and states. Our teachers come from almost every state in the Union, as Colorado cannot yet supply the demand. The examination board is appointed by the superintendent. We have what we are pleased to call a scholarship examination and a personal examination. All applicants must take the scholarship examination except the graduates of the Colorado State Normal School. Two days are given to the scholarship examination, and the third day to this personal examination or interview before the board of education and the superintendent. No outside application is considered, unless the applicant has had at least twenty-four months of successful experience in some other school. We employ no normal school graduate who is not unqualifiedly recommended by the president of that school thereby making him in a way responsible for those employed from his institution. The examination is competitive. The written examination and the personal examination are marked separately on a scale of one hundred. These two standings are added and divided by two for an average standing. The eligible list is made up by placing at the head of the list the one who has the highest average standing, and so on down, until we have a sufficient number on the list to fill all places made vacant during the year. If we were in need of a certain number of teachers, we send before the board twice that number, and the selection would be made from these. A teacher is placed upon the force, as the man said when he was taken into the Methodist church, "on six months suspicion." The probation period in no case can be shorter than three months. The superintendent

depends largely upon the report of the principal as to the fitness for the work. At the end of the third month 63 per cent. of the teachers employed last September received permanent appointments. At the close of the sixth month, 15 per cent. was added to this list, leaving 22 per cent. of the teachers to be recommended at some future time or to be rejected. After a teacher is once confirmed in her appointment, she is in the school permanently until she resigns or is dismissed for cause. There is no difference in salaries below the high school, except those of principal and assistant principal. All grade teachers receive the same salary. Women are paid the same as men for the same work.

THE OMAHA METHOD

WM. M. DAVIDSON, superintendent of schools, Omaha, Neb.—The plan used in Omaha was worked out by former superintendent, Carroll G. Pearse. We believe in breadth of preparation. To be eligible for examination, candidates must have two years of experience in teaching, or a diploma from a state normal school. Three lists are made: first, assigned for a year or less of service, to prove their worth; second, elected upon the recommendation of the superintendent, upon his warrant of their successful experience; third, permanent appointment, after five years of successful teaching in Omaha. No "pull" or outside pressure is permitted. There is, with us, no difficulty in getting teachers into the schools on merit; but it is a great problem how to keep them constantly improving.

THE CHICAGO PLAN

CHARLES D. LOWRY, district superintendent of schools, Chicago, Ill.—Teachers for the elementary schools in Chicago are obtained either from the Chicago Normal School or upon examination. The graduates of the Chicago Normal School are given certificates to teach in the elementary schools. Experienced teachers, who have had the required amount of academic training, are granted certificates upon passing an examination which includes the various subjects taught in the elementary schools. All certificates are valid for one year, but become permanent after two renewals.

Graduates of the normal school are assigned to the various schools as cadets. There they work under the supervision and instruction of the principal, and also do substitute work when necessary. As cadets, they receive no salary, but as substitutes they receive a salary of \$2.50 per day. After serving in this manner for a period of four months, if their work has been successful, they are put on the list for appointment. Their mark on this list is the average of the mark given at the Normal School and that given for efficiency of services during the four months' cadetship.

Teachers who come in by examination are required to serve four months' probation as substitutes. Their mark on the eligible list is the average of the scholarship mark obtained by the examination and the efficiency mark obtained during substitute service.

Appointments of teachers in the elementary schools are made from the eligible list in the order of standing. The names are placed on the eligible list by action of the board of education, on recommendation of the superintendent of schools.

After the teacher receives appointment, she advances in salary each year, until at the end of the sixth year of service she reaches the maximum of the second group of salaries, which is \$850 per annum for teachers of grades I-IV, \$875 for teachers in grades V-VII, and \$900 for teachers of grade VIII. Teachers of experience are given credit for successful experience on the salary schedule when they enter the system.

A teacher whose work is considered unsatisfactory is, upon the recommendation of the superintendent of schools, placed on probation. This probation lasts four months, and during that time the teacher is entitled to a transfer to some other school, in order

that she may have the judgment of a new principal. During this time her work is carefully inspected by the principal and the district superintendent. If her work improves sufficiently, her name is removed from the list of probation. If it does not improve sufficiently for her to be satisfactory, her name is dropped from the list of teachers. This action is final, if not disapproved by the board of education.

If a teacher's name remains on the list for appointment more than a year, she is given a second mark for efficiency, provided she has substituted or cadeted for a period of two months during that time. Her mark on the eligible list now becomes the average of the two efficiency marks.

The teachers in the system are marked twice each year by the principals in the different schools. These marks are filed in the office of the superintendent. An important part of the marking system is the work of the board of district superintendents. The marks received from the principals are often inequitable. Since different principals may have different standards of marking, and since the marks of the teachers must all go on the same list, it is necessary that they be reduced to a common standard. All the marks and all the information about the various cadets, substitutes, and teachers are referred to the board of district superintendents, which acts as a board of equalization. The marks of the principals are not filed until approved by this board.

Any teacher whose mark of efficiency is 80 or above, and who has reached the maximum salary of the second group of teachers, is entitled to take the promotional examination, and upon passing the same is advanced to the first group and receives an increase of salary. The promotional examination for teachers of elementary schools consists of (1) an examination in professional study, psychology, pedagogy, and history of education; (2) an examination in one of a number of academic subjects, such as English, any foreign language, physical, geographical, or biological science, manual training, household arts, drawing, music, etc. The mark of a teacher in the promotional examination is the average of the mark which she obtains in her academic subject, that obtained in the professional paper and the mark she has obtained for efficiency of service in the school. The average of these three must be eighty or above. A somewhat similar plan is carried out with reference to the promotion of principals of elementary schools and teachers in high schools.

The system of promotional examinations has been in effect for three years. When first adopted, such a large number of teachers sought opportunity to take up various lines of study that it was found difficult to find teachers for them. To meet this difficulty, the board has adopted a plan of normal extension. According to this plan, wherever a group of teachers, in any part of the city, agrees to take up a certain line of study, the board furnishes the room necessary and provides a teacher free of charge. The plan has proved very popular and very successful. The work is carried on in various schoolhouses throughout the city, in the Chicago Normal School, and in various rooms in the central part of the city. The enrollment of these classes at present numbers 3,025. This enrollment is much lower than it was some months ago, when it was found that some teachers had been enrolling in a number of classes and were doing more work than their strength permitted. As a consequence, a rule was adopted to the effect that no teacher could be enrolled in more than two classes. It is probable that in time the work will become so fully organized that credits in these classes will be substituted for a part or the whole of the examinations. By no means all the work done in these classes is for the sake of preparation for examination, however. The classes are open to teachers in private schools as well as public schools. Many teachers are taking up the work who have already passed the promotional examinations, and many others are taking up classes of a sort which do not fit for the examinations. This is especially true of such work of the normal school instructors as deals directly with the proper presentation of various subjects in the school curriculum. This work, when presented to normal-school students, is often but little understood, because these students have no body of experience with which to interpret it, but to teachers of experience it is of the greatest value, because they see its bearing and are able to test its value at once in school work.

THE KANSAS CITY METHOD

JAMES M. GREENWOOD, superintendent of schools, Kansas City, Mo.—In Kansas City our rules were revised in June, and a provision was made that after the fourth year of service, the salary being \$720, an examination may be taken in professional subjects and literature, upon passing which, teachers shall be entitled to receive a salary of \$760. After one year they shall be eligible to take a second examination, and, upon passing it, shall receive a salary of \$800 for one year, and shall thereafter, upon recommendation from the superintendent's office, receive a salary of \$825 per year without further examination.

Eligible lists are made for appointment somewhat as in St. Louis, but power to appoint or dismiss rests with the board; the superintendent can only recommend. Records are kept of the teacher and her school, including the following particulars:

1. *The Teacher*.—Appearance in school; personal peculiarities; air of refinement; ability to secure co-operation of the pupils; special and general scholarship; power to hold attention and secure honest work; seeing all that is going on; skill in imparting and fixing instruction; mode of questioning and getting replies; assigning lessons; method of recitation; mastering points in detail; keeping school records; working for the good of the school; professional spirit and etiquette; disposition to improve.

2. *The School*.—Orderly and neat appearance; class and individual movements; pupils' attention to business; the character of pupils' work; care of school property.

The promotional plan has led to a remarkable awakening. Classes of teachers have been organized, lecture courses arranged, syllabi of work prepared, and mental activity aroused which indicates a genuine revival of learning in the city.

THE LOWELL METHOD

MISS GERTRUDE EDMUND, Principal of the Training School for Teachers, Lowell, Mass.—I am not in sympathy with the sentiment that a merit system is applicable only to a large city. I believe it is just as necessary in a small city, and I know it is possible, for, in spite of strong opposition from politicians, the merit system has controlled the appointment of teachers in the elementary schools of Lowell for more than fifteen years. To take appointments entirely out of politics, the Lowell Training School for Teachers was opened in 1899. At present we take into the school only college and normal-school graduates who have passed a satisfactory examination in mathematics and English, and have shown physical fitness and ability to teach. The examination is conducted by the superintendent of schools and the faculty of the training school and is open to graduates from any first-class college or normal school in the United States. Last year we had applicants from such colleges as Cornell, Vassar, Bryn Mawr, Radcliffe, Boston University, Smith, and Wellesley. As the school was established to provide teachers primarily for the Lowell schools, the number of students in the entering class is limited to the demands made upon us by the city schools. The applicants admitted to the Training School are those who stand highest on the examination list.

The course of study comprises one year's work in pedagogy and actual charge of a room in the practice school. At the end of a year the teachers who are graduated are ranked according to character, ability to teach and discipline a school, and scholarship. There are three lists: primary, grammar, and high school.

The substitute work is entirely in the hands of the principal of the Training School, and the teacher ranked first on the primary or the grammar list is the first to be sent out to substitute in primary or grammar work, and the first to be elected to a permanent place in these schools.

In the high-school work the rule is slightly modified, providing for the appointment of

a teacher in the department of physics, for example, who has specialized along such lines, rather than one who has made a special study of Latin or Greek.

THE NEWARK METHOD

ADDISON B. POLAND, superintendent of schools, Newark, N. J.—I am asked to describe briefly the system employed in Newark, N. J. At the present time our board employs over fourteen hundred teachers. A rule provides that all appointments, promotions, and transfers shall be made only upon the recommendation of the superintendent; also, that the superintendent's recommendation shall be based upon the experience, merit, and fitness of candidates, to be ascertained as far as practicable from the records filed in his office. This necessitates a careful inquiry into the scholarship, merit, and fitness of all teachers in the employ of the board, as well as of candidates seeking positions.

The first step toward providing an efficient merit system was the creation of a city board of examiners. This board consists of the city superintendent of schools, the principal of the city normal school, the principal of the high school, and four others. The city superintendent is chairman *ex officio* of this board. By a provision of the state law, this board has the sole power to issue teachers' licenses in and for the city of Newark. Eligible lists have been created by this board from time to time for positions of every grade. From these lists the superintendent makes his nominations when vacancies occur. Candidates are usually rated by the board of examiners upon the following basis: scholarship, 50 per cent.; experience, 25 per cent.; fitness, 25 per cent.

Candidates for the lowest grade license who are graduates of a four-year high-school course and a two-year normal-school course, or of a college course, are exempt from written examination. All candidates, however, are required to pass an oral examination to determine experience and fitness.

In order to secure reliable information as to class-room efficiency of teachers, reports are called for twice a year. Principals are required to send to the superintendent their estimates (ratings) of the efficiency of their teachers under two heads, namely, (a) instruction and (b) discipline. Supervisors, both general and special, are required to make similar ratings. Teachers are grouped (rated) under the following heads: "excellent," "good," "satisfactory," "poor," and "failure." The first three groups of teachers are entitled to a stated increase in salary. About 95 per cent., generally speaking, of our teachers are included in the first three groups.

Our salary schedules are based upon years of experience and grade of license. The maximum salary is reached at the end of five years. This salary is \$750 for kindergarten teachers and teachers in grades I-VI, inclusive.

To teach a seventh or eighth grade a candidate must obtain a first assistant's license. This license is given to those only (college graduates excepted) who pass a written examination in certain academic studies. All must possess a satisfactory record for class-room efficiency. The maximum salary of this grade is \$800 to \$1,000. The next promotion grade is that of vice-principal, which is obtained in the same manner. The maximum salary in this grade is \$1,200. In all elementary grades men and women are paid alike. We have also a head assistant's license—a teacher in charge of a floor—who receives a maximum salary of \$900.

The introduction of this system met with some opposition at first on the part of both principals and teachers; but it has steadily won favor, until today few, if any, of our teachers would be willing to go back to the old system, namely, "to get a promotion is to get it."

Rarely, if ever, is the justice or wisdom of the superintendent's nomination from the eligible list challenged either in the board or outside the board. If a board of examiners is careful and impartial, so that its records of experience and fitness are to be relied upon, the superintendent will be able to make his nominations with impartiality and with reasonable certainty of general approval.

THE NEW YORK METHOD

WILLIAM H. MAXWELL, superintendent of schools, New York city—Let us not attempt to settle questions by a show of hands.

At the close of Superintendent Poland's remarks the question had been asked whether teachers in higher grades should be paid higher salaries. A large majority indicated that there should be no distinction in salary with regard to grade below the high school.

In New York there are three grades of salaries: the lowest, from the kindergarten to the sixth grade; the second, in the seventh and the first half of the eighth grade; the highest, in the upper half of the eighth grade. The lowest salary is \$600 and increases annually by \$40 thru the seventh year of service. The progress of the teacher and her work is then inspected, and the board of superintendents determines whether the particular teacher shall be advanced to a higher grade and salary. This is done again at the end of her twelfth year. The last advance is to \$1,240.

We believe that teachers do better work when confined to a specialty; therefore in the higher grades we have one teacher for English, another for history, etc. Our teachers are thus stimulated to aspire to broader knowledge and a higher grade of service. What we want in the teachers of today is knowledge of matter quite as much as knowledge of method. We must hold out the hope of advance and betterment to teachers; otherwise they are a disheartened lot. I desire to state that in New York, as in Kansas City, with a merit system of promotion there has come a revival of learning. I was impressed with the suggestion of Mr. Van Sickle, that there may be a better way of securing scholastic advancement of teachers than by resorting to the ordeal of protracted written examinations.

DISCUSSION

CLARENCE F. CARROLL, superintendent of schools, Rochester, N. Y.—Superintendent Maxwell has described the system of promotion in the schools of the city of New York. If I understood Mr. Maxwell correctly, he stated that the tendency is for teachers to seek promotion from the lower grades to the higher grades in the elementary schools. The higher salaries paid in the upper grades would naturally have this effect. In consequence, the primary teacher would always be inclined to look forward to the day when by examination and by promotion she might leave the service of little children and aspire to teach children of the grammar grades. I must assume that the primary teacher in the New York schools regards herself from the first as performing only a temporary service, and that the best talent cannot therefore be retained in the primary grades, for the ambitious and artistic teacher would eventually, attain her aim and secure her promotion.

This proposition will, I am sure, appear to the average superintendent as a menace to the work in the early grades. It has been my experience, and I am quite sure it has been yours, that the first-grade teacher ought to be a good teacher. That is stating it mildly. I may put it in stronger terms and affirm that no service rendered to any human being is higher than that of the successful primary teacher in the public schools and kindergarten.

I should be interested to know if Mr. Maxwell would place the same stimulus before kindergartners to lead them constantly to seek "advancement" from their work. Certainly in every community in which I have ever labored the work in the kindergarten and early grades has been regarded as a post of honor. This work calls not only for skill, but for culture, for insight, and for consecration. I should be compelled to say that any proposition to discount the importance of this early work, any influence which would tend to make teachers doing such work dissatisfied and discontented, would be a public calamity.

Under the influence of such a system as Mr. Maxwell has described it would not be just for us to blame teachers for seeking this so-called "advancement." The theory itself

appears to me to be vicious, first, in that it places this service to little children relatively below that rendered to the older children, and, second, in that it would tend to destroy in the lives of a host of noble women the highest impulse ever given to woman, and to blight the sentiment that has so long dignified the kindergarten and primary schoolroom. It would, I believe, tend to put back the progress of the public-school system and the progress of civilization indefinitely, if these principles were to be generally adopted and acted upon.

There are present many women supervisors, who are authorities in their work. They are our dependence and strong support, and their work is done more especially in that part of the school system where the highest efficiency and the finest results are usually attained, namely, in the primary grades. It is my earnest hope that some of these ladies may be called upon to carry forward this discussion. If we should hear oftener from the lady members of this department, especially when there is anything to be said that really has anything to do with the schoolroom, we should get much nearer to the heart of the question at issue. So much of our time is given to organization, and to other parts of the mere shell of our habitation, that it is comparatively seldom that they have the opportunity of joining in our discussions. I am certain, Mr. Chairman, that you will not fail to take advantage of their presence and of their wisdom.

MISS ELLOR E. CARLISLE, Supervisor, public schools, Boston, Mass.—Primary teachers should be made to feel that they have the highest, noblest, and best-paid work that their qualifications open to them. All teachers should continue their habits of academic study, for inspiration in their work, and for the renewal of their youth. I should like to see primary teachers receive an increase of salary after some years of work, on giving evidence of efficiency and scholastic advancement. The greatest thing this association can do is to forward the idea in the public mind that appointment and promotion should be only thru the merit system.

AARON GOVE, ex-superintendent of schools, Denver, Colo.—Our agreement upon the desirability of the appointment of teachers upon merit is pronounced. It is difficult to understand how the superintendents can approve any other method. The larger part of the discussion relates to the application of such machinery as is necessary to execute the plan of appointment upon merit, chiefly upon examination, followed by confirmation based upon successful trial, according to the report of inspectors.

Most of us are engaged in administering school systems of cities of a hundred thousand people or less. The greater cities, which latterly are so admirably conducted, are scarcely profitable examples for the superintendents in smaller communities.

The impersonality of the superintendent in Greater New York or Chicago has no place in the smaller jurisdictions. In a city of fifty thousand people the superintendent is a distinct personality, known socially and politically to every inhabitant. In the initial examination of a candidate, failure is met by individual remonstrance from the friends; then after a year's trial, if the reports concerning the novice do not justify a confirmation of the appointment, the superintendent is forced to meet people and discuss each case. How many of us are obliged to hear unanswerable questions from dear and influential friends—questions from which the superintendent of the great city of New York is far removed: "Why was she not confirmed?" "Is not her scholarship proved by her certificate?" "She has a good room; I have been in it." "Miss B. and Mr. C. tell me she is superior." "Here is a petition signed by thirty of the mothers asking that she be retained." "The other candidate, who is the daughter of an alderman, was confirmed. My friend has no aldermanic relation." One also hears from the judge, the senator, the ward "captain," and so on. Each one knows personally the superintendent; and so I submit that we need most, at a time like this, to hear how to remove the obstacles in the way whereby the superintendent of the small city seeks to base appointments upon merit.

Inalienable rights are assumed to belong to the daughters and kinfolk of several classes found in each community. Of such are "the man who has always paid taxes for the

schools," "the man whose daughter went thru the schools," "the man whose home is there, and who must have a living for his daughter," "the clergymen of the great churches," "the leading politicians," and the large class whose methods of intrigue are wickedly powerful when assaults are to be made upon the school management, and who threaten seriously to harm the whole structure, unless the given candidate be assigned to a position.

These intimations will be recognized in some smaller cities as obstacles in the proper execution of appointing teachers upon merit—and they are not encouraging. Greater New York stands as the shining monument today of proper methods of appointment successfully accomplished, but even there frequent threats are already heard from unfriendly political powers.

VERNON L. DAVEY, city superintendent, East Orange, N. J.—A large majority of the members in attendance are from cities having a population of less than seventy-five thousand. To be of value to them, the discussion should embrace the following points: (1) the source of supply; (2) the method of selection; (3) the appointing power; (4) promotion of teachers.

1. It is not customary or necessary for small cities to maintain training schools. The product of the state normal schools should be sufficient in quantity and much better qualified. The source of supply should be unlimited as regards area. Each schoolroom is for the benefit of forty-five children, not for the benefit of one young woman. Home talent should receive equal consideration with that from other localities, but not greater.

2. All appointments should be made on the nomination of the superintendent, who should be given unlimited control. In the smaller cities he should be expected to nominate only those persons of whose ability and qualifications he is morally certain. To insure this, he should be given the privilege of visiting candidates in their schoolrooms, and should be expected to use the privilege.

3. The nomination of the superintendent should guarantee appointment by the board of education. This in effect gives him appointing power.

4. Promotion may be in salary or grade, or both. If salaries are equal in all grades up to the highest in the grammar schools, as I think they should be, but few teachers will care to be advanced in grade. Increase in salary should, in my opinion, be by schedule, with the consideration that there shall be no advance at the end of any year if the principal and superintendent do not agree in recommending the teacher as having done at least good average work.

The above plan is in operation in East Orange, a city of 25,000 people. The chief obstacles are two: first, the overcoming of the demand for places for home talent; second, the increased cost if nonresident teachers are employed.

A judicious and well-balanced superintendent should be able, by his own efforts and the influences that he can bring to bear, so to mold the sentiment of the members of the board of education, and thru them the community, that these methods of appointment will be approved by the taxpayers and the necessary funds will be provided.

A. B. BLODGETT, superintendent of schools, Syracuse, N. Y.—It is certainly gratifying to find the merit system in such general use; it is still more gratifying to find such remarkable unanimity of sentiment in favor of it. I rise to question whether a system that seeks to reward merit can rely wholly on examination, even in first appointment. Scholastic attainments and professional preparation are good, but they are not all. The personality and character of the candidate are to be considered, and that fine thing called teaching power which cannot be weighed in the scales of an examination, whether oral or written.

It seems to me that there are three things to be considered in rating teachers for appointment: (1) scholastic and professional preparation; (2) character and physical fitness; (3) efficiency in the schoolroom; and two things for which teachers should be rewarded by promotion: (1) marked and increasing efficiency; (2) professional improvement by scholastic advancement.

JAMES L. HUGHES, inspector of schools, Toronto, Can.—In Canada we have not this problem. It is solved for us by the government. Everything there is on the civil-service basis. Teachers are trained in government schools, and inspected and graded by educational experts in the employ of the government. There is no outside influence whatever.

MANUAL TRAINING IN THE ELEMENTARY SCHOOL

JAMES PARTON HANEY, DIRECTOR OF MANUAL TRAINING, BOROUGHES OF MANHATTAN AND THE BRONX, NEW YORK CITY

The term "manual training" has no well-defined meaning, and in consequence no well-defined practice. Some think of it only as constructive work; others, as motor training in general. At the present time, in the higher councils of its advocates, there is an active debate on the question of how far the natural activities of the child shall determine the industries he pursues in the elementary school. Both sides agree that the child must have manual work in abundance, if he is properly to develop. Both sides agree also that his natural interests must be consulted in determining what special phases of manual work he is to do. But one side holds that his natural activities form a reliable guide to the industries which he should undertake, while the other protests that no activities seen in school are really natural. All rise more or less, say they, in response to the stimulus of the teacher; therefore they urge that stimulus be given to lead to interest in those activities which now make up the world's work. The first would give the child insight into the history of man's rise; the second would prepare him for future work in the world.

Faint echoes of this discussion have reached the class-rooms wherein elementary teachers are essaying to present the different phases of manual work. As a discussion they look upon it as theoretic and of small concern, while they turn to their immediate superiors for specific directions as to the manner in which they are to treat the practical problems which the arts present. Whether they solve the latter well or ill depends largely upon the teaching of these leaders and upon the standards which they erect.

But leaders are fallible. Many a superintendent regards all motor work as "special," and is content to turn it over to a special teacher to organize and develop as best she may. But special teachers, as a rule, come to their task with training limited and one-sided. They are ill advised as to the underlying principles of the curriculum, and believe that success lies in keeping their special subject intact. To this end they labor, striving by isolation to magnify its importance. Thus there results much manual work taught in a manner not justified by sound pedagogy. Often there is an attempt to distinguish sharply between related activities. Art and manual training are held apart, despite the fact that they are to the little child common means for expression—concrete, graphic expression. Thus the first canon in the manual-

training creed is violated. This states that drawing, construction, and design form the manual arts—one subject—and as such should be developed. Many reasons urge this identity. The arts are necessary to one another in practice. They cannot be successfully taught apart. Knowledge of drawing is needed in design, and knowledge of design in construction. The teaching of exercises—art for art's sake—should not be tolerated. The beauty the child learns should be beauty for use. Design unapplied is jejune and pointless; construction without art is an offense.

Developed apart, the arts suffer. Their natural relations are obscured and their technical requirements exalted. Each appears to exist only for the cultivation of some peculiar skill. Such teaching is a mistake; it exalts the technical ideal. Whenever rapidity and skill are sought at the expense of original expression, one recognizes worship of this ideal. It accepts, even seeks, the smooth product of automatic performance. It praises exercises which have required hours of mechanical work, tho they may not have had given to them ten minutes of actual thinking. It adheres to rigid sequences, despite the fact that neither the child's interest nor his understanding conform to steps so ordered.

Overemphasis upon the technical side violates another canon. This declares that the arts must be made developmental, not technical in aim; that they must be offered in each stage of the child's growth with specific consideration of his characteristics in that stage, and of the changes he must undergo before he can advance to the next higher stage. Technical ideals look to the product; developmental ideas, to the producer.

We may distinguish three growth periods in the child's life. From the sixth to the ninth year he develops thru sensory channels. His language is limited, and drawing and making form his chief means of expression. From nine to twelve his interests multiply. Expression thru speech becomes more free. His brain reaches its maximum size, and a desire for motion and things in motion becomes marked. Difficult muscular adjustments are now easily acquired, and habits of action readily fixed.

The period from the twelfth to the fourteenth year sees the pupil pass from childhood to adolescence. The girl precedes the boy by a year or more. In this change nature shows to us a mystery. Striking alterations occur in the child's physical and mental make-up. As a child he was a sensory being; as an adolescent he is a sensitive one. He rises now to heights of appreciation and understanding quite beyond his power to express; to him may be presented those æsthetic relations heretofore beyond his comprehension.

The arts on the physical side make a direct response to each of the periods named above. Arrest of motor development follows a failure to offer them at the proper time and in the proper manner. If they are begun and abandoned, a distinct atrophy of the developed power occurs. As educational elements they require early presentation and constant use.

On the mental side they conserve individuality. They foster personal and

not mass instruction. They necessitate constant judgment concerning form and pattern. They seek initiative and self-expression, and markedly stimulate the imagination. They deal with concrete ideas and concrete things, and thus aid to build up that apperceptive background to which the child must relate all that he truly learns.

The arts, besides, act as a moral or disciplinary agent thru the periods of development. They cultivate habits of cleanliness, system, and order. They inculcate perseverance, and hold up ideals of self-reliance and honesty. They lead by interest and are undertaken willingly—with avidity. Discipline in their presence becomes more natural and rational; the atmosphere of the schoolroom is made by them less formal. They give pleasure in their doing, and serve thus to balance outside attractions. They are of marked service in keeping the child in school.

The specialization and segregation of the arts tend to violate another important principle of their teaching. This principle defines them as socializing agents of marked service in revealing to the child his physical environment. The arts naturally relate themselves to the life about the pupil and help disclose to him his relations to his fellows. They develop social action and lend themselves to joint or communal work. Their exercises are never so interesting as when they offer results of service in the class-room or the home, or when they meet the child's interest in the world outside the school, by reflecting in miniature the tools and appliances used in real life.

The social conscience may be best wakened in the little child in this way. The interests of the arts are so varied, and their forms of expression so various, that they give in their pursuit too many points of view. Such social impressions react as expressions, and the good teacher will seek to have the child make such reaction habitual.

Never is the drawing or the making so interesting as when it responds to some present need. Those who seek to develop technical ideals are apt to ignore or slight this fact. They endeavor to secure well-finished exercises, and to this end require copy after copy for practice sake. In so doing they traverse a fourth canon of sound teaching. This requires that in the arts the element of reality appear; it demands that they concern themselves with real processes and real things. The child passes thru the symbolic stage at the threshold of school life. Later his play spirit may lead him to many games of make-believe; but even in his games he seeks reality wherever he can find it. In school it is important that he be not asked to undertake work the meaning of which he does not understand. The arts frown on formal expression built upon a basis of dictation and command, and robbed of all motive save that of fear.

Real reasons should move the child to his work. Each exercise should have behind it intelligent purpose and before it concrete achievement. Formal steps to develop any process must be followed by an opportunity for free expression; for a chance, that is, to do original work in which the new process

appears. Thru formal training and practice exercises the child never gains the incentive to application; he never acquires conscious power to use his drawing, design, or construction to definite purpose. He may learn to make a neat drawing or model; but this, however attractive it may seem, has served small purpose if it has not the child's own thought in it. Conscious power comes when the products of the child's labor are tangible and useful. In the earlier years immediate results are necessary, but at the close of the pre-adolescent period the child is prepared to accept practice as necessary to technical excellence. Technique is a subject which demands "a background of actual experience." The child should learn to look upon original expression as the goal of all preparation.

The aim of technical training should be to put the child in a position to use his knowledge for practical and personal ends. The skill taught should appear of real worth, the beauty as a positive excellence to be sought in all constructive and decorative expression. The plans drawn should be for service; so should the designs and the constructed forms. In short, every phase of practice of the arts should be instinct with reality.

Four principles have been presented as guides in teaching. To these must be added a fifth. This sees the error of allowing the arts, even as a well-co-ordinated group of subjects, to remain a group separated from the other subjects of the curriculum. As a principle, this requires that the relation between the arts and other branches be made direct and intimate. The arts should act in the spirit of service. They should help in teaching, lending interest thru doing, and aiding to give concrete form and shape to cloudy mental images. To find the various ways in which they may thus assist in the development of language, nature study, number, and other school interests is the business of class and special teacher. Some courses of study look to them as central subjects, while some admit them only as related topics; but whether developed from within or related from without, it must be the business of the teacher to see that they lend themselves to the teaching of all phases of the curriculum. There is no surer way than this of identifying them as essentials. One who has once discovered their power to make vivid and direct her teaching in other subjects will not again attempt to teach without them.

Five of the principal tenets of the manual-training creed have been cited. Put into a single statement, these declare that the arts are one—that they are part of the birthright of the little child, and should form, as developmental and socializing agents dealing directly with use and beauty, an integral part of the course of study he pursues. How, in the light of the principles, would they appear in the ideal school?

In the first or primary stage we should not find them as separate subjects at all. We should discover them being used, as a means of teaching, as agents injecting the concrete into many subjects of the curriculum. We should find the teacher constantly turning to her drawing and her making, in

connection with her language work, her folklore tales, her nature study, her number lessons, and the like. The arts would be, as it were, dissolved in the curriculum, serving constantly as modes of teaching, as means for securing the child's personal expression.

Some of the children's work would deal with those occupations which have busied man thru the centuries, but such pursuits would appear, not as devices presented for the sake of having the pupil reconstruct the primitive industry, but rather as instruments giving him insight into the simplest elements of the life about him. Thru such work we should find him learning his own social setting, his studies turning about those things—food, shelter, and clothing—which make for his comfort and sustenance.

Technical accuracy thruout these years we should find subordinated. The work done would require no fine muscular adjustments. None of it would be small—trying both to sight and fingers—and none mechanical, leading to hours of automatic performance in braiding or weaving. The materials used would be many. Original expression would constantly be evident. The things made would belong to their makers.

With the children of the pre-adolescent stage we should not find as marked emphasis on free expression thru drawing and construction. With such pupils, the arts would be found serving as agents giving precision of handling, and of self-control. Many processes would appear in the class-room—drawing, painting, cutting, pasting, sewing, binding; envelopes, calendars, booklets, etc.; all in use in developing concrete forms of immediate value. We should find, too, the pupil's rising critical sense being employed to determine the necessity for drill, and drills being undertaken as failures showed the need of them.

Higher in the school we should find the children well advanced in knowledge of processes, the boys in the school shop, and their sisters studying the principles of domestic economy in the school kitchen. Plans we should find being used in the shop—plans made by workers busy in carrying them out. At times we should find the boy working in individual fashion; at other times as one of a group employed on some elaborate model for the school. Applied designs, too, of no little beauty, we should find him making and using. His knowledge of both construction and design should appear in the simple lines of his self-planned model and in the suitability of the decoration designed for it.

The fourteenth year should find our pupil with his elementary school life completed. He stands with his native interests heightened by cultivation. His hand is gifted with no little skill. He can perform some score of operations and is familiar with some score of tools. He will make for you a simple plan and use it. He can design a simple decoration and apply it. He has completed, during his school life, half a hundred models or more—books, toys, home utensils, and simple pieces of scientific apparatus. Thru his work he has conceived a strong constructive bent and has learned to see the world about him as a constructive world. He has had wakened in him an æsthetic

sense, has had his eyes opened to beauty. He has learned to know it thru searching for it to discover fine lines, harmonious proportions, and fitting decorations. Above all, he has had revealed to him himself; he knows something of the power which lies in his creative brain and in his dexterous hand, something of his own ability to mold and shape the environment in which he lives. Thus the arts have served their purpose as essential elements to his elementary schooling.

We have stated our theory and pictured our ideal. The question that remains is to state how this ideal may become real, how this theory is to be made practice.

If one is at perfect liberty to organize a course of study, the theory may be followed closely, and we may make the arts central, using them as forms of industrial and social activity from which all the other work of the classroom proceeds. Certain isolated schools have thus developed them. Such development leads to perfect unity in the course of study.

Another method of affecting close relationships is to organize the general curriculum on the culture-epoch plan. Here the pupil in studying the lives of primitive peoples faces man's elemental needs for food, shelter, and clothing. In such a curriculum the arts spring from the child's study of primitive occupations, from essential elements in his re-solution of the first great problems of his kind.

It will be noted that these two plans represent in practice the beliefs of the two parties in the debate to which reference has been made. Both develop the arts as essentials; but the first makes them central, presenting them as activities evoked in response to a study of immediate surroundings; while the second sees them as forms of industry which must be studied if the child is to re-live the life-history of the race.

Both plans have advantages; but it is not the purpose to discuss their relative merits. Courses of study which follow the lines indicated are not common. To the great majority of teachers the problem of the arts is to relate them to a curriculum organized in manner suggested by the Report of the Committee of Fifteen. Five co-ordinate branches, present themselves in such a curriculum, the greater emphasis being upon language. To relate the arts directly to these branches, it is necessary that in the early years certain centers be selected, to which the drawing, construction, and design may be immediately referred. Many such centers offer in language work, nature study, geography, etc., the first course of study at hand suggesting the following in its syllabus on English:

First year—playthings, pets, games, outings.

Second year—the home, occupations, holidays, and seasons.

Third year—Readings on the Indians, Eskimo, Arab, Dutch, and Chinese.

Around each of these may be gathered the work of a week or more, as each gives rise to a variety of lessons in drawing, construction, and design. In a practical development of this scheme the writer has seen the work of a third-year class revolve for several weeks about the hero Hiawatha. The

story was read and talked about, the hard words spelled, the scenes illustrated in graphic fashion. The tepees, canoes, weapons, moccasins, snow-shoes, and the like were made of simple materials, and suitable designs were thought out and applied. The whole series of lessons was alive. The children vied with one another in offering suggestions for possible use in drawing or making. Their keen attention followed as their interest led.

In the higher grades it will not be found possible to relate the arts, as directly as in the lower, to other branches of the curriculum. It is now a matter of having the pupil express himself thru the arts, as of having him skillfully construct some form of use and permanent value. A great variety of such forms are to be developed about school and home. The school offers opportunity for the making of various communal or group models in connection with the study of science, nature study, geography, and mathematics. Other very satisfactory exercises will be those which gather some score of lessons in free-hand and mechanical drawing, in color, design, and construction around a form, useful in the class-room or needed in the home.

Various questions regarding materials and methods must here perforce remain undiscussed. Those relating to expense may be briefly considered and dismissed. A liberal school board means the possibility of working in many media; an economical one means that pencil and paper must suffice, with such additional material as the children themselves are in a position to furnish. It is, however, to be understood that the spirit of the creed which has been presented may be maintained, however liberal or meager the supplies. This spirit looks to see the arts in use, helpful, vivifying. Understood, it makes possible their successful development as well in the one-room country school as in the great city system. This spirit must find expression as well in the office of the school superintendent as in the class-room of the lowest grade. Thus do we return to our first proposition.

Failure in the arts must lie at the door of the school officer who leaves them as specialties to work out their way alone. Success comes to him who studies them, and who causes his teachers to study them—in their relations. That curriculum will develop best in which they are taught by those who comprehend their peculiar power, and who have been led to employ them directly, and in personal fashion. Success in the arts is to be measured in terms of use. They must be taught for use and not for show.

CHILD LABOR

JANE ADDAMS, HULL-HOUSE, CHICAGO

[AN ABSTRACT]

The labor of little children has never been so valuable to the business world as in the past twenty-five years, fifty, or 100 years, if you choose. The heavy work which formerly required a man's strength is now done by machin-

ery which a child may guide, and so we have the temptation to use the labor of little children, because they can be obtained at less wage. Gradually in England there have been made, since 1832, simple legislation against the evils of child labor. The evil has gone on into the third generation now, and child labor is almost 100 years old.

Many of our states have very defective laws, if any at all, with regard to child labor. In Pennsylvania they are inadequate; children over thirteen years can work all day and all night. There are more children under the age of sixteen at work in the Pennsylvania mines and factories than in all of the cotton states of the south.

We wonder why the public conscience is so slow to take up this question. There are many reasons. One line of responsibility lies with the educators. So rapidly as the children have left the schoolroom the educators have lost all interest and responsibility, and have turned the children over to the business world. If they do their full duty to the children within the four walls of the schoolroom, they feel they have no further duty or responsibility.

Industry is constantly wearing out the children at the period of their lives when they possess abnormal strength, a strength that should naturally go into growth and development. The state furnishes vastly expensive public school buildings and systems of education, and then, when the child leaves school, merely because the state laws offer no protection to the child against this premature labor, the state must afterward resume their care when they are worn out and thrown aside. And the factories are constantly saying to the schools: "Give us more; we have worn out and used up that which you gave."

It is a fact that children employed in these heartless factories, if they live at all, are broken, absolutely crippled, and unable to work and support themselves after they have reached years of manhood and womanhood, and must be supported in the public asylums and hospitals. Children are commercially most advantageous between fourteen and eighteen years, for most employments.

If this great body of public school instructors had been interested in the children as citizens, they would have asked, "What becomes of the children after they leave the schoolhouse door?" Is there such a thing as regulating hours of labor, such a thing as continuing instruction, preparing them for citizenship? What are we doing to protect them?

Teachers are only one factor in the problem, but we have a right to expect more help from them than the past child labor campaigns have shown. In Virginia the children cannot go to work until they are thirteen, are guarded then and allowed to work but certain short hours, and prohibited from injurious industries until twenty-one.

There is getting to be a strong sentiment in the United States that we have banked too long on the quantity of our products, and that we will soon be required to judge our work by its quality instead. We must protect and

educate our children in order to raise up the trained, skilled workmen necessary to the product of fine qualities.

The child is waked up when he leaves the routine of the school and begins to earn money. When that takes place prematurely, we have a boy-man, without the initiative of the man, or his reliability, but with an aggressiveness born of his pride in being an earner. He is unable to make the connection between what he learned in school and what he sees in the factory. If we could only get hold of him when the amount earned is all his pride, if the schools could only assume that many of the children are going into the factories, and give them a little of what the factory life means!

We have allowed industry to modify education more than education has modified industry. We are cowards if we will not acknowledge the effect of premature labor on premature child workers. The compulsory education and factory laws are coming together more and more, and in some places where both are good and well enforced they are working marvelously together. Thus we get a faint idea of what would happen if educators would remain interested in the child until he tumbled into his grave, and if he tumbled into his grave prematurely would feel in a measure responsible. It is too true that factory inspectors in many states are but too easily influenced by commercial interests.

The enthusiasm of the American schoolmaster would carry him over into the child labor agitation for the protection of the child very quickly if he were once interested.

DISCUSSION

LAWTON B. EVANS, superintendent of schools, Augusta, Ga.—I am in intimate contact with the conditions that have been referred to by Miss Addams, and the improvement of which should be the care of every superintendent of a mill community. The question arises before us: What shall we do after the mills exclude the children, and compulsory education laws force them upon our hands? What kind of education should we provide for them?

I do not believe that manual training, as we know it, quite meets the case of the factory child. The whirl of wheels has already drowned the sweet voice of life, and the tool has already cut away all the joys of existence. What they really need is less of machinery and tools, and more of books, music, pictures, flowers, and the spiritual side of life.

Allow me to tell you of a model home enterprise, at a minimum of cost, and at a maximum of adjustment to the real needs in the life of the factory child. Near one of the large factory schools in our city a house was rented, by the teachers, just such as the children live in—no more no less. It was painted, inside and out, roof and all, in artistic color; it was furnished with kitchen, dining-room, sewing-room, and library furniture—just the cheap but dainty sort that every family ought to have. The equipment of pictures, bric-à-brac, and curtains was inexpensive, but in perfect taste.

The girls are taught the woman's side of housekeeping, decorating, cooking, sewing, and whatever else belongs to her sphere as a home-keeper. The boys are taught the man's side of home-keeping—protection, provision, repairs, gardening, wood-work. The reading-room is open all afternoons for reading and simple games. The design at large is to

teach pupils, who soon will have homes of their own, the real meaning of a wholesome, attractive home, and all without expense beyond their means. How eagerly their starved natures have responded is evident by the crowded classes, by the willingness to do and provide, and by the great pride they are showing in their handiwork.

I do not know of any better work than this for children of the factory who have their afternoon hours free.

MANUAL TRAINING IN THE SECONDARY GRADES AND IN COLLEGES

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Manual training, properly so called, is from its very nature and content a secondary-school subject, and the colleges and technical schools should relegate it to secondary schools, and should recognize a full course of manual training as a preparatory study. In other words, they should treat manual training as they now treat algebra, geometry, and Latin grammar.

This change cannot be made immediately, since but a small part of the high schools and academies have full courses of manual training, and as it is an essential preparation for technical schools, the latter must supply it until the high schools are equipped.

The logic of my suggestion is readily seen. In a technical school the pupils need a knowledge of materials, tools, and processes in their laboratory work. Take, for instance, the laboratory of engineering, in which the pupils come immediately in contact with engineering appliances, with machines for testing the strength and elasticity of materials, with hydraulic apparatus, with electrical appliances, with ventilating machines, and with mechanical inventions of all kinds which involve theory as well as practice. All such work requires continual use of mechanical knowledge and skill; adjustments must be made; pieces must be fitted; and auxiliary apparatus must be constructed. While this work is going on, it is a dead waste of time to stop to learn the use of tools. One might as well stop to learn the rules of arithmetic while performing the duties of an accountant, or elementary algebra and geometry and calculus while solving problems in applied mechanics. No, manual training is strictly preparatory work—preparatory to a great many things, and especially to the laboratories of a technical school, as well as to a thousand and one operations in practical life.

In what I shall say further please remember that I am thinking and talking of pupils who are not less than fourteen years of age, and who may be eighteen or twenty years of age. I am not thinking of little boys, but of those who have considerable physical maturity, physical strength, some knowledge of algebra and perhaps of geometry, and who are quite familiar with mechanical drawing. They are supposed to be able to read drawings readily, and to make projections, sections, and developments, as may be required.

I regret that I must confine myself, during the few minutes in which I am permitted to speak, to manual training for boys, excluding the girls; but I wish it understood that girls can with almost equal profit take all the wood-work and all the drawing that the boys take. Such subjects are highly educational, very interesting, very helpful in their studies, and extremely serviceable later on.

I assume that every boy in the secondary school takes manual training for at least one year. Every boy owes it to himself to take it, and we owe it to him to give it. When properly taught, it opens up a new field, and it furnishes educational opportunity that no one can afford to miss. After a year of such work the secondary schools should differentiate between those which have manual training and those which have none.

I do not approve of pupils taking "occasional" shop lessons; that is, joining a class of "regulars" whenever they feel like it, or whenever they have time, and confessedly doing less than the full amount of work in it. Such work is very disappointing, and such students are very demoralizing to a class. Manual training should be treated with respect. The student should be held to strict account, and his work should be graded and counted as other work is graded and counted.

Both the appliances for manual training and the nature of the work itself depend upon the purpose of manual training. What is its great object and aim? If we answer that question, it will be easy to specify how best to secure what we are aiming at.

The object of manual training is mastery—mastery of the external world, mastery of tools, mastery of materials, mastery of processes. Only recently have the mechanical arts been studied, analyzed, and arranged in logical order for the purpose of being taught. It was formerly assumed without argument that the only way to learn to use tools and to master materials and mechanical processes was to go into a shop as an apprentice, or associate one's self with workmen engaged in the execution of ordinary commercial work. The idea of putting the mechanic arts into a school and teaching them step by step was a new thought, just as it was a new thought when law, medical, naval, and military schools took the place of the court-room, the doctor's office, the deck of a ship, and a military camp. But the world has made progress in educational matters during the last fifty years, and in nothing more emphatically than in this one item of teaching the mechanic arts.

You will notice that I am not thinking of future occupations so much as I am of a general preparation for life, altho I do recognize that not only the industries, but the physical, the chemical, the biological, the engineering, the architectural, the dental, and the medical laboratory—all need manual training in their preparatory courses. Manual training leads up to all studies, and it shuts nothing out. On the other hand, it opens the doors, and lifts the shades which hide or obscure the activities of the world in which we live.

Many mistakes have been made, arising from a wrong notion of the object

of manual training. Hence in one locality manual training has a strong tendency to run into trade work; in another it runs into art work; in another it runs into the factory idea and aims at production rather than education. Some people fancy that manual labor is the same thing as manual training. We are frequently told that the boy from the farm has had manual training; and it is true he has had some manual training, but he has had a great deal of manual labor along with it. I know because I was a farm boy and learned everything that could be learned on a farm previous to my college course. I learned to use correctly the hoe, the shovel, the plow, the scythe, the cradle, and to swing an ax; but I never learned the proper use of bench tools, nor had we a machine tool of any kind. I knew nothing of drawing, nothing of the mechanic arts, properly so called. Nineteen-twentieths of my time was spent simply in hard labor, which had no education in it beyond the study of crops and soils, and the market. Manual training would have been of great value, and a few lessons would have saved me much time and much money.

Recently I heard a gentleman from New York city, who evidently had seen somewhere a kind of manual training that was of very little value, say that a boy would learn more about the use of tools in half an hour by watching a good workman than he would learn in a month in a manual-training school. No man could have made that remark if he had seen manual training, properly so called, for the very thing which he wanted he would have found in a good manual-training school. He would have seen an expert workman using his tools correctly, treating his material correctly, and following the details of a process in logical order. He would have heard every step fully explained, seen every movement shown and justified; and then, in addition to the demonstration and the explaining, he would have seen that the boy himself had an opportunity to test the methods and to acquire something of the same skill and mastery. That is exactly what a manual-training school is for. The teacher is put there to teach. He is put there to explain and analyze, to illustrate, and to show how to solve mechanical problems.

I am reminded of a remark made to me recently by a gentleman in middle life, a very excellent carpenter, whom I saw watching my boys, twenty-four of them, at work making their first weld in the forging shop. He seemed intensely interested as he watched one of the young men at his work. I said: "You seem to like to see the boys work. Do you understand what they are doing?" "Yes," said he, "I worked a year once in a blacksmith shop." "Well," said I, "then I suppose this operation of welding is a very simple matter to you." "Not at all," said he; "I never made a weld in my life. I never got a chance. I kindled the fire and blew the bellows, and I did some striking for other men; but they never let me try to make a weld." Then he added, with a good deal of feeling: "These boys learn more in one week about the really essential art of forging than I learned in half a year." And the secret of it is they have a thoroly skilled workman who is competent both to teach and to demonstrate every principle involved.

The factory idea has done nothing but harm in manual training. It has resulted in a great waste of time and a great loss of interest and respect. A teacher once said to me that he had had what they called manual training during his freshman year. Among other things, he said he was shown how to make a wooden hat-rack with a variety of pins and joints, and he found the work interesting and profitable while he made a single hat-rack to fasten to a wall. "But," said he, "after I had learned all there was in it, I was told to make *six more hat-racks!* They had received an order for six, and I must make them. I rebelled and said it would be a great waste of time on my part. I wanted the time to be learning something new; but they had the order, and I had to fill it." The correct course is to abandon a process the moment one has mastered it, and go forward to the mastery of a new one. In that way every day is a step forward, and the pupil never has the feeling of a waste of time.

Now for the appliances. As I have already clearly intimated, the most important appliance in manual training is the *teacher*. To be sure, he is an expert mechanic, but he is a great deal more than an expert mechanic. He is a well-educated man, familiar with mechanical drawing; familiar with elementary physics; familiar with algebra and geometry; and withal a man who can both talk and write good English. He must be a born teacher, logical, clear; and he must understand boys and understand what they are in his shop for; that they are not there to fill orders, to execute work, or to have the tools taken out of their hands and their exercises done for them; he is to teach them how to do the exercises. He is to show them the *what* and the *how* and the *why* every time.

The first teacher I ever engaged to teach tool-work—and that was thirty years ago—was reputed to be the best workman in St. Louis. He utterly failed as a teacher. He could see only one object in all that he and his pupils were doing, and that was the finished article; and again and again he found it very much easier to do the work himself than it was to teach the boys to do it; and, besides that, his work was much better than theirs and made a much better showing. I discharged him within two months of his engagement.

Secondly, the shop or tool laboratory where manual training is to be taught must be large, light, and wholesome. It must not be relegated to the basement. It must be furnished with blackboards, blue prints, charts, and complete benches and outfits of tools for the individual pupils.

In the case of edge tools, which the pupil should be taught to keep in perfect order, each pupil should have his individual set, and for these he should be strictly responsible. Only unusual and occasional tools should be represented by single specimens and kept in charge of the teacher.

I object to a very expensive outfit, and to outfits which attempt to rival commercial establishments. I know of two or three manual-training schools in the East which have shops fitted, as I think, in a very extravagant and unnecessary manner. The men in charge have designed their outfits, not

from an educational standpoint, but from a commercial standpoint. Accordingly they are prepared to undertake work unnecessarily large and unnecessarily special in character. The fundamental principles can be taught at comparatively little expense, and it is not wise to make arrangements for the construction of show pieces, and often it is foolish and wasteful to build appliances for the shop itself.

The shops I recommend are wood-working shops in which ordinary bench tools are used, where a variety of hard and soft lumber is wrought upon, and where the fundamental principles of workmanship are taught; secondly, a wood-turning shop, which is always a pattern shop, where opportunities for learning the complete alphabet of steps in wood-turning are provided; thirdly, the first metal shop, in which metals are heated and thereby made ductile and pliable.

The fundamental processes of a forging shop are very few in number, altho their applications are countless; but these fundamental processes must be learned step by step, studying all the while the degree and influence of heat, and the behavior of iron and steel when heated, and heated to different degrees. There is so much in a forging exercise for the learner to master that it is better to divide it, the first step being a question of form and of manipulation; the second, a question of heat and the flow of metal under the hammer. The first can be learned with an extremely ductile metal like lead; the second, with hot iron and then with hot steel.

Up to this time forging shops have been largely equipped in the old-fashioned way, with coal forges and a blast. The new forge will be a gas forge, where a mixture of gas and air is driven by a pressure blower, producing exactly the heat required with a minimum expenditure of time and dirty work. I am at the present time equipping a forging shop for twenty-four students, the outfit being twenty forges for the students, partly gas and partly coke, and a coke forge for the instructor.

I may say here that the appliances for instruction should be of the best sort. It is the function of the teacher to teach both the art and the science of the art, and he must have the best of opportunities for doing so.

It is a popular fallacy to assume that the master-workman, who is skilled in the use of the best tools, is relatively unskilled and helpless in the presence of but a few tools and those inferior. Similarly, is it held to be a truism that the accomplished cook, who is familiar with the cooking appliances of a modern first-class hotel, would utterly fail if put into an ordinary kitchen with a coal stove and a common kitchen outfit. In point of fact, both assumptions are totally wrong. The true expert is always an expert, whether in tuxedos or jumpers; in a palace of machinery, or shipwrecked on a desert island; and his skill is never more apparent than when he makes poor tools seem like good ones, and when he gives to narrow appliances a range which the untrained plodder never dreamed of. Did you ever hear a first-class organist perform on a third-class organ, and did he not make it talk and sing thru all its octaves in a manner most surprising?

Brazing and soldering are arts which involve the behavior of certain alloys when heated, and they can be readily taught with few appliances, either in the pattern shop or in the forging shop.

The fourth shop is the molding and casting shop, where the use of patterns is fully illustrated, and the methods of making molds are mastered so far as the elements go. The process of molding and casting determines many of the details of patterns, and the pupil learns how patterns must be divided; what cores are for, and how they are made; and what core-prints are, and how they are used.

The quality of a mold is determined by filling it with a liquid which readily solidifies, and thus takes on the form of the mold itself. The liquid may be thin plaster-paris, or molten lead, or an alloy. I do not recommend iron or steel casting, inasmuch as it is very expensive to test molds with such metals, and it is almost impossible to work successfully with small quantities of material. If the school uses large quantities, there is a great deal of coarse labor and expense which is not justified by the educational result. Commercial work should never be thought of in a school. In practical life a great many things are cast in molds, such as works of fine art in bronze, in plaster, in brass, and other alloys; as well as in iron and steel in the industries.

It is a great mistake to multiply simple castings the patterns for which are borrowed or constructed elsewhere. For example, a purchased medallion in low relief may be molded and cast with little difficulty and the product put up as an evidence of "art work" on the part of the students, when really there is but a minimum of art work in it—no more art work than there would be in molding and casting a plane geometrical solid.

The most expensive shop of all is the fourth, in which the use of tools for cutting and fitting the harder metals without the assistance of heat is learned. This is ordinarily known as the "machine shop," inasmuch as the tools are largely machine tools of considerable complexity, altho there is always a certain proportion of bench work connected with all machine work. It is in this shop that we find the most elaborate, the highly scientific, appliances, and it is a fine educational achievement for the pupil to master the separate tools, to learn their uses and their requirements. The whole theory of metal-chipping, filing, drilling, planing, and turning is new to him, and intensely interesting. Accordingly, the shop should be equipped with certain standard tools for the processes I have named. The lathes, drills, and planers need not be large, but they should be ample for such exercises as are found useful in the course of instruction. As the pupil's mastery grows, he sees more quickly the logic of a machine, and he thinks over again the thoughts of the designer or inventor, and appreciates, as he never appreciated before, the high qualities of the skilled expert.

The machine shop, like all other shops, should be fitted for regular sections of students numbering not over twenty-four, nor should it accommodate less than twenty.

In a modern school all the machinery should be driven by electric motors, and the machinery in any one shop should be absolutely under the control of the teacher of that shop. While he is giving his demonstration of theory and practice, the shop machinery should be still, and such as he needs at his own instruction table should be driven by a separate motor.

The cost of the tools for a well-regulated manual-training school, containing three hundred boys, should not be less than \$10,000, and it need not exceed under any circumstances \$15,000.

I shall have little to say upon the course of instruction other than to follow the lines suggested by the shops and tool appliances. There is no royal set of models or exercises in shop work, any more than there are royal selections in literature or royal examples in arithmetic and algebra. The live teacher who studies both his subject and his pupils will never be content to use this year just the series of exercises he used last year. He will see how they can be improved, how certain fundamental principles can be more clearly presented and illustrated, and how both time and material may be saved by judicious combinations.

More and more every year, from what I see in my own school and elsewhere—and my observation has been very wide—do I deplore the waste of opportunity in needless repetitions, and the folly of bad arrangements. I have seen incompetent teachers yielding to the lawless whims and fancies of pupils, when those whims and fancies should have been guided and controlled. The untaught boy has no appreciation of the importance of sequence, nor the necessity of knowing just how tools should be used before he undertakes to use them in a project. If left to himself, he undertakes what he is not prepared to do; he uses the wrong tools, or the right tools in the wrong way; and his workmanship is invariably bad. His object is not manual training; it is a project; and his estimate of the value of manual training is based upon the value of the completed exercise. Again and again have I stated—and my judgment is confirmed by the judgment of any number of mature students who look back upon their training—that the main thing is the boy and not the article; and that, were all the exercises of the year shoveled into the furnace and burned, so far as they are combustible, all the manual training would survive in the developed brains and trained functions of the pupils.

At the same time, as a justification of the logic of every series of elementary steps, the pupil should be required, under the direction of the teacher, to make what we call a synthetic exercise, in which the elements are combined into an article for use or beauty, or both. Such exercises we call "projects," inasmuch as they are supposed to be the fruit of a mastery of the elements; and it is desirable that every pupil should be made to understand that when one has mastered the elements he can then be a master-builder. These projects naturally form a large part of a manual-training exhibit, but they should not mislead anyone, as it should always be understood that they are based upon a preliminary mastery of the elements involved.

In connection with every branch of manual training, pupils should be held to a clear comprehension of the principles involved in good workmanship. Examinations, not in descriptive phrase or language learned from books, but in actual laboratory performances, and reports of personal experience, should be frequent, and all exercises should be carefully criticised and graded, both by the student himself and by the instructor.

In the weekly program manual training should have its proper place, and that place should not be interfered with by other exercises. It is extremely demoralizing to do what is often done, viz.: keep a boy away from the shop in order to punish him for failure in some other line. While it is a severe punishment, it is absolutely destructive of all standards in manual training.

Shop periods should never be so long as to tire the pupils and dull the edge of interest; for the moment the work becomes tiresome and the mind wanders, education stops. Boys of fifteen can work two hours with unabated zeal and interest, but three hours would be too long. Pupils of eighteen or twenty years can work three hours, but it would be a mistake to have them work four. This has been tried, and there was no doubt about the ill effects of the longer period. Please remember that I am not talking about men at trades or in factories, or engaged in industrial work. They are working for wages and not for education, and, as we all know, there is but little education and a good deal of the automatic in it.

In a four-year course of study six hours of work a week of shop work during the first two years and nine hours a week of shop work during the next two years is a fair proportion of time. These hours include the time spent in washing and dressing. As a general rule, pupils ought not to be allowed to work without supervision, for the reason that the method of working, the tools they use and how they use them, the material employed and how it is used—these are the very things which are of chief importance; and, accordingly, they should be under constant supervision. If you answer that the boy knows how to do the work perfectly, and therefore needs no supervision, then I reply that he need not do the work; he should do something else that does need supervision.

Probably the best fruit of manual training is the power of mechanical analysis. This power cannot be learned from books, nor from lectures, nor from endless notes and drawings. It must be learned by actual work with tools and materials, under the best possible guidance, and with the constant use of drawings. The ability to analyze a complicated series of operations into a series of simple steps, logically arranged, leads to the habit of always making an analysis in every concrete problem; and that habit once formed has its influence upon every mental operation, whether concrete or abstract. It runs into every exercise the student has in mathematics, in language, in literature, in science, in ethics, and in art. In it one finds the great intellectual value of manual training.

I have not time to dwell upon the importance of mechanical drawing,

which from the beginning to the end should accompany shop work. The drawing easily outruns the shops. It goes into fields too difficult and too complicated for the shop teacher to follow, but it should be thoro and thoroly intelligible at every step; not for art work merely, nor for the crafts, but for both, and for the culture of the geometric imagination. So long as drawing is based upon principles which can be clearly stated and understood, it is within the reach of every rational pupil; and every pupil, boy or girl, fast or slow, can become a fair draftsman; and even in the realm of free-hand drawing great progress can be made and a fair degree of skill acquired almost without the pupils being aware of it.

I regret that I have not time to point out more fully some of the more flagrant instances of mistaken emphasis; perhaps with a clearer idea of the meaning of it all, the cultivated teacher will correct the emphasis. I have, however, time to say to you superintendents; you who stand at the helms of educational systems, who arrange courses of study, approve of weekly programs, and direct the supervisors of manual training—that we rely on you to see to it that the manual-training contingent does not shipwreck on the shoals and shallows of whims and fancies of untaught children, and the ethical and æsthetical delusions of unskilled teachers, on the one hand; and, on the other, that it shuns the depths and whirlpools of blind constructions born of ambition and lack of sense. Keep the smooth, safe channel of common-sense and approved educational methods.

NATIONAL COUNCIL OF EDUCATION

CONSTITUTION

PREAMBLE

The National Council of Education shall have for its object the consideration and discussion of educational questions of general interest and public importance, and the presentation, thru printed reports, of the substance of the discussions and the conclusions formulated. It shall be its object to reach and disseminate correct thinking on educational questions; and, for this purpose, it shall be the aim of the Council, in conducting its discussions, to define and state with accuracy the different views and theories on the subject under consideration, and, secondly, to discover and represent fairly the grounds and reasons for each theory or view, so far as to show, as completely as possible, the genesis of opinion on the subject. It shall be the duty of the Council, in pursuance of this object, to encourage from all its members the most careful statement of differences in opinion, together with the completest statement of grounds for the same. It shall further require the careful preservation and presentation of the individual differences of opinion, whenever grounds have been furnished for the same by members of the Council. It shall invite the freest discussion and embody the new suggestions developed by such discussions. Any member making such suggestion or objection may put in writing his view, and the grounds therefor, and furnish the same to the secretary for the records of the Council. It shall prepare, thru its president, an annual report to the National Educational Association, setting forth the questions considered by the Council during the previous year, and placing before the Association, in succinct form, the work accomplished. It shall embody in this report a survey of those educational topics which seem to call for any action on the part of the Association. The Council shall appoint, out of its own number, committees representing the several departments of education, and thereby facilitate the exchange of opinion among its members on such special topics as demand the attention of the profession or of the public.

ARTICLE I—MEMBERSHIP

1. The National Council of Education shall consist of sixty members, selected from the membership of the National Educational Association. Any member of the Association identified with educational work is eligible to membership in the Council, and, after the first election, such membership shall continue for six years, except as hereinafter provided.

2. In the year 1885 the Board of Directors shall elect eight members—four members for six years, two for four years, and two for two years, and the Council shall elect eight members—five members for six years, two for four years, and one for two years; and annually thereafter the Board of Directors shall elect five members and the Council five members, each member, with the exception hereinafter provided for (sec. 5), to serve six years, or until his successor is elected.

3. The annual election of members of the Council shall be held in connection with the annual meetings of the Association. If the Board of Directors shall fail, for any reason, to fill its quota of members annually, the vacancy or vacancies shall be filled by the Council.

4. The term of service of the several members of the Council chosen at the first election shall be arranged by the Executive Committee of the Council.

5. The absence of a member from two consecutive annual meetings of the Council shall be considered equivalent to resignation of membership, and the Council shall fill vacancies caused by absence from the Council as herein defined, as well as vacancies caused by death or resignation, for the unexpired term. All persons who have belonged to the Council shall, on the expiration of their membership, become honorary members, with the privilege of attending its regular sessions and participating in its discussions. No state shall be represented in the Council by more than eight members.

ARTICLE II—QUALIFICATION FOR MEMBERSHIP

All members of the Council shall be either life or active members of the National Educational Association.

ARTICLE III—MEETINGS

There shall be a regular annual meeting of the Council held at the same place as the meeting of the National Educational Association, and at least two days previous to this meeting. There may be special meetings of the Council, subject to the call of the Executive Committee, but the attendance at these meetings shall be entirely voluntary. A majority of the Council shall constitute a quorum for the transaction of business at any meeting, whether regular or called; but any less number, exceeding eight members, may constitute a quorum for the transaction of business at the regular annual meeting, as defined in this article.

ARTICLE IV—THE WORK OF THE COUNCIL

The Council shall, from time to time, undertake to initiate, conduct, and guide the thoro investigation of important educational questions originating in the Council; also to conduct like investigations originating in the National Educational Association, or any of its departments, and requiring the expenditure of funds.

ARTICLE V—THE APPOINTMENT OF SPECIAL COMMITTEES AND EXPERTS

In the appointment of special committees, and in the selection of writers and speakers, it shall be the privilege of the Council to appoint such experts, whether members of the Council or not, as are deemed best qualified to conduct investigations.

ARTICLE VI—OFFICERS

At the annual election of officers in 1904 the president of the Council shall be elected for a term of three years, the vice-president for a term of two years, and the secretary for a term of one year; and thereafter annually the vacancy caused by the outgoing officers shall be filled by the election of one person for a term of three years.

It shall be the duty of the president of the Council to prepare, with the assistance and approval of the Executive Committee, such a program for the annual meeting as shall realize as fully as practicable the purposes for which the Council was organized and exists.

ARTICLE VII—STANDING COMMITTEES

1. There shall be four standing committees: an Executive Committee, a Committee on Membership, a Committee on Educational Progress, and a Committee on Investigations and Appropriations.

2. The Executive Committee shall be composed of the president of the Council and of three other members, whose terms of office shall be so arranged that one new member may be chosen each year, beginning with the year 1899.

3. It shall be the duty of the Executive Committee to provide an annual program by selecting, whenever feasible, subjects for investigation, and appointing committees to conduct such investigations. It shall be the duty of the Executive Committee to carry out the provisions contained in this constitution referring to volunteer and invited papers. It shall be the duty of the Executive Committee to provide a place on the program for the report on any investigation which may be ordered by the National Educational Association or its departments.

4. The Committee on Membership shall be composed of the president of the Council and six other members, whose terms of office shall be so arranged that two vacancies may be filled every year, beginning with 1899.

5. There shall be appointed annually a committee of one to submit, at the next meeting, a report on "Educational Progress During the Past Year," in which a survey of the important movements and events in education during the preceding year is given. This committee need not be selected from the members of the Council.

6. The Committee on Investigations and Appropriations shall be composed of nine members, whose terms of office shall be so arranged that three vacancies may be filled each year, beginning with 1903. No proposal to appoint a committee to undertake an educational investigation of any kind, and no proposal to ask the Board of Directors of the Association for an appropriation for any purpose, shall be acted upon until such proposal has been referred to this Committee on Investigations and Appropriations for report.

ARTICLE VIII—THE DUTIES OF THE COUNCIL

1. It shall be the duty of the Council to further the objects of the National Educational Association, and to use its best efforts to promote the cause of education in general.

2. The meetings of the Council shall be, for the most part, of a "round table" character.

ARTICLE IX—AMENDMENTS

This constitution may be altered or amended at a regular meeting of the Council, by a two-thirds vote of the members present, and any provision may be waived at any regular meeting by unanimous consent.

By-laws not in violation of the constitution may be adopted by a two-thirds vote of the Council.

OFFICERS, STANDING COMMITTEES, MEMBERS

OFFICERS FOR 1905-1906

ELMER E. BROWN.....	Berkeley, Cal.	<i>President</i>	Term expires in 1907
AUGUSTUS S. DOWNING.....	Albany, N. Y.	<i>Vice-President</i>	Term expires in 1906
JOHN W. CARR.....	Dayton, Ohio.....	<i>Secretary</i>	Term expires in 1908

EXECUTIVE COMMITTEE

THE PRESIDENT, *ex officio*

ANNA TOLMAN SMITH.....	Washington, D. C.....	Term expires in 1906
HOWARD J. ROGERS.....	Albany, N. Y.....	Term expires in 1907
JAMES M. GREENWOOD.....	Kansas City, Mo.....	Term expires in 1908

COMMITTEE ON MEMBERSHIP

W. T. HARRIS.....	Washington, D. C.....	Term expires in 1906
ALBERT G. LANE.....	Chicago, Ill.....	Term expires in 1906
CHAS. D. McIVER.....	Greensboro, N. C.....	Term expires in 1907
LIVINGSTON C. LORD.....	Charleston, Ill.....	Term expires in 1907
JAMES M. GREENWOOD, <i>Chairman</i>	Kansas City, Mo.....	Term expires in 1908
E. ORAM LYTE.....	Millersville, Pa.....	Term expires in 1908

COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

JAMES M. GREENWOOD. <i>Chairman</i>	Kansas City, Mo.....	Term expires in 1906
FRANK A. FITZPATRICK.....	Boston, Mass.....	Term expires in 1906
ELMER E. BROWN.....	Berkeley, Cal.....	Term expires in 1906
EDWIN A. ALDERMAN.....	Charlottesville, Va.....	Term expires in 1907
AUGUSTUS S. DOWNING.....	Albany, N. Y.....	Term expires in 1907
LORENZO D. HARVEY.....	Menomonie, Wis.....	Term expires in 1907
NICHOLAS MURRAY BUTLER.....	New York, N. Y.....	Term expires in 1908
NEWTON C. DOUGHERTY.....	Peoria, Ill.....	Term expires in 1908
WILLIAM R. HARPER.....	Chicago, Ill.....	Term expires in 1908

MEMBERS

NOTE.—The letter "A" following a name denotes that the member is of the class elected by the Association; the letter "C," by the Council.

<i>Term expires</i>	<i>Term expires</i>
Calvin N. Kendall, Indianapolis, Ind.....A 1906	*W. T. Harris, Washington, D. C.....A 1909
*J. H. Phillips, Birmingham, Ala.....A 1906	*William R. Harper, Chicago, Ill.....A 1909
*Livingston C. Lord, Charleston, Ill.....A 1906	William H. Maxwell, New York, N. Y.....A 1909
James H. Baker, Boulder, Colo.....A 1906	E. G. Cooley, Chicago, Ill.....A 1909
C. C. Van Liew, Chico, Cal.....A 1906	*Howard J. Rogers, Albany, N. Y.....A 1909
*Lucia Stickney, Cleveland, Ohio.....C 1906	N. Cropsey, Indianapolis, Ind.....C 1909
*J. N. Wilkinson, Emporia, Kan.....C 1906	*Lewis H. Jones, Ypsilanti, Mich.....C 1909
Aaron Gove, Denver, Colo.....C 1906	Elmer E. Brown, Berkeley, Cal.....C 1909
*J. W. Carr, Dayton, Ohio.....C 1906	*W. H. Black, Marshall, Mo.....C 1909
*George H. Martin, West Lynn, Mass.....C 1906	Nicholas Murray Butler, New York, N. Y.....C 1909
*James M. Green, Trenton, N. J.....A 1907	*John W. Cook, DeKalb, Ill.....A 1910
*Augustus S. Downing, Albany, N. Y.....A 1907	*F. Louis Soldan, St. Louis, Mo.....A 1910
A. R. Taylor, Decatur, Ill.....A 1907	*Lorenzo D. Harvey, Menomonie, Wis.....A 1910
*Chas. D. McIver, Greensboro, N. C.....A 1907	*R. H. Halsey, Oshkosh, Wis.....A 1910
*E. H. Mark, Louisville, Ky.....A 1907	*Carroll G. Pearse, Milwaukee, Wis.....A 1910
*William E. Hatch, New Bedford, Mass.....C 1907	*Anna Tolman Smith, Washington, D. C.....C 1910
*Bettie A. Dutton, Cleveland, Ohio.....C 1907	*Josephine Heermans, Kansas City, Mo.....C 1910
*Charles H. Keyes, Hartford, Conn.....C 1907	James H. Van Sickle, Baltimore, Md.....C 1910
*Andrew S. Draper, Albany, N. Y.....C 1907	*Albert Ross Hill, Columbia, Mo.....C 1910
Wm. K. Fowler, Lincoln, Nebr.....C 1907	*Newton C. Dougherty, Peoria, Ill.....C 1910
Charles F. Thwing, Cleveland, Ohio.....A 1908	*W. H. Bartholomew, Louisville, Ky.....A 1911
*Albert G. Lane, Chicago, Ill.....A 1908	*Frank A. Fitzpatrick, Boston, Mass.....A 1911
John R. Kirk, Kirksville, Mo.....A 1908	*I. C. McNeill, West Superior, Wis.....A 1911
William L. Bryan, Bloomington, Ind.....A 1908	*E. Oram Lyte, Millersville, Pa.....A 1911
J. F. Millspaugh, Los Angeles, Cal.....A 1908	*J. M. Greenwood, Kansas City, Mo.....A 1911
*W. M. Davidson, Omaha, Nebr.....C 1908	Frank B. Cooper, Seattle, Wash.....C 1911
Martin G. Brumbaugh, Philadelphia, Pa.....C 1908	Joseph Swain, Swarthmore, Pa.....C 1911
*L. E. Wolfe, San Antonio, Tex.....C 1908	*Nathan C. Schaeffer, Harrisburg, Pa.....C 1911
*James E. Russell, New York, N. Y.....C 1908	*Lewis C. Greenlee, Denver, Colo.....C 1911
*Oliver S. Westcott, Chicago, Ill.....C 1908	*Z. X. Snyder, Greeley, Colo.....C 1911

HONORARY MEMBERS

Edwin A. Alderman, Charlottesville, Va.
 Earl Barnes, Montclair, N. J.
 William N. Barringer, Newark, N. J.
 Alexander Graham Bell, Washington, D. C.
 D. Bemis, Spokane, Wash.
 Thomas W. Bicknell, Providence, R. I.
 Albert G. Boyden, Bridgewater, Mass.
 Anna C. Brackett, New York, N. Y.
 John E. Bradley, Randolph, Mass.
 Edward Brooks, Philadelphia, Pa.

Richard G. Boone, Yonkers, N. Y.
 George P. Brown, Bloomington, Ill.
 John T. Buchanan, New York, N. Y.
 Matthew H. Buckham, Burlington, Vt.
 David N. Camp, New Britain, Conn.
 James H. Canfield, New York, N. Y.
 Oscar H. Cooper, Abilene, Tex.
 Oscar T. Corson, Columbus, Ohio.
 William J. Corthell, Gorham, Maine.
 E. W. Coy, Cincinnati, Ohio.

* Present at the Council sessions at Asbury Park and Ocean Grove, N. J., 1905, forty-one.

HONORARY MEMBERS—*continued*

Charles DeGarmo, Ithaca, N. Y.	John M. Ordway, New Orleans, La.
Robert E. Denfield, Duluth, Minn.	Warren D. Parker, River Falls, Wis.
V. C. Dibble, Charleston, S. C.	W. H. Payne, Ann Arbor, Mich.
John Dewey, New York, N. Y.	John B. Peaslee, Cincinnati, Ohio.
John Eaton, Washington, D. C.	William F. Phelps, St. Paul, Minn.
Charles W. Eliot, Cambridge, Mass.	Josiah L. Pickard, Brunswick, Maine.
William W. Folwell, Minneapolis, Minn.	Edward T. Pierce, Los Angeles, Cal.
James A. Foshay, Los Angeles, Cal.	J. R. Preston, Jackson, Miss.
H. B. Frissell, Hampton, Va.	John T. Prince, West Newton, Mass.
R. B. Fulton, University, Miss.	George J. Ramsey, Lexington, Ky.
Charles B. Gilbert, New York, N. Y.	Frank Rigler, Portland, Oregon.
Daniel C. Gilman, Baltimore, Md.	William H. Ruffner, Lexington, Va.
James C. Greenough, Westfield, Mass.	Ellen C. Sabin, Milwaukee, Wis.
W. N. Hailmann, Chicago, Ill.	Henry Sabin, Des Moines, Iowa.
G. Stanley Hall, Worcester, Mass.	J. G. Schurman, Ithaca, N. Y.
Paul H. Hanus, Cambridge, Mass.	H. H. Seerley, Cedar Falls, Iowa.
Walter L. Hervey, New York, N. Y.	H. E. Shepard, Baltimore, Md.
J. George Hodgins, Toronto, Can.	Irwin Shepard, Winona, Minn.
James H. Hoose, Pasadena, Cal.	Edgar A. Singer, Philadelphia, Pa.
George H. Howison, Berkeley, Cal.	Charles R. Skinner, Watertown, N. Y.
James L. Hughes, Toronto, Can.	Euler B. Smith, Athens, Ga.
Thomas Hunter, New York, N. Y.	J. L. Spalding, Peoria, Ill.
Ellen Hyde, Farmington, Mass.	Homer B. Sprague, Newton, Mass.
Edmund J. James, Champaign, Ill.	J. W. Stearns, San Diego, Cal.
Charles M. Jordan, Minneapolis, Minn.	Thomas B. Stockwell, Providence, R. I.
E. S. Joynes, Columbia, S. C.	Grace Bibb Sudborough, Omaha, Nebr.
David L. Kiehle, Minneapolis, Minn.	John Swett, Martinez, Cal.
William F. King, Mt. Vernon, Iowa.	W. R. Thigpen, Savannah, Ga.
Henry M. Leipziger, New York, N. Y.	L. S. Thompson, Jersey City, N. J.
James MacAlister, Philadelphia, Pa.	Julia S. Tutwiler, Livingstone, Ala.
Albert P. Marble, New York, N. Y.	Delia L. Williams, Delaware, Ohio.
Francis A. March, Easton, Pa.	J. Ormond Wilson, Washington, D. C.
Lillie J. Martin, Stanford Univ., Cal.	Lightner Witmer, Philadelphia, Pa.
Charles A. McMurry, De Kalb, Ill.	H. K. Wolfe, Lincoln, Nebr.
William A. Mowry, Hyde Park, Mass.	C. M. Woodward, St. Louis, Mo.
Mary E. Nicholson, Indianapolis, Ind.	Ella F. Young, Chicago, Ill.

DECEASED MEMBERS

Robert Allyn.....1894	Edwin C. Hewett.....1905	S. S. Parr.....1900
Israel W. Andrews.....1888	Elnathan E. Higbee.....1889	Selim H. Peabody.....1902
Joseph Baldwin.....1899	Frank A. Hill.....1903	John D. Philbrick.....1885
Henry Barnard.....1900	Burke A. Hinsdale.....1900	Matilda S. Cooper Poucher.....1900
Newton Bateman.....1897	Ira G. Hoitt.....1905	William B. Powell.....1904
Reuben S. Bingham.....1902	George Howland.....1892	Zalmon Richards.....1899
Norman A. Calkins.....1895	John S. Irwin.....1901	Andrew J. Rickoff.....1899
Aaron L. Chapin.....1892	Henry N. James.....1901	Charles C. Rounds.....1901
Clara Conway.....1904	H. S. Jones.....1900	Edward R. Shaw.....1903
J. L. M. Curry.....1902	Thomas Kirkland.....1898	James A. Smart.....1900
N. R. H. Dawson.....1895	Merrick Lyon.....1888	R. W. Stevenson.....1893
John W. Dickinson.....1901	James McCosh.....1894	Eli T. Tappan.....1888
Larkin Dunton.....1899	Thomas J. Morgan.....1902	Horace S. Tarbell.....1904
W. R. Garrett.....1903	Lemuel Moss.....1905	Charles O. Thompson.....1885
Samuel S. Greene.....1883	M. A. Newell.....1893	H. S. Thompson.....1904
John M. Gregory.....1898	Birdsey G. Northrop.....1898	Arnold Tompkins.....1905
George T. Fairchild.....1901	Edward Olney.....1886	James P. Wickersham.....1891
Daniel B. Hagar.....1896	Gustavus J. Orr.....1888	S. G. Williams.....1900
John Hancock.....1891	Francis W. Parker.....1902	Emerson E. White.....1902
William D. Henkle.....1882		

SECRETARY'S MINUTES

FIRST SESSION.—MONDAY FORENOON, JULY 3, 1905

The Council met in the First Methodist Episcopal Church of Asbury Park, N. J., and was called to order by Nathan C. Schaeffer, vice-president, who opened the session with prayer.

Vice-President Schaeffer announced that President Elmer E. Brown of the Council was detained at his home in Berkeley, Cal., on account of severe illness.

J. N. Wilkinson, Emporia, Kan., was, on motion, appointed to assist the secretary in reporting the discussions of the session.

The report of the Committee on Industrial Education in Schools for Rural Communities was submitted by Lorenzo D. Harvey, Menomonie, Wis., chairman of the committee. Copies of the report had been sent to the members of the Council in advance of the meeting, and all members had been invited to be prepared to join in the discussion of the report. Additional printed copies of the report had been distributed.

The report was discussed by Charles D. McIver, Greensboro, N. C.; A. C. True, director of Office of Experiment Stations, Department of Agriculture, Washington, D. C.; Willet M. Hays, assistant secretary of agriculture, Washington, D. C.; G. Stanley Hall, Worcester, Mass.; Lewis H. Jones, Ypsilanti, Mich.; John W. Cook, De Kalb, Ill.; James M. Green, Trenton, N. J.; A. S. Downing, Albany, N. Y.

On motion of J. M. Greenwood, the report of the committee was accepted and recommended to the Board of Directors for publication.

At a later meeting of the Council a motion was passed requesting the Board of Directors to print 10,000 copies of the report for free distribution among the active members of the Association on request, and to be sold to others at cost of printing and postage.

The president appointed a Committee on Nomination of officers as follows: E. Oram, Lyte, of Pennsylvania; J. M. Green, of New Jersey; Z. X. Snyder, of Colorado.

SECOND SESSION.—MONDAY AFTERNOON, JULY 3

The Council was called to order by Vice-President Schaeffer at 2:30 P. M.

"Report on the Educational Progress of the Year" was presented by Howard J. Rogers, first assistant commissioner of education for the state of New York, Albany, N. Y.

At the close of the reading of the report, the Council adjourned to meet at 9:30 A. M., July 4.

THIRD SESSION.—WEDNESDAY FORENOON, JULY 4

The Council was called to order by Vice-President Schaeffer at 9:30 A. M.

The first topic of the morning was a symposium on "What Are at Present the Most Promising Subjects for Such Investigations as the National Council of Education Should Undertake?"

The first paper was presented by George H. Martin, of Massachusetts; the second paper, by James M. Greenwood, of Missouri; and the third paper, by Dr. W. T. Harris, United States Commissioner of education, Washington, D. C.

Discussions followed by Lewis H. Jones, of Michigan; L. E. Wolfe, of Texas; James H. Russell, of New York.

The second topic was a "Report on Taxation as Related to Public Education." This report was submitted by the chairman of the committee, James M. Greenwood, Kansas City, Mo. The report was in printed form and was distributed among members of the Council. It had also been sent in advance of the meeting to members of the Council, that they might be prepared to join in discussing the recommendations of the report.

Discussion of the report was led by J. N. Wilkinson, of Kansas; Frank A. Fitzpatrick,

of Massachusetts; and Nathan C. Schaeffer, of Pennsylvania. On motion of I. C. McNeill, of Wisconsin, the report was accepted and recommended for publication by the Board of Directors.

At a later meeting of the Council it was recommended that 2,000 copies of the report be printed for free distribution to members of the Association on application, and sold to others at the cost of printing and postage.

By unanimous vote, the Council instructed the secretary to send a telegram to the president of the Council, Dr. Elmer E. Brown, who was detained at his home in Berkeley, Cal., on account of illness. The following telegram was sent:

Dr. Elmer E. Brown, President of the National Council of Education, Berkeley, Cal.:

The National Council expresses its profound regret at your inability to be present at its sessions and to preside over its deliberations.

(Signed) JOHN W. CARR,
Secretary of Council.

FOURTH SESSION.—THURSDAY FORENOON, JULY 6

The Council met and was called to order at 9:30 A. M. by Vice-President Schaeffer.

The report of the Committee on Investigations and Appropriations was submitted by Frank A. Fitzpatrick, of Massachusetts, secretary of the committee, as follows:

REPORT OF THE COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS

To the National Council of Education:

The Committee on Investigations and Appropriations begs leave to submit the following report on such matters as have been regularly brought before it for consideration:

1. The Committee on Industrial Education presented the following request:

APPLICATION FOR THE APPOINTMENT OF A COMMITTEE ON INVESTIGATION, AND FOR RECOMMENDATION OF AN APPROPRIATION FOR THE EXPENSES OF THE SAME

"On behalf of the Committee of Five on Industrial Education, appointed by the Council July 7, 1903, whose report is submitted at this meeting, I respectfully ask the Council to appoint a committee to continue the work already begun by the Committee of Five, and to recommend to the Board of Directors that such an appropriation be made as may be necessary to carry on the work of the committee and print its records.

"It is the judgment of the Committee of Five that if the Council should deem it wise to appoint the committee asked for, it should be authorized to continue its work for at least three years, and to make at least one report a year.

"The following are some of the reasons for the appointment of such a committee:

"The report of the Committee of Five made at this meeting does not attempt to deal with details, but in a general way sets forth the reasons for industrial education in rural schools, the necessity for the organization of a new type of secondary schools in which the industrial phase of educational effort is made prominent; and indicates in brief outline what may be attempted in the way of industrial education at the present time, in existing types of schools.

"Further work is necessary to put into available and authoritative form the results of experiments in this field in this and other countries; to give such detail of successful experiments as may be useful in other localities than where the experiment is in operation; and to present plans of organization for the development of industrial education in rural communities.

"The United States Department of Agriculture is deeply interested in this subject, and it is believed that the proposed committee, representing the National Educational Association, could in a variety of ways co-operate with this department, thus combining for a single purpose technical knowledge and training, and practical acquaintance with educational conditions and possibilities in rural communities.

"The Patrons of Husbandry, the Farmers' Institute, and other organizations and agencies are also interested in industrial education, and it is believed they would welcome the co-operation of a committee of the National Educational Association representing that body and its interest in industrial education.

"Such a committee and the Bureau of Education could co-operate in a variety of ways, which would prove valuable to those interested in the organization and administration of this phase of educational work.

(Signed) "L. D. HARVEY."

"MENOMONIE, WIS.,
"MAY 3, 1905."

On motion, an appropriation of three hundred dollars (\$300) was recommended for the working expenses of this committee during the next year.

2. On motion, the committee recommends that two thousand copies of the Report of the Committee on Taxation as Related to Public Education be printed and distributed by the General Secretary of the Association to active members, one copy each, on application only, and sold to others at cost and carriage price; that ten thousand copies of the "Report of the Committee on Industrial Education in Rural Schools" be printed and distributed by the secretary on the same conditions; and that three thousand copies of the "Report of the Committee on Salaries, Tenure, and Pensions of Public-School Teachers" be printed and distributed by the Secretary under the conditions outlined above.

3. No other requests having been presented, and no one appearing in the interest of any other matter, the committee adjourned.

Respectfully submitted,

J. M. GREENWOOD, *Chairman.*

F. A. FITZPATRICK, *Secretary.*

On motion, the report with its recommendations and appropriations was adopted by the Council.

Mr. Fitzpatrick also submitted the following communication from James H. Canfield, chairman of the Committee on Public Libraries and Public Schools:

To the President and Members of the National Council of Education:

For two years a movement has been under way, based upon careful and continued investigation, in the hands of a special committee of the Library Department of the National Educational Association, to bring the public schools and public libraries together in more helpful relations. This movement looks to a co-ordination of the work of these two integral parts of our system of free public education, and to securing greater efficiency in the administration of such school libraries as are in the hands of the teachers as librarians—to this latter end seeking the aid of some definite instruction in normal schools.

This committee has for its chairman the librarian of Columbia University, and for its members Mr. Melvil Dewey, of the State Library School, Albany, N. Y.; Miss Mary E. Ahern, secretary of the Library Department of the National Educational Association, and editor of *Public Libraries*, Chicago, Ill.; Mr. Martin Hensel, librarian of the Public School Libraries of Columbus, O.; and Miss Electra Doren, head instructor in the Library School of Cleveland, O. The members of this committee are also members of the American Library Association, and have been appointed by that association as a committee of co-operation with the Library Department of the National Educational Association.

Much work has been accomplished already, which has been presented in the form of special reports and papers before the Library Department of the National Educational Association, and before the American Library Association. During this present meeting a special report will be presented to the Library Department on "Instruction in Library Economy in Normal Schools"—the result of much correspondence and many conferences, and a careful investigation of this entire field.

The committee will be continued, with instructions to bring all this matter together in a single report, covering the entire question of possible and helpful relations between the public schools and the public libraries, to be published during the current year.

An appropriation of \$300 maximum, or so much thereof as may be found necessary, is requested for the preparation and publication of this report. The entire work will be in the hands of the chairman of the committee, and all expenditures will be made upon his approval only.

Respectfully,

JAMES H. CANFIELD.

The foregoing report was recommended to the Directors for approval.

J. M. GREENWOOD, *Chairman.*

L. D. HARVEY.

Mr. Fitzpatrick stated that the Committee on Investigations and Appropriations reported progress on this matter, and recommended to the Board of Directors that an appropriation of \$300 or as much thereof as should be found necessary, be made for the use of this committee for the purposes stated in the communication. This recommendation was, on motion, referred back to the Committee on Investigations and Appropriations, with authority to communicate direct with the Board of Directors, and to request that

body to make the desired appropriation, to be available when the proposed report of the committee should be ready for publication.

Secretary Fitzpatrick also submitted a report from the Committee on Proposed Investigations on the Culture Element and Economy of Time in Education, as follows:

CAMBRIDGE, MASS., July 1, 1905

To the National Council of Education:

The committee appointed in 1903 to report to the Council on an investigation, proposed by President Baker of the University of Colorado, concerning the culture element and the economy of time in education, did not succeed in presenting any report at St. Louis in 1904. There were differences of opinion in the committee which had been developed in correspondence; and only two members of the committee attended the St. Louis meeting. The Council continued the same Committee of Five, and requested a report from them at the meeting in July, 1905.

The committee has been obliged to do its work chiefly by correspondence; altho three members of the committee, Messrs. Baker, Goodwin, and Eliot, met in New York early in December last to discuss the results of the correspondence.

Among the topics which President Baker had suggested for investigation, there were three which seemed to the committee to afford opportunity for promising inquiries. The first of these topics was, "The value of a college training for young men who are going into business." Your committee are unanimously of the opinion that the Council might wisely pass a resolution requesting the Commissioner of Education at Washington to investigate that subject by ascertaining at several of the business centers of the country the number of college-bred men who hold high places in industries, commerce, and finance.

Your committee also advise the Council to appoint a committee of five persons, partly college men and partly school men, to prepare a report on the following topics: (1) the best period for the high school—four years from fourteen to eighteen, or six years from twelve to eighteen; (2) the devices already in use for shortening the college course, or the combined courses of college and professional school. These two topics relate to economy of time in education—an economy highly valuable to college graduates who are going into business, as well as to graduates who are going to study a profession. In case the committee just mentioned be appointed, your committee recommends that the Council ask for an appropriation not exceeding \$500, to be placed at the disposal of the new committee to meet the cost of postage, stationery, and clerk hire.

This report is unanimous so far as its first recommendation is concerned, and is supported by a majority of the committee as regards the second recommendation.

CHARLES W. ELIOT,
JAMES H. BAKER,
J. M. GREENWOOD,
E. J. GOODWIN,
E. A. ALDERMAN,

Committee.

By CHARLES W. ELIOT, *Chairman.*

On motion, that part of the report relating to the appointment of a committee and an appropriation for its expenses was referred back to the Committee on Investigations and Appropriations.

The report of the Committee on Salaries, Tenure, and Pensions of Public-School Teachers was submitted to the Council in printed form, copies having been distributed by the secretary of the Association in advance of the meeting.

The leader of the discussion on behalf of the committee was Charles H. Verrill, official statistician of the committee, Washington, D. C.

The discussion of the report was continued by Andrew S. Draper, Albany, N. Y.; Albert G. Lane, Chicago, Ill.; Miss Grace Reed, Chicago, Ill.; William H. Maxwell, New York city; Miss Anna Tolman Smith, Washington, D. C.; and John W. Cook, De Kalb, Ill.

On motion, the report was accepted.

The Council recommended that three thousand copies of the report be printed for free distribution among the members of the Association, and for sale to others at actual cost of printing and postage.

The report of the Advisory Committee on the Simplification of English Spelling was submitted by William H. Maxwell, of New York, chairman of the committee, who submitted both a majority and a minority report.

Owing to the fact that the hour for adjournment had arrived, action on the report was delayed until the next session of the Council.

FIFTH SESSION.—THURSDAY AFTERNOON, JULY 6

MEMORIAL SESSION

The Council was called to order at 3 P. M. by Vice-President Schaeffer.

Memorial addresses on former members of the Council were presented and ordered printed, as follows:

Newton C. Bateman, by N. C. Dougherty, of Illinois.

Clara Conway, by William T. Harris, of Washington, D. C.

Edwin C. Hewett, by John W. Cook, of Illinois.

Ira G. Hoitt, by Charles C. Van Liew, of California.

Horace S. Tarbell, by Walter Ballou Jacobs, of Rhode Island.

John W. Carr, of Ohio, was appointed to prepare a memorial address for Lemuel Moss; and George H. Martin, of Massachusetts, to prepare a memorial address of John W. Dickinson.

Nathan C. Schaeffer, vice-president of the Council, having been elected President of the Association, tendered his resignation as vice-president of the Council. On motion, the resignation was accepted.

William H. Maxwell, chairman of the Advisory Committee on the Simplification of the English Spelling, completed his report, which was presented in part at the morning session, and moved that it be referred to the Committee on Investigations and Appropriations. Carried.

The Council adjourned.

SIXTH SESSION.—FRIDAY FORENOON, JULY 7

BUSINESS MEETING

The Council met in business session in the lecture-room of the First Methodist Episcopal Church at 9:30 A. M.

The secretary announced that there had been forty-one active and nineteen honorary members present at the current meetings of the Council.

The Committee on Nominations submitted the following report:

ASBURY PARK, N. J., July 7, 1905.

To the President and Members of the Council of Education:

The undersigned, committee appointed to make nominations of officers to serve the Council for the ensuing three years, beg leave to make the following report:

For secretary, to serve this body for the ensuing three years, J. W. Carr, Dayton, Ohio, is nominated.

As a member of the Executive Committee, James M. Greenwood, Kansas City, Mo., whose term of office expires this year, is nominated to succeed himself.

The term of two members of the Committee on Membership, James M. Greenwood, and James H. Van Sickle, expires this year. Mr. Greenwood is nominated to succeed himself, and Nathan C. Schaeffer, Harrisburg, Pa., is nominated to succeed Mr. Van Sickle.

The term of office of three members of the Committee on Investigations and Appropriations—Nicholas Murray Butler, New York, Newton C. Dougherty, Peoria, Ill., and William R. Harper, Chicago, Ill.—expires this year. Each of these members is nominated to succeed himself.

For vice-president of the Council, to fill the vacancy caused by the resignation of N. C. Schaeffer, Augustus S. Downing, Albany, N. Y., is nominated, to serve for the unexpired term.

Respectfully submitted,

E. O. LYTE, *Chairman.*

J. M. GREEN.

Z. X. SNYDER.

At the request of Nathan C. Schaeffer, the name of E. O. Lyte, of Pennsylvania, was on motion substituted in the report for his name as a member of the standing Com-

mittee on Membership. With this modification, the report of the committee was on motion adopted and the nominees declared elected as officers of the Council for the ensuing year.

Superintendent James M. Greenwood, on behalf of the Committee on Membership, submitted the following report:

To the National Council of Education:

Your Committee on Nominations of new members submits a report as follows: That the following-named members, whose terms of office expire with the present meeting, are hereby recommended for reappointment for six years:

Frank B. Cooper, Seattle, Wash.
Joseph Swain, Swarthmore, Pa.
Nathan C. Schaeffer, Harrisburg, Pa.
Lewis C. Greenlee, Denver, Colo.
Z. X. Snyder, Greeley, Colo.

The following persons are recommended for appointment to fill vacancies for the unexpired terms of office of the following-named members who have been, by the provisions of the constitution, transferred to the list of honorary members by reason of their absence for two consecutive annual meetings of the Council.

1. Martin G. Brumbaugh, of Pennsylvania, to fill the place of E. W. Coy, Cincinnati, Ohio, whose term expires in 1908.
2. Miss N. Cropsey, of Indiana, to fill the place of H. B. Frissell, Hampton, Va., whose term expires in 1909.
3. E. G. Cooley, of Illinois, to fill the place of Ella F. Young, whose term expires in 1909.
4. C. C. Van Liew, of California, to fill the place of R. E. Denfeld, whose term expires in 1906.
5. John R. Kirk, of Missouri, to fill the place of E. A. Alderman, of Virginia, whose term expires in 1908.
6. William L. Bryan, of Indiana, to fill the place of Charles M. Jordan, of Minnesota, whose term expires in 1908.
7. W. H. Maxwell, of New York, to fill the place of C. R. Skinner, of New York, whose term expires in 1909.

All of which is respectfully submitted,

J. M. GREENWOOD,
W. T. HARRIS,
L. C. LORD,
A. G. LANE,

Committee.

On motion, the persons named in the report were duly elected to membership in the Council, and the secretary of the Council was instructed to inform each member of such election.

The communication from Charles W. Eliot, of Massachusetts, referred to in the minutes of the fourth session, was not received in time for proper consideration by the Committee on Investigations and Appropriations. It was therefore moved that action be deferred on this matter, and that the secretary be instructed to notify the committee why action was delayed.

There being no other business, the Council adjourned.

J. W. CARR, *Secretary*

REPORT OF ADVISORY COMMITTEE ON SIMPLIFICATION OF SPELLING

PRESENTED BY WILLIAM H. MAXWELL, OF NEW YORK, CHAIRMAN

TO THE COMMITTEE ON INVESTIGATIONS AND APPROPRIATIONS OF THE
NATIONAL COUNCIL OF EDUCATION

Gentlemen:

The committee to whom at your last meeting you referred resolutions adopted by the Department of Superintendence, February 24, 1904, and Plan A and Plan B submitted to the Board of Directors of the National Educational Association, June 27, 1904, for

providing organized effort and leadership in promoting simplification of our English spelling, report as follows:

I

The committee are unanimous in the belief that the simplification of our English spelling is a matter of the utmost importance and an object worthy of careful consideration and hearty support by the National Educational Association. The reasons for this position are succinctly stated in the following excerpt from a letter addressed by Professor Calvin Thomas to the chairman of your committee:

So far as I am personally concerned, I do not hesitate for a moment to declare myself in sympathy with the object which Mr. Vaile and his co-workers have in view. That object, as I understand it, is not to try to bring about, all at once or in a short time, the general adoption of new spellings for any very large number of English words. Such a project would be chimerical. It is of no use to shut our eyes to the enormous force of the prejudice which attaches the great majority of the writers and readers of English to the conventional spelling. Adults who have learned to spell in a certain way generally prefer to go on in that way, no matter how bad it may be from a scientific point of view, rather than to take the trouble of changing fixed habits. They may admit that much of our spelling is irregular and capricious, but its very irregularity is dear to them. The conventional word-pictures have become as familiar friends, whose faces they like just as they are. The usual spelling is associated in their minds—so at least they say—with the beauty and dignity of the English language. Any departure from it, even in the direction of plain common sense, offends them, and they set it down to cranky eccentricity.

This prejudice, due solely to the power of visual associations, is unintelligent and always makes sorry work when it seeks to defend itself on rational grounds. The eminent scholars who have given most attention to the subject are all but unanimous in the conviction that it would have been far better from every point of view if, from Anglo-Saxon days down, the changes in English spelling had kept pace closely with the changes in pronunciation. The arguments advanced in support of the conventional spelling where it happens to be bad—we should never forget that a large part of our spelling is perfectly satisfactory—invariably turn out, when closely examined, to have little or no weight. The great purpose of a system of spelling is to record speech. Men spoke for ages before they wrote, and they invented alphabets to make a record of their spoken language. The best system of spelling is that which keeps closest to this principle. Indeed, the only principle in which the thinking mind can finally rest in stable equilibrium is to spell as we pronounce.

But while phonetic spelling is the ideal, and in the long run the only sound ideal, our English inheritance is such that any attempt to reach the goal quickly would be futile. All that can be hoped for is the gradual adoption of sensible changes in the spelling of particular words and groups of words. To this end, however, it is necessary that the subject be kept before the public, and it seems to me that to aid in keeping it before the public, in a cautious and conservative spirit, is an entirely proper business for a great national educational association. The improvement of our spelling is a matter of perennial interest, and rests upon the same intellectual basis as the improvement of our laws, our art, or any other part of our social life. It is a matter which has received and is receiving from educators in other parts of the world a large amount of attention. To push it aside as unworthy of serious thought, or as a matter about which nothing can be done thru organized effort, is to take a position which, as it seems to me, the National Educational Association should never assume.

But the great, the overwhelmingly cogent, reason why the Association should take an active interest in this subject, should show its good will, and at least endeavor to do something, is connected with the teaching of school children. If only the convenience and the prejudices of adults were concerned, we might perhaps think it just as well to let matters drift. But the policy of drift becomes repugnant to the thinking mind when we see millions and millions of children compelled to devote so much of their school time to a largely futile attempt at the mastery of English spelling; to a mechanical dogmatic drill which has very little food for thought and no important nourishment for the growing mind, but simply trains the visual memory to the retention of disordered, illogical and anomalous facts. And the worst of it is that the effort is so largely futile and tends to become more so. The children do not learn to spell, parents complain of the schools, the higher grades complain of the lower, and the public associates the idea of illiteracy, or defective education, with "bad" spelling of any kind. The real fault, however, lies not so much with the teachers as with our miserable spelling. If we spelled as we ought, children would learn to spell correctly in one-quarter of the time they now devote to the subject, and the teaching of the art would be a pleasure, instead of a trial, for the intelligent teacher.

Now this state of affairs will not grow better but worse under a policy of drift. Just in proportion as we cling tenaciously to the dear old absurdities of our spelling, will our children and our children's children have a harder and harder time in learning to spell.

Two or three generations ago the country schoolmaster could perhaps afford to devote a considerable part of his energy to drilling his pupils upon spelling. There was upon the whole nothing better for them to learn or for him to teach. Today the outlook is different. A number of fascinating studies which are within the reach of childhood and are good for childhood clamor for attention. We have learned some things about psychology. We have at least learned that the youngster is primarily a doing and a growing animal, and that he needs to be given things to learn which shall feed his mind with real food; feed it, that is, with ideas and impressions upon which he can reason after his fashion, and which he can relate to the rest of his knowledge. And when there are so many interesting and mind-nourishing things to be learned, the intelligent teacher will chafe more and more under the necessity of devoting so many months and years to a tedious deadening drill, the ultimate object of which, after all, is not to teach the pupil how to write his own language, but to teach him how, several centuries ago, the London printers—and in the beginning these printers were Dutchmen who did not know English—chose to write their language. People often talk about the time wasted upon dead languages. It is as a drop in the bucket in comparison with the time wasted upon dead spelling.

Looked at from this point of view the problem of improving our spelling does not appear a trifling matter, but one of very great importance; one to which busy men and women, and especially educators, may very well give earnest attention—not for the purpose of fortifying themselves in their own prejudices, which are of little moment, be they radical or conservative, but for the purpose of determining soberly and circumspectly which way the finger of wisdom points, and what can be done to facilitate progress in that direction.

II

Assuming that the ideas set forth by Professor Thomas are sound and believing that the majority of the active members of the National Educational Association are in favor of making some persistent effort to secure the simplification of English spelling, your Committee sought to determine whether either Plan A or Plan B would be likely to produce valuable results commensurate with the amount of money it is proposed to expend. Plan B was not favorably considered by any member of the committee. The following objections were urged against Plan A:

1. It would probably not effect the purpose for which it is designed—to secure popularization of reformed spelling. The weight of authority attaching to the names of the members of the commission, however great, would not of itself produce the desired result.

2. The proposed commission is too large for effective work. Inevitably the majority of the members, even if competent men could be induced to serve, would soon become mere figure-heads. The work would inevitably fall into the hands of a salaried secretary.

3. Any committee which is to spend the money of the National Educational Association should be entirely under the control of that body. Not only should it be called into existence but it should be extinguishable by the Association. This commission would be independent, and while depending on the National Educational Association for financial support, might pursue lines of action at variance with the policy or the best interests of the Association.

4. Before obligating itself to any future payments, the Association should know very definitely what it is proposed to accomplish and how the money is to be expended. No plans of this kind have been formulated. When the advocates of the resolution were invited to state to your committee their conceptions of the purposes for which the money, if appropriated, might be expended, the suggestions offered were the following:

- a) Paid advertisements of the advantages of phonetic spelling to be published in leading magazines.

- b) Appeals to large advertisers to write their advertisements in phonetic spelling.

- c) Prizes for essays to be written by high school pupils on subjects connected with reformed spelling.

- d) The furnishing of letter-heads printed in reformed spelling to any business houses that would use them.

- e) The issuing of reformed spelling calendars.

- f) And the publication of literature and furnishing of lecturers on the subject.

These suggestions do not commend themselves to your committee. They would be much more apt to lead to ridicule than to approval.

In view of these very serious objections, your committee cannot approve Plan A.

III

Superintendent Jordan presented to your committee the following modification of Plan A, intended to overcome some of the objections stated above:

To your questions whether we would advise the National Educational Association to lend its moral and financial support to either one of the plans suggested, we answer Yes, to Plan A, modified and outlined as follows:

THE COMMISSION FOR PROMOTING THE SIMPLIFICATION OF OUR ENGLISH SPELLING

1. The Board of Directors of the National Educational Association, to appoint, upon nomination by the Committee which the Department of Superintendence appointed to present its resolutions, seven prominent, scholarly and discreet friends of the cause to constitute the Executive Board of the Simplified Spelling Commission.

2. The Executive Board to be empowered, in addition to the regular functions of such a board, to elect and enroll as members of the commission all friends of the cause, especially men and women of prominence, who are willing to give their names and whatever help they can in promoting the efforts of the Executive Board.

3. The members of the commission in each locality to be organized as a local co-operating center.

4. The Executive Board to organize itself by choosing from its membership the president and the secretary of the commission, and to appoint the most suitable person it can find for the treasurer.

5. The members of the commission, including Executive Board, to serve without compensation, excepting the secretary who shall receive an appropriation for salary to be fixed by the Board.

6. The Executive Board to make its own rules for the conduct of its business; to determine its policy, plans and methods; to fill the vacancies that may arise in its membership; to become a corporate body and to hold and administer bequests or other funds for the best interests of the cause which the commission is created to serve, and to do all other acts which its judgment may approve as tending to that end.

7. The records of the Executive Board to be open for inspection by any contributor to its funds, including officers of the National Educational Association.

8. The Executive Board to make an annual report to the secretary of the National Educational Association covering its work for the year ending June 30th, this report to be published in the volume of *Proceedings* of the National Educational Association at the discretion of its executive committee.

9. The National Educational Association to appropriate from its current revenues the sum of \$10,000, or so much as may be available after the expenses of this meeting are defrayed, for the use of the Executive Board, to be paid to it in ten semi-annual installments, each equal to but never exceeding the amount given to the board from other sources during the same period.

In support of this plan, Superintendent Jordan submitted the following argument:

The foregoing scheme obviates the objection to a large commission by concentrating initiative and the control of policy, work, and funds in the hands of a small board which at the same time can bring into sympathetic and supporting relation with itself all friends of the cause. Active workers in molding public sentiment find great help in being allowed to quote and publish the names of prominent persons who approve their cause. This provision for enlisting a large circle, even of figure-heads, can do no harm and will add no expense, while its possibilities of usefulness are great. Why not sanction it?

The advantages in giving the commission an absolutely independent and self-perpetuating existence:

1. It would remove all danger of any of its debatable questions coming up in the National Educational Association to cause friction, while it would relieve the National Educational Association as far as possible for a period of five years, and therefore wholly, from all responsibility and criticism for the actions of the commission.

2. It would insure a consistent and stable policy, which is absolutely necessary to win public respect and support.

3. If the commission were merely a committee of the National Educational Association it would be subject, by means of an election in a popular assembly, to periodic changes in personnel and sentiment, which would lessen its dignity and influence, and prevent men of wealth, some of whom are becoming interested in this reform, from helping to provide an endowment for the cause.

4. Those wealthy men would not think of providing any considerable sum for this work unless it were in the hands of an incorporated body, which a committee never can become.

A minority of your committee opposed this plan on the ground that a committee or commission expending the money of the National Educational Association should at all times and under all circumstances be under the control of the National Educational Association, and that the purposes for which the Association's money is to be expended are not clearly stated.

IV

The following plan was laid before your committee by Professor Thomas:

Let the National Educational Association invite a small committee of experts—three or five—to prepare a Primer of Simplified English Spelling, said primer to contain a brief introduction written in a simple, universally intelligible style, and then a list of 1,000 or 2,000 or 3,500 words, the spelling of which could be most easily and advantageously simplified. The primer would give both the conventional and the simplified form, but otherwise would be modeled in a general way upon the admirable spelling primer used in the Prussian schools.

I think there would be no difficulty in getting a competent committee to do this work for nothing, since the simplified spellings would for the most part be found in the *Standard Dictionary* and in the American Philological Association's list of 3,500 words. The National Educational Association would of course assume the expense of printing and stereotyping, which would not be great, and could then take steps to bring the Primer to the attention of teachers in the common schools and could, if it chose, formally "sanction" the use of the simplified spellings and the teaching of them in school, along with the usual spellings.

It is and has long been my judgment that such an enterprise as this would do more than anything else conceivable to accelerate the improvement of our spelling.

This suggestion also failed to receive the support of a majority of your Committee.

MINORITY REPORT

The undersigned members, constituting a minority of your committee are of opinion that whatever work is attempted by the National Educational Association in the matter of the simplification of our English spelling should begin in a quiet and dignified way, and should take the form, not of reformatory agitation or propaganda, but of the dissemination of accurate knowledge with regard to an important subject, which, at present, is not properly or generally understood. It seems a matter of the first importance that the work should grow in a natural way from modest beginnings, and that it should become an object of large and regular expenditure only as its utility is clearly demonstrated by experience.

We, the undersigned, members of your committee, therefore, respectfully submit the following recommendation:

That the Executive Committee of the National Educational Association appoint a committee of seven competent persons to report to the National Council a definite plan, or several alternate plans, for accelerating the improvement of English spelling, and that the necessary expenses of said committee be paid by the National Educational Association.

Respectfully submitted,

WILLIAM H. MAXWELL, *Chairman,*

CALVIN THOMAS,

For a minority of the committee.

MAJORITY REPORT

The committee met at Milwaukee, Wis., February 27 and 28, 1905, Messrs. Maxwell, Jordan, Hempl, and Seerley being present and participating in the discussions, Professor Thomas submitting his views in detail in written form. It developed that the committee was divided into two sections, Chairman Maxwell and Mr. Thomas agreeing upon one policy, and Messrs. Jordan, Hempl, and Seerley adhering to an entirely different policy. For this reason there was no possibility of agreeing upon a report that should make recommendations to this body; hence a different procedure became necessary, and this report is filed with a statement of plans and differences as they exist.

It is believed by a majority of the committee that the National Educational Associa-

tion is the best agency in the United States to undertake the organization of the work of simplifying English spelling; that it should lend its unqualified support to the encouragement of reform in these particulars; and that it should not hesitate to furnish money from its treasury to assist in the proper maintenance of such work for a reasonable number of years. While the majority of your committee recognizes that it may have little influence in determining the action of the National Educational Association, nevertheless, inasmuch as the work of education, as conducted in the public schools, is made needlessly difficult by the unnecessary peculiarities and incongruities of English spelling, it is thought that there is reason to assume that much simplification is possible, and that it is, therefore, proper to recommend that plans be formulated and a suitable commission of experts and judicious scholars be invited to take charge of the work to be accomplished.

We, the undersigned members, constituting a majority of the committee, submit the following conclusions:

Instead of the conclusions of Chairman Maxwell and Professor Thomas, following the argument submitted for the plan proposed in Section III in which the minority of the committee expressed objections to the proposed plan on the ground that a committee expending the money of the National Educational Association should be under the control of said Association and that the purposes for which the money is to be expended are not clearly stated, the majority of the committee submit that we do not believe that the objection is well taken, for the general purpose of the appropriation is well understood and it would be an unreasonable self-imposition if the Association were to hold itself responsible for the detailed expenditure of the appropriation. We, therefore, endorse the plan proposed by Superintendent Jordan as a modification of Plan A, and as set forth in Section III.

Respectfully submitted,

GEORGE HEMPL,

HOMER H. SEELEY,

CHARLES M. JORDAN,

For a majority of the committee.

PAPERS AND DISCUSSIONS

REPORT ON THE EDUCATIONAL PROGRESS OF THE YEAR

HOWARD J. ROGERS, FIRST ASSISTANT COMMISSIONER OF EDUCATION FOR THE STATE OF NEW YORK, ALBANY, N. Y.

It is a difficult task to cut out a cross-section of a year in one of the great fields of human endeavor, and, even where aided by the most powerful microscopes of inference and imagination, label this part progress and that failure. So difficult is it that, altho an added year of grace is permitted me by the non-presentation of a similar paper at last year's meeting, had I fully realized it, someone else would have addressed you today. Evolution is a slow process; evolution in education one of its slowest forms. The field is so overlapped, its processes so involved and dependent, that all hope of traversing it crying *eureka* at many objective points is futile. The germ of the greatest educational movement of the century might lie within our vision undetected. I want, therefore, to preface this paper clearly with the statement that it is

made up of facts and happenings of the last two years, chosen for their apparent importance, but presented in a fragmentary manner. Many of the questions treated demand for proper analysis a discussion which would transcend the limits of the entire paper, but which must obviously be presented in suggestive outline. Many others are barely mentioned, or omitted altogether. To the many friends, both at home and abroad, who have assisted in the presentation of the report by their valuable suggestions, I wish to express my obligations; and particularly to Professor Sadler of England, Professor Lagerstedt of Sweden, Inspector-General Gilles of France, and Director-General van Overbergh of Belgium, thru whose valuable and expert advice it has been possible to pick only those facts and tendencies in their respective countries which are of the greatest importance and lie clearly within the scope of this report.

THE MOSELEY COMMISSION

One of the most important events which have taken place in recent educational history is the visit of the Moseley Commission of England to this country in October, November, and December, 1903. The two reports which were the result of this visit, one made by the Education Commission and the other by the Industrial Commission, have created intense interest both in England and in this country, and are regarded here as an eminently fair and just criticism of the state of public education in the United States. Mr. Alfred Moseley, a member of Parliament, and a man prominent in the commercial and financial world of England, brought to this country twenty-seven educational experts to inspect and report upon various features of the educational and social life of the United States. Mr. Moseley frankly states that his inspiration for this unwonted enterprise was his admiration for the brilliant exploits of American engineers in the development of the diamond mines of South Africa some fifteen or twenty years ago. He says:

The success of these engineers turned my attention to the United States, and some years ago I paid my first visit there for the purpose of seeing what sort of country it was that was responsible for sending so many level-headed men to the Cape. . . . So far as I was able to ascertain, the form of education given in the United States was responsible for much of its success, and I returned home determined, if possible, to get together a party of experts to visit the country and test the soundness of my conclusions.

The immediate opportunity which was an additional incentive for Mr. Moseley to carry out his project was the passage of the Education Act in England in 1902, and the possibilities which arose under it for the development of education along practical lines. He traced a similarity between education as controlled by the various states of our Union and the control vested in the counties of England under the new statute. There was thus added as a further motive the possibility of finding many things in our educational system which would prove of value to England.

The subjects of investigation placed before the Moseley Commission were (1) the development of individuality in the primary school; (2) the social and

intellectual effects of a wide distribution of secondary education; (3) the effect of specific instruction given in (a) business methods, (b) applied sciences; (4) the present state of opinion as to the value of professional and technical instruction of university rank designed with special reference to the tasks of business life.

The commission visited New York, Washington, Baltimore, Philadelphia, New Haven, Boston, and Chicago, and at the latter place broke up as a body, and the individual members proceeded to every part of the country in search of information applying to their special fields.

The report of the Education Commission was published in 1904, and covers 400 closely printed octavo pages. It is prefaced by a statement by Mr. Moseley, and contains a joint report signed by all the members of the commission, and a special report by each member of the commission. In this report is expressed the belief that general education is of value both to the community at large and to the commercial, industrial, and agricultural service of the state; that in competing with American commerce Europeans will be called upon to face trained men gifted with both enterprise and knowledge; that the British public must be impressed with the absolute need of immediate preparation to meet such competition; that wonderful spirit animates both teachers and pupils in our schools, and that the absence of class prejudice and of religious difficulty serves to facilitate the work of the schools; that there is very close connection between theory and practice, especially in the scientific field; that the important part which manual training is assuming in our public schools is of high value as an educational discipline; that in no country has there been such marvelous liberality displayed toward education both from public and private sources; and that the entire work of education in elementary, secondary, and higher fields is organized and co-ordinated in such a way as to secure most harmonious working and to avoid duplication.

Much frank criticism, in most cases well deserved, is mingled with the freely expressed admiration. Our teaching of foreign languages seemed to the commission particularly slipshod and to partake of antiquated methods. Some disappointment was expressed that manual and industrial training does not seem to have played any great part in our commercial or industrial development. The answer to this criticism is under two heads: first, very few of our industrial schools and our manual-training departments are over ten years old, which is altogether too short a period to exert any marked influence on industrial methods; second, the theory of public education in the United States is based upon the belief that our prominence in industrial and commercial work is due not so much to any form of special training in the arts and crafts as to the liberal training which is given to every child in our public schools. It is a safe rule of conduct that if a child is fitted during his eight elementary years for *anything*, he will be bound as a wage-earner to be fitted for *something*.

It is impossible in this address more than to hint at some few of the points brought out in the papers of the report, or to state any of the conclusions. Every one of the twenty-seven papers is worth careful attention and study on the part of our educational public, and, without in any sense seeming to discriminate at all, the reports submitted by Mr. Henry E. Armstrong, Mr. Arthur W. Black, Professor T. L. Papillon, and John Rhys are specially valuable in their keen observation, just criticism, and valuable inference. Mr. Arthur W. Black sums up in three concise sentences as follows:

The great facts remaining with me as a result of my educational investigations in America are, first, that the public opinion is much more strongly in favor of education than in this country; second, that the scholars in America take a keener interest in their studies than is generally apparent here; third, that the teaching given in the elementary schools produces a mental alertness and readiness of mind to a greater extent than is secured in this country.

The reports are a pleasure to Americans, because the tone is complimentary, and because they concede in the premise the commercial and industrial supremacy of this country, and seek to find in our educational system the reasons therefor. The reports are of value to Americans, because they frankly present and criticise our shortcomings, and, while the balance on the ledger is largely in our favor, a careful study of the debit side is of the utmost benefit to our educational public. It would be extremely fortunate, if, in other fields than education,

There wad some Moseley the power gi'e us
To see oursel's as others see us.

SCHOOL LEGISLATION

During the legislative period of 1904 there were over 125 enactments in the various states affecting education, but nearly all of them were of such local or incidental character as not to call for special mention. Three important acts, however, in the winter of 1904, affected particularly state educational systems, and two in the winter of 1905 brought about most important reforms in city administration. The three relating to states were the new school codes of New Jersey and Ohio, and the so-called unification act of the state of New York. In the two former the changes made by the revised codes were so voluminous as to forbid anything like extended discussion here, tho in Ohio there were many radical changes, mostly in the direction of principles advocated by this Association.

The dual system of school administration which had been the development of a century's growth in the state of New York was abolished by the legislature of 1904. The University of the State of New York, established in 1783 and governed by a board of regents, had supervisory powers over the colleges, universities, professional and technical schools of the state, and certain legally defined powers over the high schools and academies. The Department of Public Instruction, organized in 1812, placed under the jurisdiction of the secretary of state in 1821 and reorganized in 1854, had control of al

schools supported by public tax, including both elementary and secondary schools. By the law of 1904 the powers of both these great departments were merged in the educational department; a new office, with the title of commissioner of education created, and the board of regents reorganized. This law is purely a change in administrative details, and does not affect in any degree the procedure governing either of the old departments. The law has been in operation now one year, and its benefits thru increased efficiency in service, economy in expenditures, and uniformity of policy are universally conceded.

In April, 1905, as a result of long-continued agitation on the part of the Teachers' Association, Public Education Association, and other organizations of the city of Philadelphia, the legislature of the state of Pennsylvania enacted a law in reference to cities of the first class. The bill is drawn on lines which are now believed to be sound in the administration of educational policies of cities, and contains many of the principles or provisions which were incorporated in the school laws of New York city, Cleveland, and St. Louis. The main provisions of the law are as follows:

1. A five-mill tax for both the immediate and prospective needs of the schools, which will insure a sum under which the development of the city system will be rapid and effective.
2. The minimizing of the powers of the sectional boards, and the consequent lessening of the influence of the local ward-heeler and the politician. The retention of these ward divisions was a concession to obtain the passage of the bill, and they will undoubtedly be abolished in the near future.
3. The appointment of the members of the board of education at large by the judges of the court of common pleas. While this is logically unsound in that it combines judicial and administrative functions, it is probably a better plan at the present time in Philadelphia than the plan of election by popular vote.
4. Reduction of the size of the board from forty-two to twenty-one; a step in the right direction, but a still smaller board would do better service.

Many minor provisions, such as the definite fixing of responsibility, the centralizing of powers and duties, the appointment of responsible heads of executive departments, etc., are incorporated. The most serious omissions are the failure to provide a strict merit system for the appointment and promotion of teachers, and some indefiniteness in regard to the powers and duties which surround the office of superintendent. Most of these errors or omissions can be remedied by the first board of education, provided a progressive and broad-minded board is appointed. The general effect of the bill—while it may not meet the enthusiastic praise bestowed by one critic that it places the school system of Philadelphia fifty years in advance—is to give the city of Philadelphia a rational and defensible school system in line with modern educational policies, and a basis for a thoro and effective reorganization.

In April, 1905, the legislature of Massachusetts passed an act reorganizing the school committee of Boston, which will undoubtedly have a radical effect on the administration of school affairs in that city. The act is very short, and substitutes for the present school committee of twenty-five a com-

mittee of five, and bestows upon the latter all the powers, privileges, duties, and obligations devolving upon the present committee. The success of this law will depend entirely upon the personnel of the board. If five strong representative citizens are appointed to its membership, the school affairs of the city, under the by-laws which they will adopt, will be immensely improved. If a weak board, subject to outside influences, is appointed, their latter condition will be worse than their first. The powers of inspectors, superintendents, and supervisors are not mentioned in the act, but are left to the by-laws to be fixed by the new board of education. There is undoubtedly a great opportunity awaiting the new board, and probably in no city in the country is there greater likelihood of a board being appointed which will be able to meet it.

The laws of both Philadelphia and Boston have certain resemblances. Both are very brief; both reduce materially the number of the board; both leave to the board the making of rules and by-laws to govern its own procedure; and both leave the board free to define the powers and duties of all its appointees.

MORAL AND RELIGIOUS TRAINING

It is impossible to present by ordinary standards and statistics any measure of ethical or moral growth. It has no distinct schedule in any curriculum, but it should form the basis of every curriculum. Character-building is the real aim of the schools and the ultimate defense for the expenditure of millions upon their maintenance. The moral sense of this country is felt to be in an unsatisfactory condition. It has been borne in upon our consciousness with slowly increasing and insistent force, made headway against unwilling attitudes of mind, and is now acknowledged as a serious menace to our social fabric. It manifests itself almost daily in new and surprising forms. The code of honor in business, were it not so full of menace to the peace of the public, would be a diverting study in tangential ethics. Practices are encouraged and methods tolerated which not so many years ago would have set their users outside the pale of business approval. The conscience of men seems divided into two parts, a positive and a negative; the former controlling their social relations after office hours, and the latter in convenient use during business hours. The methods of high finance differ not one whit from the buccaneers of the Spanish main, except as the swing of the broadsword differs from the push of the electric button. The misuse of fiduciary funds, illegal combinations for trade and transit, and clever evasions of the spirit of the laws form the bulk of the news in our daily papers.

But why multiply examples when the tendency is marked in every walk of life, and nowhere more distinctly than in the youth and children of the present age? There is in their minds a flippant disregard for constituted authority; a lack of respect for age and superior wisdom; a weak appreciation of the demands of duty; a tendency to follow pleasure and interest rather

than obligation and order. Such is the recognized condition which demands the earnest thought and action of our leaders of opinion. The greatest sign of relief for the general situation is that the people are awake to the conditions and are agitating its remedy. Out of this is bound to come a healthier life and an intoleration of false standards. The question for school men is how to assist by the proper training of the next generation of men of affairs. And I am going to say, at the risk perhaps of being misunderstood, that in my opinion much of the responsibility for the present attitude of mind of children, as indicated above, is due to the theory that a child must be "interested" in every phase of his school work, or it is not good for him. Beginning with the kindergarten and continuing into the elementary grades, we have run a little wild in the last decade or more in making things easy for the child. We have coaxed and coddled and bribed with sweetmeats till the child has a totally wrong impression of his relativity to his environment. I yield to no one in acknowledging the great work done by the kindergarten, particularly in the crowded portions of our great cities, and in approving its purpose; but this does not mean approval of *all* its methods. They should not be extended too far into the child's life, and the elementary schools should begin to differentiate *at once* between work and play. A child has a weak, imperfect, illogical mind, or he would not be a child. To appeal to his reason and his interest is to premise your work on negative quantities. Prescribe what *your* reason and the experience of the race have proved good for him, and see that he does his task thru love if possible, thru compulsion if necessary. If a subject be thoroly disciplinary and wholly distasteful, and a child does it, it is good for the child. And above all, let us see to it that we instill into the child, by leading him to conquer difficulties, and to subordinate his desires to his obligations and his duty, a moral fiber which will carry him straight thru fire and water to his goal in life; and let us not be responsible for turning into the world creatures of flexible backbone, who will pursue their sinuous way along the lines of pleasure, interest, and least resistance. This is too large a subject to be pursued farther in this paper, but its proper solution will contribute much to the strength of our training in morals. It is only one of the factors in the problem, but one which can be eliminated by the action of school authorities.

Against the material tendencies of the times, and the non-observance of moral obligation, many agencies are at work. As said before, the chief hope is the fact that the people are awake to the conditions. A recognized evil is more easily fought than one which works unseen and unappreciated. The work of the Religious Education Association has been rational and progressive, and its chief value is that it has been proved to be an agency thru which the exemplary but scattered efforts of a score of societies and bodies are given a unity and an organization which are accomplishing great results. The work of the society should have the earnest support of every school man, for it means concerted effort and strategic disposition of force. The introduction of educational methods in the Sunday schools has been remarkable in its

effects. As one writer states: "More has been done since February, 1903, to put the Sunday school on an educational basis than during the score of years immediately preceding." The promotion of intelligent Bible study has been the sole object of one society; and the fact is being recognized among our colleges that a man to be educated must have as thoro knowledge of the Hebrew laws, literature, and customs, as of the Greek and Roman. It is not so much of a disgrace for a college student to be caught reading the Bible as it was in my day. The output of literature on this subject during the year is noteworthy, and an examination of its titles, found in the bibliography of education published in the *Educational Review* of June, demonstrates the hold which the subject has upon the public and the methods which will be used to remedy the situation.

SCHOOL AND COLLEGE ATHLETICS

Closely allied to this subject is the whole vexed question of school and college athletics, and the influence of the age is seen in the taint of professionalism which creeps into our student sports in spite of severe rules governing eligibility. The taint will continue until it is thoroly ground into our students—yes, and even into the faculty and alumni advisory councils—that inter-collegiate games should be played for sportsmanship and not for victory; and that it is just as much a credit to lose as to win, provided you play a square game. Heroic efforts have been made in the last few years to draw up iron-clad rules carrying severe penalties, but the spirit of the old cry, which used to govern the ethics of sport in at least a half-dozen institutions of the Atlantic seaboard, of "anything to beat Yale" can be eliminated only when college pride and spirit prefer an honest defeat to a questionable victory.

DEPARTMENTAL TEACHING IN ELEMENTARY SCHOOLS

The departmental plan of teaching, introduced into over 130 of the elementary schools of the city of New York during the last year, has attracted wide attention as the most comprehensive attempt to apply this principle to the public schools. It has been permitted at the option of the teachers in Boston and Chicago, and individual trials have been made in other places. It has been tried for two years in the city of Albany, and the weight of opinion is favorable toward it, altho two years more of trial are deemed necessary to give a sufficient basis for comparison. An inquiry among the departmental teachers and the departmental pupils in the city of New York resulted in an almost unanimous opinion in favor of the plan. Its success is dependent, of course, on a large and thoroly organized corps of teachers, and it must therefore be confined to the larger cities. But where it can be introduced and be administered effectively, there would seem to be no reason why it should not be done. There is no more logic in a teacher's teaching all kinds of subjects, than in a lawyer's practicing all kinds of law, or a doctor's attempting to treat all classes of diseases. The age of the Jack-of-all-trades has passed in our professions and vocations. Why continue it in the one profession which is the foundation of all others?

A careful inquiry into the results of this method of teaching was recently instituted by Mr. Kilpatrick, and some of the most noted advantages claimed from an educational standpoint are as follows:

1. Expert teaching; the child is always under the control of the teacher who is best qualified to teach any given subject. The teacher herself becomes highly proficient in the science of the branch as well as in the best methods of teaching it.
2. Improved discipline.
3. Possibilities of more complete equipment in the way of special apparatus for the most effective teaching.
4. Better distribution of time and continuity of work.
5. Placing the responsibility directly upon the teacher for the advancement of the class in each subject of the grade.
6. Economy of supervision, economy of time and equipment.
7. The promotion of individuality thru placing greater responsibility upon each child and increasing his opportunities.
8. Much greater interest in the subject on the part of the scholar when presented by an expert teacher.
9. It is a step toward the individual development of the pupil, which in the present day of routine class machinery is much to be desired.

EDUCATION FOR THE INDUSTRIES

I choose this term because the term "industrial training" is invariably associated in the public mind with manual training, which is not all of what is meant. Education which trains for the work of the world, whether it be the arts, the trades, agriculture, mining, or commerce, is the subject which is engrossing more of public attention than any other in the educational field. The business and commercial world is asking in all seriousness if we cannot send out young men and women somewhat better fitted for business conditions. There is no question about the training of those who are to enter the professional and technical fields, but for the workers in the varied industries there is doubt. Social life in this country has grown from simple needs to the complexity of the highest modern civilization, with all the entailed obligations. Our education has grown and expanded with it. When the applications of steam and electricity (from 1830 to 1860) revolutionized the entire social structure, our education changed its form to meet the demands upon it. A revolution in industrial methods is going on today almost as marked, and our educational machinery must be remodeled sufficiently to meet it. Stripped of all verbiage, our country is getting too large, and our needs too complex, to train all children just alike. But the traditions and spirit of our country will not for a moment sanction the establishment, as in Europe, of two systems of instruction—one industrial and one cultural, one for working classes and one for governing classes. Our solution of the problem is forced to be a combination course—the same for all children in earlier years, with all that that implies of hope and opportunity, containing enough manual training to benefit all, and an option in the higher years to afford the special training desired for the work of life. How to adjust our machinery to the demands and the conditions, the kind and the extent of schools to be instituted to meet the require-

ments, are our greatest problems today. The progress of the country under this heading is more in the general acceptance of the idea and the means taken to meet it than otherwise. A catalog extensive and striking could be made of the commercial and manual-training high schools established, the shopwork and practice courses introduced in the grades, the technical and trades schools instituted, and the departments of commerce organized in the universities; but it would be only cumulative evidence of the feeling abroad in the land. At the convocation of the University of the State of New York last week the entire program of two days was given to an intensive consideration of this topic, and the ablest experts in the country addressed the meetings. Out of this agitation will come an adjustment satisfactory to our commercial and industrial development, and in harmony with our laws and traditions.

HIGH SCHOOLS

The growth of high schools has been greater in the last two years than during any similar period since 1895. Four hundred and thirty schools have been established, and the increase of students in attendance aggregates 43,595. Secondary education has seemed to recede from its two extreme positions and approach a more common ground. The former general and scholastic courses have been made more practical; and the practical courses that have heretofore been somewhat narrow are being broadened by the introduction of cultural subjects. Manual-training high schools are being looked upon less as trade schools and more as a liberal education process. An exception to this, and an experiment which involves to the extreme the parental control of the state, is the recent establishment of the Girls' Technical Training School on the East Side in New York. It is destined to supplement the grammar-school grades by three years of instruction in dressmaking, millinery, stenography, bookkeeping, domestic science, etc., so that its graduates may at once find profitable employment in our shops. English, mathematics, geography and United States history, some science, and a modern language, or science option, are the other studies. It is the first approach in this country at public expense to the *écoles primaires supérieures* of France, and while there is no doubt of its great practical value to a municipality like New York, its effect upon the educational policy of the United States will make it an object of close observation and interest.

The two- and three-year courses in commercial study are being rapidly discontinued, and the four-year commercial course recommended by the committee of the Department of Business Education of this Association in 1903 has met with general favor, and many commercial high schools have been established with this course as a basis.

The Minnesota Agricultural High School has for its purpose to train students to become useful citizens as well as good farmers and housewives. The account of its development contained in Appendices B and C of the Report of the Committee on Industrial Education in Rural Schools is worth

careful study, as the co-ordination of the rural school, agricultural high school, and agricultural college undertaken by the state of Minnesota is pioneer work and attracting wide attention.

RURAL SCHOOLS

The consolidation of country schools is growing in popular favor, and perhaps has no place in this paper other than to report progress, inasmuch as it has been previously discussed. But the recent movement for instruction in the elements of agriculture in rural schools is a strong additional argument in its favor. The larger the school, the better the equipment for teaching agriculture; and, what is more important, the greater the chance of securing a teacher who is fitted to give instruction. The Report of the Committee on Industrial Education in Rural Schools and Communities has just been placed in the hands of the members of this Association, and is an interesting and valuable document. The general conclusions of the committee are summed up in twelve findings unanswerable in argument and conclusive in their reasons. I shall not give even a summary of these findings, as the entire report is on for discussion at this meeting. The report should be studied thoroly, however, as the first comprehensive document on a phase of education which promises great results, not only in the development of agricultural wealth, but also in holding young men to the occupancy of farms.

EDUCATION IN THE SOUTH

The last two years have seen a remarkable growth in the educational activities of the southern states. A continuous educational campaign has been prosecuted vigorously in nearly every southern state. This campaign has been participated in, not only by leading educators, but also by prominent political leaders, and the appeal to the people for an increase in school taxes, the consolidation of school districts, and for general educational improvement has borne fruit rapidly. The Southern Education Board and the General Education Board have co-operated cordially and effectively with the educational authorities of the various states, and their stimulating assistance has been appreciated by teachers and school officials. The organization of these boards has been fully treated in the report preceding this, and it is not my purpose to repeat it. The boards came at a time when public sentiment was ripe for such a campaign as has been waged. College and university men have been foremost in their participation, and the public press has lent most valuable aid. School improvement clubs and associations have been formed thruout the South, and education has become a rallying-cry in political campaigns. The determination of the South to educate all of its people, and its decision, in spite of poverty and other handicapping conditions, to do this as a business proposition and to do it at once, is one of the most satisfactory occurrences of recent years. While for a long time the urban population of the South has had good public-school facilities, it must be remembered that nearly 80 per cent. of the population of the southern states is rural. It is

chiefly for the improvement of rural school facilities that this educational campaign has been waged, and the unparalleled growth in public sentiment, showing that the movement has the thoro support of the people, is one of the most interesting and gratifying educational facts of our time.

The time-honored Peabody Fund, established in 1867, is about to disappear as a distinct factor in southern education, the trustees having determined to relinquish the trust, only the interest of which has been used heretofore, and dispose directly of the funds, amounting to about two and a half million dollars. One million dollars is to be given to the Peabody Normal College at Nashville, Tenn. The disposition of the remainder is as yet undetermined.

The gift of ten million dollars to the General Education Board made last week by John D. Rockefeller puts the work of that board upon a solid basis for a century to come and establishes a reserve force in the field of education, which may be thrown at will to strengthen any weak point in the line, North, South, East, or West.

TEACHERS' PENSIONS AND CARNEGIE'S GIFT

The question of pensioning teachers, on the theory that they are members in long and honorable standing of the civil service of the state and should receive grateful recognition upon retirement, has been greatly strengthened in principle by the almost universal satisfaction over the recent gift of Mr. Andrew Carnegie of ten million dollars for the pensioning of college professors who have retired from work on account of old age or disability. It is too early yet to know the plans for distributing the benefits of this fund or to ascertain its limitations, inasmuch as the board of control has but recently been appointed. But if this principle is sound in its application to colleges, it is equally sound as applied to elementary and secondary schools, and it may pave the way to a general agitation of the subject and acceptance of the idea.

The report of the Committee of the National Educational Association on Salaries, Tenure, and Pensions, submitted for the consideration of this body at this meeting, states that hardly a beginning has as yet been made in the United States toward creating a system of pensions for teachers. In making this statement the committee emphasizes the distinction between a pension system properly so called and the various schemes of mutual aid, retirement funds, or old-age stipends that have been organized and are maintained primarily by the teachers themselves and at their own expense. The United States seems to have fallen behind other nations in this respect, and Great Britain, France, and Belgium have more satisfactory laws providing for pensions to retired teachers. The report states that there is no commonwealth in the United States in which public-school teachers in all cities and counties are by provision of law pensioned upon retirement out of public funds. Local authorities have taken some notice of the subject within the last few years, but, with the exception of New York, Detroit, and San Francisco, no municipality can be said to have a public pension system. The pro-

visions in all other cities are based upon the insurance plan of deductions from teachers' salaries. The law creating a retirement fund in Greater New York, the sources of which fund are the moneys forfeited or withheld for absence from duty, the moneys received from donations, legacies, and gifts, and 5 per cent. annually of all excise moneys, was amended by the legislature of 1905 so as to exempt from levy and sale by virtue of an execution all pensions or annuities payable out of the public-school teachers' retirement fund.

The new school codes of New Jersey and Ohio both recognize the insurance principle in the creation of retirement funds. This question is one which will be much before the public during the next decade, and the report of the committee of this Association is particularly valuable in the facts and deductions which it presents.

Correlative with this topic is the tenure of office of teachers. The principle should be recognized that security of position is of fundamental importance in order to secure faithful and efficient service from public-school teachers. A school force which is constantly shifting or liable to sudden change cannot produce the results obtained under a permanent tenure. There is not the incentive for bright young men and women to enter the teaching profession that would prevail were the principle of permanency established. The reluctance of men to enter the teaching profession, and the general uneasiness of those who are engaged in it, are largely due to this fact. The advocacy of tenure of office for all teachers during competency and good behavior, after they have first served a satisfactory probationary period, was the basis of a bill introduced into the New York legislature last winter, but for the passage of which public opinion did not seem ripe. This is about the state of affairs which exists in all parts of the country. The report of the United States Commissioner of Education made public in 1904 contains an investigation of the length of service of teachers in cities of 8,000 population or over, which shows that in 379 cities or towns, out of the total of 545 exceeding this limit of population, 50 per cent. of the male teachers have been engaged less than thirteen years, and 53 per cent. of the female teachers less than ten years.

TEACHERS' SALARIES

Considerable progress has been made in the last few years in the matter of teachers' salaries, and the report of the Committee on Teachers' Salaries, Tenure, and Pensions just submitted to this Association gives an abundance of figures and the necessary available data for the consideration of this subject. The principle at issue needs no discussion here, but the statement can be safely made that there is a general disposition to advance the salaries of teachers in the public schools of the United States, tho it is not in proportion to the increased cost of living or to the advanced requirements for the certification of teachers. Most of the larger cities have adopted a fixed salary schedule providing for minimum and maximum salaries for each position and a regular yearly increase. These schedules are as diverse as can be imagined,

and seem to be based rather upon the opinion of the local authorities than upon either the size of the city or the purchasing power of a dollar in that community. The variation in the salaries of similar positions in cities of the same relative size is sometimes startling in the extreme. In some cases the difference is due to the personality of the occupant of the position, but in most cases to the more variable quantity known as boards of education. Minimum-salary laws, correct in principle and indicative of a desire to deal justly with the situation, have recently been passed in Indiana, Maryland, West Virginia, and Pennsylvania.

The deductions and inferences from this interesting report would fill a volume, but can have no further place in the résumé I have attempted. The chief sign of progress is the general favor with which the attempt to improve the salaries of teachers has been received by the people in general. The recognition of the principle that it saves money to the public to pay for expert service will do more to further the progress of popular education in this country than any other one item. One of the keen observers accompanying the Moseley Commission stated that the people of the United States spend a marvelous amount of money on their public schools, but that the salaries of teachers are not sufficient for the service the country desires or should have; that the money lavished on the schools goes to buildings or equipment, which are on a much more generous scale than in England, but that the teachers—the living force of the schools—are kept short.

The raising of the Harvard endowment fund to yield an annual income of one hundred thousand dollars to be applied to the increase of the salaries of the professors is a notable event of the year, and indicates the general feeling on the question. Similar funds are now being raised by the alumni of other colleges.

THE BACCALAUREATE AND PROFESSIONAL COURSES

The last two years have seen the adoption of many experiments—I use the word rather advisedly—in the direction of a shorter combined baccalaureate and professional course. In the face of the increasing demands of the professional schools, and with opportunity for almost unlimited laboratory research, this shortening has been done at the expense of the college course. The policy of Harvard, Columbia, Cornell, and Chicago has been in this direction. The last revision of the curriculum of Columbia, voted in January, 1905, to take effect next September, is the most radical step thus far adopted, and at the same time the most defensible. It has the merit of entire frankness and of logical reasoning, even if we do not agree with all the premises. The requirements for graduation are 124 points, each point meaning satisfactory completion of work requiring attendance one hour a week for a half-year. After a student has obtained 72 points, he is at liberty to take up work for the remaining points in any of the professional schools of the university except law, which requires 94 points. A brilliant student can make 72 points in two years. The average student will make 60 points. It becomes pos-

sible, therefore, by hard, persistent and thoro work, to win the two degrees in six years; it is quite possible to do it in six and one-half years; and not difficult to do it in seven years. The student may make up his mind at the end of two, or two and a half, years, whether he will pursue the college course for the full four years, or whether he will take advantage of the shortened time to gain his professional degree.

The other changes which accompany this scheme are the adoption of semi-annual admissions and graduations which come from making the half-year the unit of credit, and the establishment of a program of studies for the degree of B.S. which does not require Latin; a regulation preventing those whose work is consistently poor in all courses from receiving a degree; and a further regulation to prevent browsing about the course, which prescribes that at least 9 points must be under some one department. Quoting from a résumé of the new program by Professor Thomas:

The expectation is that the new program of studies will prove especially attractive to students who may wish to obtain a college education before entering one of the schools of technology or applied science. . . . To avoid duplication, the college should gradually gather into its jurisdiction all those fundamental disciplines which are at once important in general education and necessary for particular lines of professional study. The professional schools will then be able to confine themselves more closely than now to strictly professional instruction.

This program will undoubtedly be watched with great interest, and will be the basis of many discussions and conclusions.

Under the auspices of the Education Department of the State of New York, efforts have been made the past year to establish a medical elective course in the last two years of the arts colleges of the state which will be accepted by medical schools as an equivalent of one year of medicine. It has progressed to the point of outlining the course, an expressed willingness on the part of several colleges to adopt it, and of two medical schools to accept it. This arrangement will earn the baccalaureate and medical degree in seven years.

There has, however, been noticeable during the last two years a strong reaction against the tendency to shorten the college course, and from the papers and discussions which have been contributed during this period it is evident that there has been a return to the distinct work of the American college as such. This is accentuated, and the work of the small college strengthened, by Mr. Carnegie's recent statements concerning contemplated action, and the gifts of D. K. Pearsons to numerous small colleges in the West. President Hadley, in his article in the *Century Magazine* for April, 1905, puts the matter in an unanswerable form which should be studied by everyone interested in this phase of our educational life. This article, which is based upon the statement of a French scholar that the bachelor's degree is a social rather than a pedagogical institution, and in which he demonstrates that the college course is valued not solely or primarily for its studies, but rather for its associations, concludes as follows:

Time alone can show whether the idea of allowing a student to develop his professional activity at as early a period as possible, but postponing to as late a period as possible the narrowing of his sympathies and the lessening of his points of contact with men outside of his profession, is a practical or an impracticable one.

While we are waiting for this question to be decided, we shall probably see two sets of experiments going on in different universities. In those which are connected with our large cities, where the work of the professional school counts for more and the life of the college for less, we are likely to see a tendency to shorten the college course—a tendency to make a sharp line of demarkation between the studies of that course and the professional studies which are to follow it, and to disregard or undervalue the social adjuncts which a college course carries with it. In smaller places and among institutions which have a more distinctly collegiate atmosphere, we may expect to find these tendencies reversed—to see an effort to maintain the college course in its integrity and include within it as much as possible of preparation for the actual work of life—in the belief that the gain to American institutions and American citizenship resulting from the contact of different types of men with one another will be strong enough to resist the tendency of such a college to disintegration, and valuable enough to compensate for any difficulties and losses which the prosecution of such a plan involves.

Prophecies are presumably out of order, but there are indications that undergraduate work will eventually be entirely separated from the distinctive university courses, and all work preparatory thereto left to secondary schools and colleges.

ENTRANCE TO THE PROFESSIONS

Material progress has been made in the last two years in establishing legal provisions in the various states guarding the entrance to the professions of law, medicine, dentistry, veterinary surgery, nurse-training, and public accounting. The necessity of maintaining relatively uniform standards in the various states is now recognized sufficiently to induce legislative action. The state of New York leads in her elaborate code governing all of these professions, and the laws of other states are usually based upon the New York statutes. The southern and far western states are still slow to act.

In law, the state of Missouri has established a state board of examiners and a preliminary education equivalent to a grammar-school course.

In medicine, reciprocity provisions for indorsing other state licenses have been passed in Georgia, Iowa, Missouri, and Wyoming. Medical acts have been revised in South Carolina, Kentucky, Vermont, and Wyoming.

In dentistry, state boards of examiners have been created by Kentucky and Wyoming; Mississippi requires high-school education or its equivalent as a preliminary to the examination.

In pharmacy, New York has made eight years in elementary schools and one year in high school a prerequisite to entering a school of pharmacy. Pennsylvania has become the second state requiring a diploma from a reputable pharmacy school for admission to licensing examinations.

In veterinary medicine, Maine and Missouri have established state boards of examiners, and New York has raised the entrance requirement of veterinary colleges to a four-year high-school course, or its equivalent, placing this profession on a par with medicine and dentistry.

In nurse-training, Maryland has created a state board of examiners; and the equivalent of a high-school course and diploma from a training school is required for registration.

UNIVERSITY SUMMER SCHOOLS

The last two years seem to have marked perceptibly the passing of the summer school of methods and the growth in public favor of the university summer school. This is a distinct step in advance, inasmuch as it substitutes for the spasmodic efforts of diverse agencies a regular curriculum maintained by a responsible organization. The growth of the university summer schools is phenomenal, and teachers are patronizing them to a remarkable degree. A number of cities have made it a financial or professional advantage to the teachers who attend university summer schools. Several cities give specific advances in salary to the teacher who brings a certificate of achievement; others allow several points toward professional examinations for the winning of similar credentials.

THE PUBLIC LIBRARY AN INTEGRAL PART OF OUR EDUCATIONAL SYSTEM

The public library as an educational force is beginning to be much more thoroly understood and used. If civilization is to advance and free institutions to be insured, there must be intelligence on the part of the people and due regard paid to the constant improvement of the individual. The school does not hold the child any great length of time. The average term of instruction per pupil for the whole country is now about 5.17 years, and an additional means of instruction must be provided at public expense. When school days are over, there is no agency but the public library efficiently to take the place, and for busy men and women it is the only opportunity for larger information and for self-education, which is in reality the broadest and best education. The highest civilization is that which lives together in mutual helpfulness. It means to each citizen a source of help, comfort, and protection, each giving according to his power and each acquiring according to his deserts. An ignorant and unenlightened people cannot live such a life as this. Small men and women cannot enter into it. There must be breadth of horizon and largeness of outlook, grounded in information, intelligence, and character. The common school has thrown wide the door of opportunity, and its work must be carried to completion by the public library. That this is realized by the public is amply demonstrated by the remarkable increase of public libraries, and the growth and extension of its principles. Five hundred and six library gifts in the United States for the year ending May 31, 1904, the latest figures available, are reported at \$6, 103,137, of which nearly one-fourth was given by Mr. Carnegie. He has given during the last fifteen years nearly forty millions of dollars to establish 1,350 libraries. The appropriation for the city of New York for current library expenses for the year 1905 was \$634,393. The free circulation of books in the city of New York for 1904 was 6,339,190, and for the state of New York a grand total of 11,347,802. Accurate

statistics are not available from other portions of the country, but in twenty-three states there are state library commissions, or departments, to promote the establishment of public libraries and to assist them in maintaining high standards of usefulness. The number of free libraries is rapidly increasing from year to year, and, in the light of its supplementary function to the public school, library growth is one of the brightest signs of the times.

SPECIAL EDUCATION

Special education—a term which I have never liked, seemingly coined to avoid the use of the word “defective,” and which has always to be defined as education applying to children defective in some measure—has made a wonderful advance during the last two years, particularly in two ways: first, a growing appreciation and practical acceptance on the part of the public that it is as much a part of the duty of the state to provide free education for children defective in any respect as for those who are normal; this is evidenced by increased interest and increased appropriations for the maintenance of schools for special instruction; second, the great increase in the number of manual-training courses in schools for the deaf and dumb, blind, and feeble-minded children, whereby they are not only trained to be mentally more alert, but often lay the foundation of a trade which will support them during life. In connection with the Ohio School for Feeble-Minded Youth, there has recently been established a custodial farm of sufficient acreage to give employment to the adult feeble-minded of the state in such a way that the sexes are entirely separated, not only from each other, but from society at large. In the courses of study for the blind there has been introduced a great amount of nature study by which the sense-perception is being greatly increased and a knowledge of the outer world more closely brought to the mental sight of the child. At the St. Louis Exposition there was on exhibition a group of 358 specimens of insects gathered, classified, and mounted by blind pupils, the only aid given being that which was rendered by ordinary children in catching the specimens. If this increased study in nature work will aid to cultivate in the blind a habit of exact thought, in the place of the irregular emotions which have hitherto characterized this class of children, it will be a distinct step in advance.

A resolution passed by the American Medical Association in New Orleans in May, 1903, asking that measures be taken by boards of health, boards of education, and school authorities, and, if possible, legislation be secured looking toward an examination of the eyes and ears of all school children, has been adopted by the Mississippi Valley Medical Association, the American Public Health Association, and over twenty state medical associations. In about thirty cities of the country formal tests of the sight and hearing are maintained by official medical inspectors, and in a number of municipalities medical inspectors are appointed by the public-school authorities to test, not only the sight and hearing, but other organs of the body. This guardianship of the health of children is producing remarkably good results.

In many of our cities also special classes are formed for the training of children, more or less abnormal, who with proper care can make greater intellectual advance. These classes are always small, and in charge of a teacher specially fitted for the delicate work.

COMPULSORY EDUCATION AND JUVENILE COURTS

The feeling of responsibility on the part of those carrying on the affairs of the state for the education of the young is increasing. There is a greater appreciation of the child's rights to an education, and an insistence upon parents sending children to school up to the full age limit. The compulsory-education laws have been amended in many states with this end in view. Children's courts have been established in many cities, and truants and incorrigibles carefully supervised, and placed where they can secure a good elementary education. Notable juvenile courts are those conducted by Judge Lindsay, of Denver, Judge Tuthill, of Chicago, and Judge Stubbs, of Indianapolis.

SUPPLEMENTARY EDUCATION

The measures for adapting the public-school system to the varied conditions of a great urban population are significant features of our social and economic progress. Various forms of continuation schools for those who are employed during the day are being established in all the large industrial cities. The educational centers for working-people in Boston, the evening school of trades in Springfield, and the great number of evening schools in New York, Philadelphia, and Chicago are instances in point. These schools teach a range of subjects almost as wide as the day schools, tho leaning strongly to the practical. The attendance of recently arrived immigrants at these schools is noticeable and significant. The use of the public schoolhouses in the evenings as social centers, for popular lectures, for parents' meetings, and for study clubs, begun in the larger cities, is rapidly being adopted in smaller cities and industrial towns, and brings a double return to the community for the investment in educational equipment.

The humane as well as educational principle involved in maintaining vacation schools in crowded cities, where children can find recreation as well as instruction in manual training, gymnastics, and athletics, is reclaiming thousands of boys and girls from street life, and turning gangs of embryo toughs into normal-trained men and women. The public-school gymnasium and playground is recognized to be as potent a factor in modern school training and upbuilding of character as can be employed. For this reason one of the most notable events of the school year just closing is the appropriation of one million dollars for the purchase and the equipment of playgrounds in the tenement districts of New York and Brooklyn. Three hundred thousand dollars was also appropriated for purchasing three athletic fields for the use of the pupils of the greater city. It is money well spent. Nearly every city in the United States of 100,000 inhabitants maintains vacation schools. The great devel-

opment in the last five years has been due to New York's action in taking over the schools formally conducted by the Society for Improving the Condition of the Poor, and its great need has led to the prosecution of the work with corresponding vigor.

THE EDUCATIONAL EXHIBIT AT THE ST. LOUIS EXPOSITION

A paper of this nature would not be complete without reference to the educational exhibits of the Universal Exposition held at St. Louis in 1904, in which exhibits thirty-three states and territories and twenty-two foreign countries participated. At the same time there may be a doubt as to whether this display comes under the head of educational progress. It was rather an objective summary of the world's educational status at that date brought together for the purpose of comparison and study. It has already been thoroly discussed in the educational press and on educational platforms, and the lessons taught by the orderly and systematic arrangement of the prominent features of the educational systems of nearly every civilized country have been thoroly emphasized. It is too early to assert that it has influenced any important movement, and almost too late to repeat again that its suggestive influences have penetrated thru the thousands of teachers who visited the Education Building to every quarter of the globe. Unique in the position of being the concrete form of the science, the theory of which the entire exposition was designed to emphasize, the exhibit stands as a monument to mark the recognition of the fact by a new nation, that education is the practical basis of the social and industrial life of a country.

THE CONGRESS OF ARTS AND SCIENCE

The most notable gathering of men of letters, arts, and science which has ever taken place in the history of the world was the Congress of Arts and Science held under the auspices of the St. Louis Exposition in September, 1904. It was a gathering remarkable for its cosmopolitan membership, its emphasis of the fraternity of scholarship, for the personnel of its participation, and for its magnificent contribution to the scientific thought of the world. The congress was conceived in the desire to depart from the routine of international gatherings common to universal expositions, and was the result of much thought and wide conference on the part of the authorities of the exposition. The plan grew out of the idea that the subdivisions and multiplication of specialties in science had reached a stage at which investigators and scholars might derive both inspiration and profit thru a general survey of the various fields of learning, planned with a view of bringing the scattered sciences into closer mutual relations. The central purpose was the unification of knowledge—an effort which seemed doubly appropriate on an occasion when the nations were bringing together a comprehensive exhibit of their arts and industries. In these days, when mind is concentrated on atoms, when the narrow field of the specialist is all too wide for the life-work of our keenest intellects, a discussion of the broader relations of the sciences, their inter-

dependence on each other, and their influence on the destinies of the race, was felt to be worth the trial. It might lead to generalizations in which this age is remarkably deficient.

The opening of the congress on September 19 was followed, on Tuesday forenoon, by addresses on the main divisions of science and its applications, the general theme being the unification of each of the fields treated. These were followed by two addresses on each of the twenty-four great departments into which knowledge was divided. The theme of one address in each case was the fundamental conceptions and methods, while the other set forth the progress during the last century. These addresses were delivered by Americans, making the work of the first two days the contribution of American scholarship.

On the third day, with the opening of the sections, the international work began. One hundred and twenty-eight sections were held in the four remaining days of the congress, at each of which two papers were read, one by a foreigner, the other by an American, the theme of one being suggested by the relations of the special branch treated to other branches; the other, by its present problems.

A glance at the personnel of the speakers proves conclusively that never before have so many leading exponents of various learning or so many leading scientists been brought together for a common purpose. The papers, which in nearly every instance by their very high plane of scholarship showed a full appreciation of the importance of the occasion, are now being published in eight volumes by Houghton, Mifflin & Co., of Boston, and will embody a contribution to scientific literature which will mark the St. Louis Exposition long after the record of its material achievements has faded from the minds of men.

EDUCATIONAL LITERATURE

Within the last two years the literature of the profession has broadened and deepened, and some really noteworthy books have been published which indicate that within a reasonable time we need not be ashamed of comparison with other professions. The bibliographies published by the *Educational Review* in June, 1904, and June, 1905, give forty-three titles of books that should be in every large library and be accurately known to all students of education. With no intention of discriminating, a half-dozen of these should be specially mentioned as widely read and favorably received works; such are Horne's *Philosophy of Education*, Thorndike's *Educational Psychology*, Brown's *Making of Our Middle Schools*, Coe's *Education in Religion and Morals*, Carpenter's *Teaching of English*, and Hall's *Adolescence*, easily the greatest book on the subject ever presented.

MISCELLANEOUS

Space forbids extended treatment of many features worth presenting, but their mention will carry full appreciation to this audience; noteworthy are:

a) A growing tendency in the eastern states to support from public funds the higher forms of education.

b) Extension of trade schools under private auspices and in institutions maintained by private bequests where plumbing, metal-working, carpentry, painting, etc., are taught.

c) A growing belief in loose grading plans such as obtain in Chicago, St. Louis, Elizabeth, Batavia, Cambridge, in contradistinction to the old mechanical grading.

d) Reaction from the belief that spelling can be learned incidentally as one learns to walk, and a liberal reaction from older methods of teaching history and geography, where lessons were memorized, to the newer forms of teaching, which require the pupil to understand what they are studying.

e) The leading place given to English in the elementary schools, and efforts toward a more rational plan of teaching English in the high schools. Arithmetic is no longer given twice the amount of time allowed to any other subject, altho its importance is still recognized.

f) The constant raising of the standard of entrance to the teaching ranks, and the rapid development of departments of education in colleges and universities. Correlative to this is the growing demand for none but college- and university-trained teachers in high schools, while normal-trained teachers are in demand for the grades and the rural schools.

g) A gradual but inevitable transference of purely educational functions from boards of education to professional administrators; appointment of teachers on the merit plan, transfer of teachers and pupils, graduation of pupils, and other details of management generally have been given over to the superintendent.

h) Close attention to schoolhouse architecture and the immense improvement in the equipment of school buildings, particularly in reference to gymnasiums, baths, roof playgrounds, elevators, workshops, and kitchens.

i) The work of the Agricultural Department of the government, supplemented by the work of the agricultural colleges and experiment stations, in applying the results of scientific investigation to agriculture, horticulture, stock-breeding, floriculture, and the like.

j) The investigations and discoveries of Luther Burbank in the improvement and development of fruits, flowers, and vegetable food-products, especially the development of a spineless cactus which can be produced in almost limitless quantities in arid climates, and which will add materially to the food production of the world.

INSULAR EDUCATION

Porto Rico.—No changes have been made in the school system as a whole or in the policy of the department to lay emphasis upon the work of the common schools of primary grade. As a rule, children enter these schools at the age of five or six, and remain about three years, the vast majority, by reason of their poverty, not being able to remain longer. The town schools have a carefully graded eight-year course. The principal hindrance to the more rapid development of educational matters on the island of Porto Rico seems to be the lack of funds, and unless Congress takes special action on the matter, little relief is likely to come. The burdens of taxation are now as severe as the limited resources of the island can meet, and much as the improvement of the schools is desired by the people, it is considered unwise to tax them further for this purpose. Whether Congress can find any means of relief for the situation is doubtful, but a policy should be inaugurated which will give to every child in Porto Rico an opportunity to attend school,

instead of the accommodations being limited, as at present, to about 70,000 children, or one-fifth of the population of school age.

There are at present employed in the common schools 1,265 teachers, of whom 139 are Americans who devote most of their time to the teaching of the English language. The average enrollment per school has increased over 25 per cent. within the last two years. The eight-weeks trip of 540 Porto Rican teachers to the United States and to the summer schools of Harvard and Cornell during the summer of 1904 is considered successful from every standpoint. The object of the trip was to give the teachers a strong stimulus in the study of the English language, and a clearer idea of American life and institutions, and of American history and geography. Congress refused to do more to aid the scheme than to provide transportation, and the remaining amount required, which was practically \$100 per person, was contributed nearly half by the teachers, and the remainder by private subscriptions in New York, Boston, and Philadelphia.

The University of Porto Rico was established in March, 1903, and with it was incorporated the insular normal school, located at Rio Piedras. This normal department of the university was the only department in operation at the time of the organization of the university. The main object is the establishment of professional schools, particularly in law, medicine, and engineering. Teachers' institutes have been inaugurated during the past year, and the programs of the meetings and the appointment of inspectors are carried on from the department.

The Philippines.—The reaction and indifference to the educational policy of the United States government which existed in the Philippines two years ago have now almost entirely disappeared thru the strenuous measures adopted by the Bureau of Education. Provinces such as Misamis, from which the division superintendent and all insular teachers and all supplies were withdrawn, have come fully to realize the value of the education proffered, and the fact that its being a free gift should not cause it to be lightly considered. The realization that education was not to be forced upon the people, but rather was an opportunity which they should not fail to grasp, has seemed to be the controlling element in the change of attitude.

The chief points of progress in the Philippine schools, which have been carried on under the policy first established by the government, have been almost entirely in the matter of administration and of increased revenue. The status of the division superintendents under the civil service has been fixed, and the minimum salary placed at \$1,600. These salaries are also no longer fixed with reference to the respective political divisions, but the superintendents may be assigned to duty in any part of the archipelago. Promotions have also been arranged for on the merit basis, and the teachers included in the classified civil service. This gave rise to some confusion at first, but satisfactory and equitable adjustments have been made, and the law at the present time is popular. Provision has also been made for meeting the expenses of American teachers assigned to visit the *barrio* schools.

The chief features of the policy of the bureau have been summarized by the superintendent of education, as organizing and placing, under competent supervision, primary instruction within reach of every child in the Christian provinces; the training of a sufficient number of Filipino young men and women as teachers; organizing in every large municipality an intermediate school for continuing the work of the grades, and giving efficient practical instruction in industrial training; the establishment of provincial high schools; the developing of the three technical schools already established.

The passage of the internal-revenue act of a year ago, which devotes 5 per cent. of the entire revenues to the municipal school funds, has been of immense advantage to the educational situation, and has permitted the employment of many hundred additional teachers at fair salaries. The actual attendance in September, 1903, upon the common schools was 182,282 pupils. In October, 1904, the grand total was approximately 364,000. This tremendous increase in one year is due, not to the enforcement of any compulsory education act, but to the more complete realization on the part of the Filipino people of what the education introduced by the American government stands for and the opportunities it affords their children. The experiment of planting the ideals of American democracy among an Asiatic people seems to be meeting with more abundant success than was anticipated two years ago, and in the minds of the officials of the government the successful termination of the reactive period, and the evidence of increased interest and attendance, are positive proof of the ultimate justification of the American policy.

FOREIGN EDUCATION

It is impossible in a review of this nature to go into minor details in foreign education, or do more than select here and there some features which seem to us worthy of note. This is all that has been attempted, and in no case is there a discussion of foreign systems. Many important countries are untouched, because their work seems to be the normal progress of policies adopted prior to the period covered in this address. I should like this borne carefully in mind in criticising the faults of omission and commission existing in the report.

France.—In the field of higher education, a decree which took effect November 1, 1904, united the Superior Normal School to the University of Paris. The normal school preserved its administrative and civil personality, the director and assistant becoming members of the council of the university. The teachers of the normal school became members of the faculty of science and letters. The scientific instruction is given by the university and the professional instruction by the normal school, with a course in the lyceums. Two courses, one of letters and one of science, are maintained, each three years in length. The students are matriculated in the university; and, in short, the relation is almost exactly the same as that of the Teachers College to Columbia University in this country. The policy

of placing the training of teachers for the higher schools under university direction is parallel with recent developments in our own country, and the direct influence of the American system is acknowledged in the reorganization in France. The changes are made in the expectation of securing a more equitable distribution of the scholarships, the number of which will depend upon the funds available in the budget, and of obtaining a higher grade of teachers in the secondary schools of France. In the discussion of these changes, M. Croisset, dean of the faculty of letters of the University of Paris, asserts, in commenting on the importance of Latin composition as compared with the Latin theme, that Latin has ceased to be what it was formerly, a scientific international language.

In secondary education the chief modifications have been in the plan of studies, programs, and examinations for the baccalaureate. In the lyceums the total duration of hours of class-work and of study has been reduced to nine hours for students under sixteen years of age, and to seven hours for those under twelve. No class period must exceed one hour, except in the higher courses. The modifications of the French secondary school system are suggestive of the American plan as exhibited in Paris during the Exposition of 1900. The former modern and classical courses, differing by one year have been revised, and, instead of two distinct lines of study, two cycles have been adopted, the first of four years, from the sixth to the third inclusive, in two divisions, differing by having Latin as the basis for one, and French and other modern languages for the other. The second cycle, comprising three years, is divided into four sections: (a) the Greek-Latin, (b) the Latin and modern languages, (c) the Latin-science, (d) the science and modern language, all quite analogous to the four courses of the American series leading to the degree of arts (B.A.), the degree of philosophy (B.Ph.), the degree of science (B.S.), and the degree of literature (B.L.).

In elementary education the chief problem has been the amelioration and improvement of the teaching force. No one may become a teacher in the public elementary schools without holding a normal-school certificate testifying to pedagogic ability, and granted after having passed three years at least in a normal training school for teachers. The chief anxiety is concerning the question of men teachers. The recent financial law passed April 22, 1905, has increased the salary of teachers in the elementary schools, and the new military law of 1905 contributes to the increase of men teachers by permitting an exchange of military service for a five-year contract in teaching.

The suppression of the congregations still continues a matter of strife between the lay spirit and the clerical. The law of July 6, 1904, presents six articles, all of which are interesting, but which cannot be presented here *in extenso*. The first forbids instruction of all kinds and any nature to the congregations of France within a maximum limit of ten years. The second decrees that congregations that are exclusively teaching bodies shall not enroll new members, and only those that are foreign may continue their course. The

third determines on the closing of the institutions within at least the ten years. The fourth provides for public announcement of the closed congregations in the official journal. The fifth provides for the closing of the effects of the institutions. The sixth repeals all laws to the contrary. Under this act private elementary and secondary instruction is restrained. It is a matter of interest meanwhile to remark that most of the schools closed by this act will open, even if they have not already opened, under a lay teaching body which is nothing more or less than the former personnel in secular garb. The closing of the congregations, however, resulted in bringing private education, elementary and secondary, under the jurisdiction of the state.

An interesting study is being carried on by a commission, of which M. Léon Bourgeois, former minister of education, is president, to inquire into the requirements and educational obligations for abnormal children. The commission is making an exhaustive investigation under the decree of October 4, 1904, and is establishing fundamental propositions.

It is difficult to characterize the various lines of evolution of instruction in France during recent years. Science profoundly impresses the department of teaching, and demands services most important and profitable to the masses. This does not mean that the classical tradition has been abandoned, or is to be retired in France in favor of research. French spirit still aims at the ideal and the development of the beautiful, and the pursuit of pure science has not ceased to be held in highest honor. The new plans for secondary instruction have invested the sciences, however, with new functions. M. Liard, vice-rector of the University of Paris, writes: "They will be the instruments of culture." Letters will continue, as in the past, the tried instructors impossible to be supplanted, but in the domain of the positive sciences there will be more effective work than in the past. The sciences will be ranked by the French among the humanities. Again in the words of M. Liard:

Our countrymen, who are beyond all an idealistic race, and deductive, have need of a great bath of realism. . . . On the whole, the education of the French youth seems to have been too much directed to the abstract mathematics, and not enough toward experimental science. Often the spirit of our race has led our students by bounds to the highest generalities at once to treat deductively all items of knowledge. It is necessary, then, that education thru the experimental sciences become experimental and inductive.

Attention should be called to an item of interest to all, which has frequently been overlooked. There have been established for some time frequent and profitable relations between the schools of France which are under the jurisdiction of the minister of public instruction and those of neighboring states. Foreigners are received as auxiliaries in the primary normal schools and in other establishments of secondary instruction. Reciprocally, French teachers are sent to foreign schools; and this exchange, so advantageous from all points of view, is multiplying each year.

England.—This survey confines itself to what has taken place in England, but it should not be forgotten that an important development of opinion on educational matters has been going forward during the same term of years

in Wales, Scotland, and Ireland. At no time in England's history has there been so widespread an interest in the problem of national education as during the last three or four years. The movement is still in flood. It has touched every type of school and all grades of education. It is the outcome of the ferment of thought and of the upthrust of new social ideals. While the study of American and foreign systems of education has done much to stimulate the criticism of methods of teaching, the English movement is anything but imitative. It proceeds from a strong sense of national need, and is slowly feeling its way thru discussion and practical experiment to the readjustment of typical English methods to the new social and intellectual conditions.

First in importance therefore, among the educational developments in England during the last three years, must be placed, not the mere administrative change, but the growth of public interest in educational matters.

Stress should be laid upon certain changes in the point of view of those who are desirous of educational reform. There is a growing sense of the unity of national education, in the interdependence of one grade of educational institution upon the other. These parts of the educational policy which have rested consciously or unconsciously upon traditional social distinction are slowly losing their power. At the same time, the influence of environment in education is seen to be of signal importance. The educational problem, therefore, is discussed more and more as an aspect of the social problem. The discussion has begun to center on the aims of education, and is bringing into clearer relief the value which the English mind attaches to virility of character, and therefore to the character-forming factors in education. There is less disposition than heretofore to regard changes in educational machinery as sufficient in themselves to secure educational reform. This change may for a time seem to retard administrative organization, because it reveals the deep-set varieties of social and economic ideals within each area which the schools must serve; but, in point of fact, nothing is of more helpful augury for the future than this disposition to think the matter out, to get at the bottom of the problem, and to abstain from any superficial treatment of the difficulties involved.

The law of 1902 relates almost exclusively to the regular administration of schools, and the county councils, which became the local unit of supervision and administration, have assumed the power of the former boards, with little friction and with apparent success. The chief opposition to the law, as might have been anticipated from the great struggle which arose at the time of its passage, is in the application of local taxes to the support of church schools which remain substantially under private control. The necessity of accepting the conditions passively, as was predicted at the time of the passage of the act, has not been recognized, and the various religious sects outside of the established church have made a steady and firm resistance to the payment of taxes to be used for this purpose. Thousands of summonses have been

issued by the courts to those refusing to pay the taxes, and unless the law is amended in this particular, much confusion is likely to arise. The administration of the new law is immensely superior to the procedure under the act of 1870, and, if satisfactory adjustment can be made of the religious question, both the elementary and secondary schools will soon be on a highly satisfactory basis.

In 1903 a new education law was passed for the city of London which practically extended to the city the principal features of the general law of 1902. The historic London School Board, which has made such a magnificent record in the thirty-five years of its existence, and whose influence has been felt thru the length and breadth of England, has practically brought its work to a close. The opposition to the application of the law to the city of London arose quite as much from the sentiment over the thoro work and magnificent record of the old board as for any other reason; but it is almost the unanimous opinion that the present policy is much better adapted to the present needs of London's development.

In the sphere of secondary education an advance has been made all along the line. Old schools are being strengthened, new schools have been established, curriculums are being modified, and equipments have been improved. No such period of revival in secondary education has been known in England since the Revival of Learning. The beginning of this period of reform has only just been entered upon, but the outlook is very highly encouraging.

In the sphere of technical education there has been a great strengthening of the more advanced work. In London and in the other great cities research and higher teaching in technological subjects are being pushed forward. Technical evening classes for workmen and other students, both men and women, have been organized in large numbers.

The Universities of Oxford and Cambridge are particularly sensitive to the new conditions and to the demands of the present trend of thought. The University of London is rapidly gaining strength and cohesion. A new university has been established at Sheffield, and the government grants to all the new universities and university colleges have been more than doubled.

Sweden.—In May, 1904, the Swedish Riksdag decided upon a reform in regard to the secondary schools of Sweden—the most radical and important in their entire history. These schools are the direct continuation of the monastery, cathedral, and town schools, some of which have existed since the Middle Ages. As heretofore organized, they have consisted of a continuous course of nine years, following a course of three years in the common schools.

The change authorized divides the secondary schools into a lower modern school of six years and a higher gymnasium of four years. The gymnasium, however, is not a direct continuation of the modern school, but continues from its fifth class. The courses are based, as before, upon the three-year common-school course. The result of this change is that pupils have the

option of taking the full six-year course of the modern school, and, if they are successful in the final examinations, they are entitled to certain privileges, such as being received as apprentices in the government telegraph or postal-service department. Coeducation is also allowed in these modern schools, and is important as being the first instance in which the government has authorized coeducational schools in secondary education. This decision was preceded by a very careful investigation of the results of coeducation, particularly as conducted in the United States.

The other option is to leave the modern school at the end of the fifth year and take the four-year gymnasium course, making the complete course for the student nine years. The four-year gymnasiums are also of two kinds, the Latin gymnasium and the modern gymnasium, and both are concluded by an entrance examination which admits to the university. The main difference in the gymnasiums is that in the former an opportunity is given to study Greek. An innovation is also allowed in introducing elective courses in the last two years of the gymnasium course. The most important change in the curriculum of the secondary schools is the abridgment of Latin and of Greek. Heretofore six years of Latin and four years of Greek have been given. Under the present arrangement four years of Latin and two years of Greek are prescribed. The tendency to force the classical languages into the background has been quite marked, and the present program reduces the time for the study of Latin one-half from that in vogue thirty years ago. At that time, also, 75 per cent. of the pupils in the last four years of the gymnasiums took Latin, while at the present time 47 per cent. take this subject.

The most important administrative measure in connection with this reform of the secondary-school system is the establishment of a superior board of five members who will manage its affairs, in place of the ministry of education and the chapters of the dioceses which have hitherto controlled them. Among the members of this board of five are Hon. Carl von Friesen, head of the present Education Department, Professor Ernst Carlson, principal of the higher secondary school of Gothenburg, and Dr. N. G. W. Lagerstedt, recently the royal Swedish commissioner to the St. Louis Exposition.

Germany.—The imperial rescript of the emperor, acting, however, as the king of Prussia, which took effect in 1902, is the principal event in the educational world of Germany during the last four years. By this decree the leaving certificates from the *Gymnasium*, the *Realgymnasium*, and the *Ober-Realschule* were accepted for entrance to the university—a privilege heretofore enjoyed by the graduates of the *Gymnasium* alone. The *Realgymnasium* has one classical language, Latin, and two modern languages, French and English; the *Ober-Realschule* has only the modern languages. The similarity of this action to certain tendencies in this country can readily be perceived. Thus far only a few of the other German states have shown any inclination to follow the example of Prussia, and east German states have quite positively refused to order an equalization of the three kinds of insti-

tutions. The overwhelming influence of Prussia in matters educational will in time undoubtedly lead most of the states to similar action.

The academic degree has, during the various evolutions of the German university, become of little practical importance, except to those who intend to devote themselves to an academic career. It is possible to become a clergyman, a lawyer, a physician, or a teacher in high schools without possessing the baccalaureate degree. The large number of graduations which still take place every year under these conditions, is accounted for by the consideration which the title enjoys in the public estimation, and by the widespread partiality in Germany for titles in general.

The time-honored compulsory-education laws of Prussia are now being more strictly enforced than ever, and in 1901, out of a grand total of 5,754,000 children, only 518 evaded attendance.

Keen to observe the necessity of training young men for commercial service in the German colonies and consular service in all parts of the world, a series of commercial high schools has been established in the last few years which treat economic science from the practical and strictly scientific point of view. The Commercial High School in Leipzig, founded in 1898, was the first institution of this kind, followed by the Municipal Commercial High School in Cologne, founded in 1900, and the Academy of Social and Commercial Science founded in Frankfort-on-the-Main in 1901. The magnificent exhibit of these schools at the St. Louis Exposition is too recently in the minds of this audience to need extended comment.

Agricultural schools of various grades, including farming schools and agricultural winter schools, have grown with the utmost rapidity over the entire empire. At the end of 1903 the schools of this class aggregated 256. Nearly all are subsidized by the state, or receive incomes from the provisional district and commune funds.

Belgium.—There have been no new laws of importance in Belgium concerning primary instruction, with the exception of a general increase in the salaries of teachers. The measures which have been undertaken by the administration have all tended toward the practical realization of what is considered in Belgium the imperative law of modern pedagogy, *l'école pour la vie*, which may be liberally translated as school training for the necessary work of life. To insure the introduction of this essential reform, the central government has made four matters, or objective points, the subject of legislative measures and decrees:

1. The thoro inspection of the curriculum on the part of the government.
2. Creation of technical courses designed to meet local needs.
3. Instruction and preparation of teachers in educational methods adapted to the future condition of pupils in professional life.
4. Increase of work in social education.

One of the strongest means of securing the great results achieved in this method of education has been to enlist the aid of teachers in preparing dissertations for the general pedagogic conferences. The problems, which every

teacher is compelled to solve, consist of the obligatory assembling of documents and materials necessary in laying out their lessons and in applying them to the course of instruction established by the government. The value of this collection, as exhibited by Belgium last year at St. Louis, is without parallel as a collection of historical educational documents. Last year the government directed that each school send in treatises, statements, and collections upon a series of questions, all of which are now being exploited at the exposition at Liège. This work is considered of the highest importance from the point of view of the ultimate preparation of the teaching staff, inasmuch as the collections in their educative power are so much greater, as they have been made by the teacher aided by his pupils, and are composed of elements selected by them and by him from the territory of their own community and in the different workshops of their own locality.

The secondary education of Belgium has recently been carefully devoted to introducing into the instruction a spirit more practical and more business-like, and to systematic efforts to attract the children of the middle classes toward commercial careers in arts, industries and trades. This tendency is manifested principally by the creation of new commercial sections in a certain number of secondary schools, as well as under the ministerial decree of July 30, 1904, remodeling the program for instruction in drawing in the royal athenæums and the secondary schools of the kingdom. In the higher secondary schools, with the same idea in view, and under the decree of September of the same year, modifications in the course in mathematics and commercial sciences have been authorized. The teaching of commercial accounting and of commercial arithmetic has received a new practical form more complete and more in accordance with actual necessities. The Belgian government is neglecting none of the factors which can contribute, either in primary or secondary education, to a training for *l'école pour la vie*. On the other hand, it is important not to lose sight of the fact that public instruction ought not only to be directed in a national sense toward the needs of its own country, but at the same time toward matters concerning foreign nations in a way to sustain business relations with other countries, and to develop their economic condition. With this particularly in view, a course in economic geography and the more thoro study of the English and German languages have been introduced into the curriculum.

In higher education there has been established in the University of Liège the degree of "geological engineer" by decree of August 24, 1900, with the design of procuring engineers with a geological knowledge more complete than has resulted from study in the technical schools, and to furnish the equipment demanded by the development of scientific mining. The degree of "doctor of arts and archæology" has also been established at Liège at the end of a course more complete than any that now exists either in Europe or America. This was established in 1903. The University of Gand established last November the degree of "engineer of naval construction," the first course

in which will not be completed till the end of the academic year 1905-6. There have also been established in the two Universities of Gand and Liège the degrees of *licencié* in commercial science and *licencié* in commercial and consular science. These have for their object the giving of a technical preparation to young men who are fitting themselves for commercial and industrial vocations, and particularly for consular careers. The University of Louvain has set up a School of Commerce and Consular Science, and includes in its course of study a curriculum preparatory to a doctorate in "geographical science." The University of Brussels has opened a School of Commerce which confers the degree of "engineer of commerce." Both the Universities of Louvain and Gand have established technical schools since 1900, and during the last few years the curriculums of both universities have been enriched by numerous chairs, among which are to be specially noted those of oriental literature, Egyptology, Assyriology, and many modern languages, chiefly oriental. It has been a period of the utmost activity in university circles, and the efforts of the government in establishing faculties which shall meet literary and scientific demands of modern years have been effectively supplemented by private benefactions and foundations.

Japan.—The educational system of Japan has moved along steadily under the imperial ordinance, published in 1886, relating to universities, normal schools, elementary schools, and middle schools. The changes made since that time have been in the line of amendments, but the general features remain the same as then prescribed. Among the chief points of this revision were the establishment of the University Hall exclusively for research in connection with the Imperial University; in the normal schools the expenses of the pupils were to be paid by the schools, and the subjects of study and the standard to be attained were prescribed by the minister of state for education; the expenses for elementary schools were chiefly to be paid out of the tuition fees; the higher middle schools were established to prepare pupils for the university, and also to give them professional education; the number of ordinary middle schools to be established in *fu* and *ken* (civil divisions corresponding to French prefectures) was limited to one for each. In 1890 the imperial ordinance revised the provision relating to elementary schools. By this revision the people were placed under obligation to send their children to school till they completed the ordinary elementary-school course of three or four years. In the famous speech made in 1890 the emperor decreed that all instruction should be in line of fostering moral sensibility and the practical performance of human duties and should be considered the chief object of elementary education; and that the spirit of loyalty and patriotism should especially be awakened. In 1893 regulations relating to supplementary schools for technical instruction were issued. In 1899 the imperial ordinance for the middle schools was revised, and, among other things, the limit of the number of these schools to be established in a civil district was removed. In the same year an imperial decree urged upon the local authorities the establishment

of higher schools for girls, and the local corporations, or town or village school unions, were authorized to provide for such schools. In the year 1900 an imperial ordinance again revised the elementary-school code, and abolished entirely the minimum three-year course. In view of obligatory attendance, tuition fees were abolished, and many changes were made in the time and extent of the subjects pursued. In the same year also the medical departments of higher schools were reorganized under the name of "special schools for medicine." In 1903 an imperial ordinance prescribed regulations for special schools in which instruction is given in higher courses of arts and sciences. For the purpose of alleviating the burdens of higher education, a special reserve for educational purposes amounting to 10,000,000 yen was set aside from the Chinese indemnity fund, the annual interest of which was to be distributed according to the proportion of children of school age attending during the previous year. In 1903 the total amount available for this distribution was 1,371,000 yen. Between 1900 and 1905 there has been marked increase in salaries paid teachers, and provisions have been made by the state for providing pensions to retired teachers. This pension is paid out of a special reserve fund established by each *ken*, and is formed by holding out 1 per cent. of the salaries of regular teachers. The national treasury in addition grants a sum equal to one-half of the moneys paid by cities, towns, or villages.

In April, 1903, a system of state textbooks was introduced, copyrights being reserved by the Department of Education. All textbooks, except those for morals, Japanese history, and geography, and Japanese readers, may be selected by the local governor from among those which are copyrighted by the Department of Education, or adopted by the minister of state for education. The books excepted are prescribed by the government.

A great advance has been made in the last few years in the matter of school equipment, and strict laws have been established as to the relative proportion of school grounds, school buildings, open-air gymnasiums, furnishing of dormitories, distance of school buildings from factories or unhealthy ground, size of classrooms, etc.

The great demand for trained teachers led to the establishment in 1902 of professional teachers' training institutes under the control of the Imperial University, by which teachers for middle and normal schools should be trained in the shortest possible time. The course of study extends over two years, and is divided into five distinct classes. Five of these institutes are in operation, and the first class was graduated in 1904.

A great advance has been made since 1900 in the establishment of higher schools, including both those fitting for collegiate courses and universities, but more particularly the technical schools leading to technical and commercial industries and agriculture. The traditional sentiment of the Japanese people formerly led young men to proceed to the university after finishing their course at the middle school. The tremendous impulse given to indus-

trial education after the Japan-China war has led the government to promote the establishment of industrial schools of various groups, and a strong tendency is now discernible among the young men to attend these schools.

In the field of higher education the establishment and growth of the Imperial University of Kyoto is most conspicuous, and at present it consists of a University Hall for original research, and colleges of law, medicine, science, and engineering.

The establishment of the Kyoto Higher Technical School in 1902, as a school of industrial fine arts, was designed to introduce improvements into art industries, and to place Japan in the forefront of artistic nations. An important commission was appointed in 1902, under the title of the National Language Investigation Committee. One of the important functions of this committee is to examine the relative advantages of the Kana and the Roman characters, if phonograms are to be substituted for ideographs. In addition, the committee is delegated to recommend a simplification of the present style of writing and of the Kana orthography.

Another important committee on the history of Japan, working under the auspices of the University of Tokyo, has nearly completed its work, and the materials gathered are now being published under the name of "Japanese Historical Materials" and "Old Japanese Documents." The total number of ancient documents compiled by the committee is more than 100,000.

TENDENCIES

Even so cursory a presentation of foreign educational features as is contained in this paper must impress the reader with the thought that education on the continent is becoming intensely practical. Almost every innovation or change of policy, in whatever country, has for its object the more thorough training of the youth for his future trade or occupation. The line of cleavage between the training of the many and the training of the few, or between industrial training and cultural training, is becoming more and more distinct, and what Belgium has long taken as the dictum of its own educational policy may with equal correctness be applied to Europe in general—*l'école pour la vie*.

The history of education in the United States for the last century has shown it to be eminently practical, and peculiarly responsive to public demand. Its close relation and responsibility to the people preclude its taking any other form. It is not a thing apart from the public and for the benefit of a few, as in the days of Egyptian priesthood, but rather is the instrument of the people in shaping the destiny of the country. Given, then, the trend of the development of this country, and there follows as its corollary the tendency of its education. The twentieth century will be the scene of a struggle for commercial and industrial supremacy. The United States has entered this world-conflict with all its energy, and the successes it has already gained have startled its competitors. The kind of education, therefore, of value to these changed conditions, and best likely to train our citizens for their

future work, will be the kind of education to which our schools will perforce adapt themselves. These modifications fall naturally into three divisions: education for commerce, education for trades and other industries, and education for agriculture. Our educational leaders must solve the problem of how to adapt sufficient training in these lines to meet the demands of the age, and not destroy at the same time the balance which has been maintained in our curriculums with the more clearly cultural subjects, the broad and liberal training in which has been the source of our past strength and present power. This must not be sacrificed in the adjustment which must inevitably come, for to do so would be to remove the corner-stone of the edifice.

SYMPOSIUM: WHAT ARE AT PRESENT THE MOST PROMISING SUBJECTS FOR SUCH INVESTIGATIONS AS THE NATIONAL COUNCIL OF EDUCATION SHOULD UNDERTAKE?

I. COMPARISON OF MODERN BUSINESS METHODS WITH EDUCATIONAL METHODS

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My attention has recently been attracted by some lines of work carried on in connection with certain industries, and I have been impressed by the contrast between these material industries and that which this Council represents.

The children of this world are wiser in their generation than the children of light.

This statement occurs to me at this moment of writing, but I hesitate to make an application.

Last year I saw in the laboratory of Professor Cooper, who is at the head of the department of agriculture in the Tuskegee Normal and Industrial Institute, some experiments in progress in local soil analysis and in the hybridizing of certain varieties of cotton, the object being to determine how the different kinds of soil could be most successfully used or treated or combined for use in cotton-raising, and how new and improved varieties of cotton could be produced which might successfully be grown in such soils.

Very recently I saw in the Textile School at Lowell, Mass., some experiments, conducted with great care, upon the adaptability of certain varieties of cotton for manufacturing purposes. These experiments consisted in part of delicate tests of the tensile strength of the fibers, tests of their capacity for absorbing dyes of different kinds, and tests of their power to retain their color under various conditions natural and artificial.

These are types of the new scientific basis upon which every modern industry is planting itself. Men have found that the difference between

success and failure in manufacturing enterprises turns upon the minute knowledge which can be obtained only by trained scientific experts.

The two cases which I have cited illustrate the study of the material to be wrought upon. What is it? And, being what it is, what can be done with it?

Along a different line, similar investigation has been going on. This is in what is commonly known as shop management and practice. The object of the investigation here is to determine the working capacity of the employees. It involves the ascertaining of the actual time required by an able-bodied and skilled worker to do each part of a piece of work, and from that a deduction of the exact cost of the whole work, if done by men all of whom were doing their best. It includes a comparison of this time with the time occupied by the average worker in doing the same piece of work, and from this a deduction as to the increase in price which the employer could afford to pay a man for doing his best.

Beyond this, the investigation includes a study of the means in the form of a detailed plan of the successive processes, their order of succession, and the conditions for most rapid procedure; and it critically examines into the functions of the various grades of directing officers, in order to secure the highest efficiency, the object of the whole series of investigations being to ascertain how to attain that seemingly most contradictory combination—high wages and low labor cost.

This strange combination of phrases brings to mind that saying of Comenius which has remained from his day until^o now so enigmatical. His guiding star he declared to be “to discover a rule in accordance with which the teachers may teach less and the learners learn more.”

The contrast between modern business methods and the most modern methods in education is so great as to suggest some searching questions. In the comparison, educational processes seem unscientific, crude, and wasteful. Are they really so? If they are, are they necessarily so? If it should be charged that educational work rests on assumptions which not only are unproved, but which are false, can we deny it? Do the elements in the educational processes defy analysis, or has there been no serious attempt to analyze them?

Let us say at once that the business processes of which I have spoken do not furnish examples, but only principles. There is an analogy, not a parallel.

It is possible for an engineer to measure by means of a stop-watch, as has been done, the time required for a laborer to lift his shovel, to insert it in the earth, to fill it, to lift it, to throw the contents into a barrow, to lift the barrow when full, to wheel it and to dump it; and out of all this mass of data to construct a formula for determining the cost per cubic yard of excavating for a sewer or a cellar or a subway. But the man who expects or demands that such units of results shall be determined and used in measuring work in education is a fool.

No stop-watch can measure the time required for a child to learn four times five, for no one knows when it is learned. He may know when it can be said, but it may be said today and not be learned; and it may be learned tomorrow and not be said. It may be discovered later that it has been learned, but when it was learned no one knows or can know. Mental growth which is the result of education does not lend itself to the method of ordinates. Neither its curve nor that of the acquisition of knowledge which accompanies it can be plotted.

Dismissing, then, the methods of the chemist and the engineer, is there still a field for accurate investigation which may be called scientific?

The experiments of which I spoke at first, both in Tuskegee and in Lowell, were based on the fact that cotton is not all alike. The grower who should say, "Cotton is cotton, and I will raise it;" the manufacturer who should say, "Cotton is cotton, and I will make it into cloth," would go into bankruptcy.

Does not the existing public-school system rest on the assumption that children are children, and proceed to treat them accordingly—that is, substantially all alike?

Not quite. Children who are totally blind and totally deaf and totally idiotic are classed by themselves as exceptional, and treated accordingly. All the others are simply children, so old.

Another difference is coming to be noted; one which needs no great nicety of observation to detect. It has been observed that children vary in height, and some attempt has been made to meet their individual needs by adjustable furniture. But is there anywhere any recognition of the fact that in a group of five-year-old children there are as great differences as between sea-island, upland, and Egyptian cotton?

Has any attempt been made anywhere to discover those differences, and to take them into account in shaping the educational process? Or is it true that we take into the school system at its lowest level all the children who apply, and, without examination, start them all on the same road, giving them all the same work to do under the same conditions as to teacher, apparatus, and time? Is it also true that, owing to differences which no one has sought to discover, a considerable number of these children fail to keep up with the procession, and go stumbling and limping along during the first year? Is it true that at the end of the first year or half-year a sorting occurs, not based on any differences in the children, but only on differences in the attainments which they have made in learning a few rudimentary facts of knowledge? Are those who have failed turned back to mingle with the new lot of unassorted ones, to traverse the same road again, without any searching investigation to ascertain the cause of the trouble? Does the presence of these children interfere with the rate of progress of others, reduce the efficiency of the teachers directly thru the loss of time, and still more, tho indirectly, thru excessive demands upon their patience and nervous energy? Do the weaker children suffer by being subjected to a régime for which they are not suited, and under

conditions which are not favorable? Do we still go blindly on into the successive grades, gathering statistics of so-called results, looking everywhere but to the children themselves for the causes of failure—to teachers, to courses of study, to social conditions? Do we know what becomes of the children who enter the first grade—that is, of all of them? Do we know how many go thru all the grades, how far the others go, what becomes of those who drop by the way, and why they drop?

Summarily, is the business of schooling the children of any town or city carried on with the same intelligence—that is, with the same scrutiny of material, the same adaptation of means to ends, the same readiness to modify means, the same forecast of contingencies, the same balancing of accounts—as characterizes the successful business enterprises in that same town or city?

As a schoolman I find myself compelled to answer "No." In answering "No," I am not pleading guilty to any charge. Nor am I making any charge. I am only trying to look at the situation as it is—or rather as it appears to me, which may be a very different thing.

I notice that someone in New York has been rather savagely attacking Superintendent Maxwell because so little is really known about the condition of education in that city. The attack seems grossly unfair to Dr. Maxwell, and will probably prove to have been unsafe for the other man. The trouble is too nearly universal for anybody to try to blame anybody. Better go back to the New England Primer, and say

In Adam's fall
We sinned all.

Nor am I unmindful of the fact that some attempts have been made in a few places to draw out of the classes the most hopeless cases and to give them special instruction under special conditions. But no attempt has been made, so far as I know, even in the cities where this work has been begun, to discover how general is the need of such specializing, and no reliable figures are available which may be used as a basis for action elsewhere. Where this work has been undertaken it has only been after the situation has become intolerable, after so many feeble-minded children have been dragged on so long as to attract attention by their numbers. If someone had known about them earlier, some time and effort might have been saved.

We are like Kipling's soldier:

If only myself could talk to myself
As I knew him a year ago,
I could tell him a lot
That would save him a lot
Of things he ought to know.

Nor am I unmindful of the medical inspection which is carried on systematically in the schools of some cities. But this is primarily in the interests of public health, and only incidentally, if at all, in the interests of public education.

What are the things we ought to know? Or, what knowledge, if it could be obtained, would be of service in helping to organize the business of public schooling in any community?

First, on the physical side: If the condition of all the children who apply for admission to the schools of any city or town at the opening of the school year could be known as to such obvious matters as seeing and hearing, as to the presence and extent of adenoid growths, as to spinal weaknesses, as to nutritive conditions, it would be possible to adjust the conditions and work of the school in such a way that the defective ones would not be in the way of the others, and, what is more important, that they might themselves be treated with consideration and care.

This is the need of every local school system. But before any such investigation can become general, there is needed a body of evidence as to the facts of these defects in young children, as to their prevalence, and as to the effects upon the school welfare of the child.

Any attempt to make an examination of this kind would in many communities encounter inertia or active opposition. There is needed an investigation by a competent body, which would determine the nature and method of examination, which would secure such examinations in sympathetic localities, which would gather up the results of these examinations and of similar ones which have already been made, and from all the facts deduce conclusions which in published form would be available thruout the country, and which might form the basis of local effort to improve local conditions.

That children are not all alike, that they are really sufficiently unlike to warrant special educational treatment, is a fact believed by many, but not yet demonstrated. Should investigation prove the belief not well founded, and demonstrate that the number of physically defective children is so small as not to be worth considering, that conclusion would be worth having.

On the mental side, there appears to be a considerable number of children entering school each year whose development has been retarded, and who are unfit for the school work planned and conducted for normal children of the same age. These children are started with the others along the same path, and subjected to the same régime of school hours, conduct, and teaching methods. Under those conditions they drag, and not infrequently grow relatively, if not absolutely, more stupid. Dr. Johnson said of Sheridan: "Sherry is dull, naturally dull, but it must have taken him a great deal of pains to become what we now see him. Such an access of stupidity, Sir, is not in nature." If in any community the number of such children were known, the annual ratio determined which might be expected, provision for appropriate treatment could be made in the general school scheme, and possibly in the school budget. Were there any accurate knowledge in existence as to the number of such children in general, this too would be of service in arousing local attention.

At another point knowledge is needed. At the end of the first school

stage it should be known for the whole school system how many children have failed to develop rapidly enough to warrant their entering upon the next stage. These children should be carefully examined to determine the causes of the failure, whether some of the physical defects which have been named, or slow development of mental power, or poor teaching. In the absence of such accurate knowledge much injustice now prevails. Poor teachers excuse their failures by affirming defects in the children which do not exist. Good teachers are blamed for the failures of children in whom these defects do exist. Judgments are based on guesses, and until some plan is devised by wise men by which knowledge should replace guessing, school work will continue to be crude, unscientific, and unbusinesslike.

In another field light is needed. What becomes of the children who enter school at the beginning of any one school year? Is this known for any community? How many of them complete the elementary-school course? If not, how far do they go? How many disappear from school thru removal or death? How many enter the high school? How far do they go in it? From what point in the school course do children leave to go to work?

The air is full of statements on many of these points. Where could one go who wanted facts for the results of carefully conducted investigations, with such statements of method as would justify confidence in the results?

I have suggested only two or three of the simplest elements of the problem of public schooling. Beyond this are wide fields of experimentation and research into those more subtle physical and mental differences by which the entire educational process is conditioned. The time may come when we can profitably enter into these tempting but dangerous fields.

Just now we need to be told authoritatively that elementary tests have been made in such and such places, upon so many children, with such and such results. We need to be advised as to the best way to make these tests, what part in them specialists should have, whether teachers can conduct them wholly or in part, and what training teachers should receive to enable them to be of service.

We need to know what treatment is recommended for defectives, and how the school conditions should be modified for each class.

With a body of facts and conclusions of this character, local school officials might go before the local public and ask that a beginning be made in local examinations as a businesslike basis for the increasingly expensive business of public schooling.

II. *THE PROFESSIONAL CULTURE OF TEACHERS AFTER THEY HAVE BEEN REGULARLY EMPLOYED IN SCHOOL WORK*

JAMES M. GREENWOOD, SUPERINTENDENT OF SCHOOLS, KANSAS CITY, MO.

This paper is tentative, and it is designed to call attention to the mental attitude of a large class of teachers after they have been regularly employed in school work, and have practically ceased to study educational problems

seriously, or to widen their spheres of knowledge by systematic methods of culture. It is assumed that teachers who cease to strive after higher ideals in self-improvement are moving with an accelerated velocity down an intellectual incline. This furnishes the background for submitting some reflections on the composition of the teaching force of the United States.

In his last report the Commissioner of Education gives the whole number of public-school teachers employed at 449,287. Of this number, 117,035 are men and 332,252 are women. The same table shows that during the last twenty-two years the percentage of male teachers had steadily decreased thruout the country from 42.8 to 26, and that the annual decrement of male teachers in the five great divisions into which our country is geographically subdivided is about 5,000, and the annual increment of female teachers is 15,000. In 467 cities included in the report of the Committee on Salaries, Tenure, and Pensions of Public-School Teachers in the United States (p. 53), it is shown that the number of teachers employed was 84,042, exclusive of supervisors, and that only 8.6 per cent. of the entire number employed in high and elementary schools were men; but deducting 2,921, who are principals, from the total, leaves 5.6 per cent. of male teachers in these high and elementary schools. These partial statistics are introduced for the purpose of calling attention to the character of the teaching force to be influenced by any system that may be devised for their professional improvement. It is my conviction that there is no marked difference between the sexes in regard to any innate or acquired disposition to study thoroly educational problems, or to strike out on new lines of investigation. In a rough sort of a way, I am inclined to the belief that not more than 20 per cent. of either sex now engaged in educational work is willing to do much in the direction of either persistent study or along special lines of professional reading. By this I do not affirm that 80 per cent. of the teachers do not read, but that their reading is of that patchy, scrappy, miscellaneous species that contains neither information nor much literary culture. The disinclination of a majority of teachers to engage seriously in new channels of thought, unless under pressure of a present, powerful stimulus, is well known. Consequently, this negative factor has to be reckoned with in all calculations connected with an investigation of this kind.

When "teachers' reading circles" were first outlined in several of the states, and courses of study rather formidable were recommended, covering three or four different lines of work, it was very generally believed that a plan had been hit upon that would materially raise the general level of the professional efficiency of the teaching force of the country, and thus widen their spheres of knowledge in many directions. In the practical application of this elaborate scheme, it soon became apparent that those who should have accepted it most enthusiastically rejected it or were indifferent, while the younger and more enthusiastic teachers were incalculably benefited.

There is another class, not so numerous as the first, that had their minds

set in another direction. They are the "degree-hunters" who are specializing. They are high-school and elementary teachers who are looking forward to something better than they now have, and are striving each summer at normal schools, colleges, and universities to improve themselves in certain branches of study in order to receive higher salaries. Work of this kind has great value academically, but, in general, it does not lead very far in the direction of professional study, and consequently contributes little to expert teaching. The knowledge acquired is chiefly technical and narrow, and it leads into closed alleys rather than out into the open. Yet there are some exceptions. My observation, in watching high-school teachers who have taken work along special lines, is that it narrows rather than broadens their vision of educational questions generally. As a class, these teachers give much less thought to scientific methods of study pertaining to the acquisition of knowledge than any other class of teachers. They are drill-masters who continue to fit subjects to boys and girls, rather than fit boys and girls to subjects. Their methods are in an advanced microscopic stage. In hardly any sense can they be classified as students of education, but they are excellent drill sergeants.

If 80 per cent. of teachers cease to read systematically after they have been once thoroly installed as teachers, the question is: How can they be induced to fall into studious habits of reading and investigating educational problems? A temporary stimulus may be imparted by having a graduated course of study, the pressure of which is in some manner connected with an advance in salary. A purely financial stimulus is a low motive for real teaching. But there is a tendency inherent in some minds, while working at a project that is irksome at first, to become interested in the kind of work which was so distasteful at the beginning. This change is produced by a different view-point. However, there should be nothing compulsory connected with any scheme for the professional advancement of teachers, but it should be of such a nature as would enable one to pull himself upward by self-exertion.

A danger to be guarded against, in the use of all factitious stimuli, is the shortness of the time occupied in preparation for advancement. Many never look ahead very far. The near and the present they see. In general, the minimum salary should be large enough to allow those who reach it, and feel inadequate to further exertion, to rest there and vegetate, having their thoughts undisturbed by visions of future examinations; but for those progressive spirits actuated by a great desire to do much better work, and to cultivate their minds to the greatest possible extent, a way should be left wide open thru which to advance in proficiency each year.

By a well-known law in operation among skilled laborers, it is a recognized fact that the best workers always lift up to a certain level those who have not will-power enough to lift themselves. The strong workers help the weak ones to better salaries. A method of dividing teachers into groups for the study of special subjects has been quite successful in some cities. Frequently one enthusiastic teacher in a school of twenty or thirty teachers will inspire from

one-half to three-fourths of the entire body. Sporadic efforts are generally short-lived. Enthusiasm is contagious, but it is not equal to well-directed, persistent discipline. A disciplined mind counts everywhere.

If the superintendent of a system of schools, or the principal of a school, is studiously inclined, the teachers, as a body, can be put in the right attitude toward professional advancement. The superintendent or principal must be a leader—one who can persuade others to enlist under his banner. The organization of the workers first into a compact body, those who really mean to improve, will produce a marked effect on the laggards.

I have made it a point, whenever I have read a new book, or an old one, that I found to be helpful, to call the attention of principals and teachers to it publicly, and to speak briefly of the leading thoughts it presented. In all that is done, the taste of each individual must, to some extent, be consulted. He should be urged to go out and browse in such pastures as seem most inviting to him. Next to one's professional reading, after thoroly informing himself in regard to the subject-matter which must be taught and its connection with other related subjects, he should study most thoroly the principles of education and the history of the processes by which each mind made its discoveries. To secure the best results, each one should pursue some subjects that are quite remote from his daily routine of work. The mind that is not continually making some new acquisitions is decreasing in power as well as in mental alertness.

To keep all the teachers of a corps growing in knowledge as well as in efficiency is one of the most urgent unsolved educational problems in our country at this time, and I trust some practical scheme will be presented at an early date in which this subject will receive the treatment its importance demands.

Memorial Addresses

Newton Bateman

BY NEWTON C. DOUGHERTY

Newton Bateman, LL.D., was born in Fairfield, N. J., July 27, 1822. He was of mixed English and Scotch descent. His parents removed to Illinois in 1833. His school opportunities in early life were limited, and the thoro college training which he finally acquired was secured by an energy and perseverance not often witnessed. In the year 1843 he was graduated from Illinois College, having supported himself by his own labor. By reason of failing health, he withdrew from Lane Theological Seminary, which he had entered to prepare for the ministry. He traveled for a year, and then entered upon the work of teaching in St. Louis. In 1851 he became the principal of the first public high school in the Northwest—at Jacksonville, Ill. In 1858 he was elected state superintendent of public instruction for Illinois. This office he filled for fourteen years with distinguished success, beginning in 1859 and ending in 1875. This service was continuous, with the exception of 1863-64. He accepted the presidency of Knox College in 1875, which position he held until 1893, when, on account of failing health, he tendered his resignation. Dr. Bateman never enjoyed sturdy health. Delicate from birth, he was enfeebled by the severe experience thru which he passed during his college course, and by the hard mental labor he performed in succeeding years. He died of heart disease at Galesburg, October 21, 1897, loved by the great state of Illinois, which had learned to admire the man and appreciate his work. Such, in brief, is the biography of the man who in a wonderful way influenced the educational history of the past century.

The contribution that men make to the progress of humanity depends not only upon the ability and devotion of the man himself, but also upon the circumstances in which he is placed. The history of the world is marked by significant epochs, decisive crises. If the right work is done at such times, then follows great prosperity or happiness to the individual or the state; if the right work is not done, the progress of the individual or the state is hindered. Newton Bateman lived at such a time in the educational history of the Northwest. It was a time demanding energetic service of a special kind. Dr. Bateman performed precisely the work which the emergency demanded, and the splendid school systems of the Northwest, with their high schools and state universities, are in large part the result of that work. The people who settled the central states were a people who placed culture and enlightenment above material prosperity. They were broad-minded, far-seeing people. They were well informed of the world's best thought and achievement. They wished to secure for their children the highest results of scholarship. They believed that an enlightened public sentiment gave a security beyond the law and above the law. These people came from New England, from the middle states, and from the border states of the south. They were united upon the needs of education, but they differed as to how it should be secured. The men from New England and the middle states at once, if not by state law, then by special charter, established colleges, academies, and free elementary schools; the men from the South established colleges, academies, and elementary schools, but these schools not at public expense. These men from Virginia, Tennessee, and Kentucky believed a free school to weaken the responsibility of the parent, and they opposed all state laws looking to the establishment of free public schools. They were willing to charter colleges and academies in as great numbers as asked for, and in

1858 Illinois had chartered more than two hundred degree-conferring institutions. In the year 1825, seven years after the organization of the state, a law was passed in Illinois which provided for both state and local taxation for the maintenance of public free schools. But the people who came from south of the Ohio were in the majority, and in 1827 the law was virtually repealed. The public disapproval of the proposition for a free school law was so strong that it required thirty years to overcome it. The state was opposed to all paternalism and believed in individual effort only. Not until after Dr. Bateman began his work at Jacksonville was a free school law enacted in Illinois which became really effective.

But a point had been reached at which the advocates of popular education were not satisfied with the mere enactment of a free school law. Other objects were pushed. Other demands were made upon the state. Massachusetts had established a school for the training of teachers, in 1839—the first public normal school in the United States. Other states had fallen into line. The Massachusetts idea began to gain a foothold in Illinois. Horace Mann visited the state and gave strong lectures upon normal schools. Energetic men were pleading for a normal school in Illinois. If normal schools were good for the Atlantic seacoast, they would be good for the western prairie; and educational men were determined that Illinois should head the western procession.

But the progressive men of the state were not content with a school for the training of teachers only. Dr. Bateman and others felt the influence of the University of Michigan, and they insisted that Illinois should have a university which should impart all forms of higher instruction at the expense of the state. But it must be remembered that all this while the great mass of voters of Illinois were by no means included among the advocates of these new educational measures. Many looked upon them with indifference, and a large majority of the citizens of Illinois were opposed to them. Such was the condition of things in Illinois when Dr. Bateman was called to the superintendency of public instruction. Crude ideas prevailed among the friends of education. Indistinct notions were entertained by those who were most ardent in support of the new ideas. The whole condition of the educational movement was chaotic. It is not strange that men differed in their opinions. They were anxious for the advance into unknown territory. Only a few normal schools were in existence, and only one state university had attracted public attention. The educational leaders of Illinois, therefore, had little to pattern after in their ideals of such institutions.

The condition of Illinois education, when Dr. Bateman assumed the duties of his office, may be compared to the condition of the American republic while the struggle for independence was going on. At that time we know there was much patriotism; there was willingness to sacrifice for the good of the country. But just what kind of a country it was to be; what forms its institutions were to take; whether there was to be a strong central government or only a weak combination of independent powers; whether the chief magistrate was to be a president or a king; whether he was to hold office for life or a limited number of years, were questions that no one could confidently answer. It was the mission of George Washington, by his wisdom, his unselfish devotion, and his energetic action, to solve the problems and to give the new nation a dignified position among the nations of the world. In times of doubt and uncertainty and great difficulties, what is most needed is an honest, pure, and powerful personality—a man who has the wisdom to see that which shall be for the greatest good and the persistent determination to secure it. Principles are mighty; political and civil institutions of the right sort are good in their influence; but a mighty personality, a man endowed with honesty and wisdom, is ever mightier than principle—is, in fact, the pivot on which God revolves humanity. Such a personality was Dr. Bateman. His keen intellectual powers, his ability to grasp the problem which confronted him, his tenacity of purpose, his power as a public speaker, his mastery of the English language, made him the leader of the hour. Difficulties had for him no terrors. The purposes which dominated his soul were of the highest ideals. It was

not for the sake of wealth, not for the sake of public position, that he toiled. His soul was stirred by lofty ideals which would help to uplift his fellow-men. He entered upon his duties determined to enlarge the promises of the law for free elementary schools, to strengthen the normal school, to put secondary education upon a more stable basis, and to secure a state university; and all of these objects he accomplished in his fourteen years of service. He announced his platform to be: the right of the child to an education, and the duty of the state to secure him that right. He knew that the children of the state needed the right kind of schooling. He knew that under the law of 1855 this could not be secured. He saw that change must be made in that law in order that schooling should be universally enjoyed. He knew that among the lowliest in the social scale were men and women who, if the opportunity were offered to them, would make themselves fit for the noblest service to the state and to their fellows. And he resolved that the law should be amended so that the opportunity should be so offered, and it was.

Dr. Bateman became principal of the first high school in the West in 1851. It was located at Jacksonville, then a village of less than ten thousand people. He saw the need of the high school, not only to connect the elementary schools with the college, but also to strengthen the elementary schools. Thru his influence the Peoria High School was organized in 1855, and the Chicago High School in 1856. From these three centers the free public high school began to spread and take root, not only in Illinois, but also in the adjacent states of Ohio, Indiana, Michigan, and Wisconsin.

When Dr. Bateman became state superintendent, one of his great objects was to convert the so-called colleges and academies which had been chartered by the state, into high schools. By public address, by correspondence, by all the influence he could bring to bear upon the legislature, he kept the subject of high schools before the people constantly. The result was that, before he retired from the office of state superintendent, the public high school had become, not only a part of the system of public schools in Illinois, but also in almost every state in the Union. To Newton Bateman more than to all others we owe the present American system of high-school secondary education. His genial temperament, his kindly good will, his warm sympathy, opened to him the hearts of the teachers of Illinois, and all recognized him by divine right the leader of the educational army.

We shall never forget his last address to the State Association, in which he portrayed the noble qualities of body, intellect, and heart which the coming teacher should possess. We quote:

Through costly experiments, splendid failures, and baffled hopes, we make our way toward the Augustan age. As the Israelite awaits the readvent of the lost glory of his race, the Christian the dawn of the millennial day, and the millions the coming of that good time when the earth shall be greener and the skies brighter; so we believe in the sure coming of the golden age of schools and teachers. But for this inspiring hope, this vague but inextinguishable faith and longing for something worthier and better, who of us would not at times be ready to drop the oar and in hopelessness to drift any whither—any whither? In the rapt visions that come to me, as they come to all, I sometimes seem to see the apocalyptic gate swing open, and far down the aisles of the future, brightly revealed in the soft clear light, there stands the incarnate idea of the coming teacher.

Ira G. Hoitt

BY CHARLES C. VAN LIEW

The passing of Dr. Ira G. Hoitt means the loss to California of one of her most earnest workers in the cause of education. Dr. Hoitt was thoroly imbued with a sense of the importance of sound and high training for the youth of our land, and he gave himself masterfully to this cause from the time when, as a young man, he deliberately and thoughtfully made teaching his life-work, almost to the day of his death.

Dr. Ira G. Hoitt was a native of New Hampshire, born in Lee, July 23, 1833. He

fitted for college at Phillips Exeter Academy, completing in three years the work laid out for a five-year course. He then entered the sophomore class at Dartmouth College in 1857, and graduated in 1860. During the next four years he was principal of various high schools in Massachusetts, finally leaving the Boston English High School in 1864, to go to California.

On arrival in San Francisco he became at once identified with the school work there, officiating for a short time as vice-principal, and within a year receiving the appointment to the principalship of the New Lincoln Grammar School, at that time the largest school for boys on the Pacific coast. His unflagging energy and his introduction of fresh spirit and progressive ideas of method brought this school up to a very high standard. Among other achievements, he raised the money for a well-equipped library, the first established in San Francisco, and instituted the Lincoln School Medal Fund, which is still in operation. In 1880 he was elected from San Francisco to the general assembly for two years, and as chairman of the committee on education did much to improve the school laws. In 1884 he was elected to the San Francisco Board of Education, and served two terms as president of that body; in this capacity he was ever the steadfast friend of teachers, instrumental in improving their condition both as regards salary and tenure of office.

In 1886 he became superintendent of public instruction of California, and for four years he put into the duties of that office a spirit and zeal that gave a strong impulse to all state educational work. The amount of school tax was materially increased thru his efforts. His own intense patriotism was one of the ideals which became manifest in all of his institute work and school inspection.

In 1887 the legislature appointed him a delegate to the National Educational Association at Chicago, where he presented a joint resolution of the state legislature of California, inviting the Association to hold its session of 1888 in San Francisco. That invitation was accepted, and Dr. Hoitt was made president of the local committee to arrange for their coming and entertainment. Those who were present at that meeting will recall the large-hearted hospitality which characterized its management. During the sessions, Dr. Hoitt was elected a member of this National Council of Education. In 1892 Dartmouth College bestowed upon him the honorary degree of Ph.D.

Dr. Hoitt's genial ways, his engaging personality, and his ever-ready words of encouragement endeared him strongly to teachers thruout the state. His high ideals of professional honor and professional courtesy were always an inspiration to younger teachers. On retiring from the office of state superintendent, he established at Burlingame, near San Francisco, a preparatory school for boys, which, up to within a year of his death, received his utmost devotion and professional skill. In 1899 a fire which destroyed his school buildings left him the victim of a shock from which he never quite recovered. He continued his work, however, until 1904, when failing health obliged him to give up all active duties. On February 19, 1905, he passed on.

Few men have done their life-work more thoroly, more persistently, than Dr. Hoitt. He never contemplated failure, but brought the full strength of great energy to bear upon every undertaking in which he was engaged. Since his death hundreds of tributes of respect and affection, offered by former pupils, some of whom are now old and gray-haired, stand as the best testimony of the character of the man and of the man's work. His last words, when the touch of death was upon him, were: "I must go to school."

Horace Sumner Tarbell

BY WALTER BALLOU JACOBS

Horace Sumner Tarbell, was born August 19, 1838. The place of his birth and the home of his youth was among the picturesque scenes of the Green Mountains of Vermont. He was a Green Mountain boy, and the son of a Methodist preacher. These two facts

suggest his early history. Studious and devoted to books, at nine years of age he was reading Livy, and he was soon a member of the neighboring Newbury Academy. In 1859 he graduated from Wesleyan University, the Methodist college of Connecticut, where he won marked distinction as a mathematician.

He at once chose teaching as his profession, and was made professor of mathematics and physics in the Belleville Academy in Canada. But Dr. Tarbell was not to be expatriated or to find his life-work in academies and colleges. He became grammar master in Detroit, and was soon given charge of two of the largest grammar schools in the city.

In 1870 he became superintendent of schools in East Saginaw, Mich. In 1876 he was made state superintendent of schools in Michigan. In 1878 he resigned this position to become superintendent of schools in Indianapolis. After six years of eminently successful work, in 1884 he became superintendent of schools in Providence, R. I., a position which he held for eighteen years.

In 1902 he was traveling in California to regain his health, but this was not to be, for he died in San Francisco, September 16, 1904.

As a writer of text-books his success was unusually marked. His geographies and language books have made his name a family word in many homes in our country, and have inspired and helped an army of teachers.

The world of learning honored Dr. Tarbell. He received the master's degree from Queen's College, Canada, and the degree of doctor of laws was conferred upon him by Brown University. He was at one time president of this Council, and a member of the Committee of Fifteen. He was president of the State Teachers' Associations in Michigan, Indiana, and Rhode Island, and of the Barnard Club of Rhode Island. In the councils of the Methodist church he held many positions of honor and responsibility. He was a rare man, who had rare opportunities to do good in the world, and who never fell below his opportunities.

Dr. Tarbell possessed a strong power of initiative and marked ability in organization. These traits are shown in all of his work. In Detroit he established an evening school for prisoners in the house of correction—the first school in the world for adult prisoners. The dealing which he had with these abnormal minds furnished him with many suggestions in his problems with normal minds. While state superintendent in Michigan he established Conductors' Institutes, the first institution of the kind in the United States.

In Indianapolis he inaugurated the system of supervision still in force, and established training schools from his own plans which have since been adopted in many cities. His work in Indianapolis was eminently successful, and laid the foundation for the merited fame of the Indianapolis schools. In Providence he thoroly reorganized the schools, introducing the new features which he had found successful in Indianapolis. He also opened schools for backward children, the first schools of the kind to be a part of any public-school system in the United States. He also established special schools for unruly boys and truant.

As a member of the Committee of Fifteen, Dr. Tarbell wrote the report on the training of teachers. In this report he advocated a method of training teachers for secondary schools somewhat similar to the method successfully used by him in training teachers for elementary schools. By agreement with Brown University, this system was at once put in operation in the city schools. Thus Brown University, which was the first college in the country to establish a chair of didactics, was the first to offer a course in training for secondary-school teachers involving an elaborate system of practice-teaching. In this work also Dr. Tarbell was a pioneer. It is not so remarkable that he initiated so many new projects as that his plans were so uniformly wise and successful. He was at once a wise man and an able man—qualities by no means always united in the same person.

Dr. Tarbell's mind was distinctly synthetic. He rejoiced in facts, but his satisfaction was never complete until facts were subordinated to principles. The addresses

which he made before his teachers were always of rare merit, and characterized by this synthetic principle. He wove together the everyday facts of teaching so as to make plain the movement of things in the large. He stood, as it were, upon a watch-tower, summing up the past and predicting the future. His was the vision of men who see things in the large, and whose purposes overreach and disregard minor annoyances.

Dr. Tarbell was a keen observer of men. Instinctively he understood their purposes and the measure of their usefulness. He educated the citizens who controlled the schools as well as the pupils within the schools. He set for them higher ideals by broadening their vision and deepening their understanding. Those whose purposes were low, and who still failed to respond to patient kindness, found in Dr. Tarbell an iron will concealed behind a dignified but courteous reserve.

With his teachers he was always kind and helpful. No man appreciated more praise and devotion from those working under his direction; but this he never sought, nor did he ever make its attainment in any way paramount to his one purpose, the improvement of the schools under his charge.

But it was as a husband to his wife, as a father to his daughters, and as a friend to his chosen friends that Dr. Tarbell showed the richness of his emotional life. Here self vanished, reserve melted away, and the true simplicity of the man, the purity of his thought and purposes, was transparent. Those intimate friends who mourned his loss have indeed mourned deeply. His place may be filled by another who will wisely direct the school policy of a great city, but to those who knew him intimately his place can never be filled. He was always the strong friend whose arm warded off evil, whose counsel gave clear light in the valley of decision. When courage was lacking, his courage was the courage for many; when others were weak, his strength was the strength for all.

He was a man of fine fiber of character, and this fiber was remarkably tenacious and closely knit together. His thought was always consistent with itself, his action was always consistent with his thought.

Clara Conway

BY W. T. HARRIS

Miss Clara Conway, of Memphis, Tenn., for more than twenty years enrolled as a member of this National Council of Education, died the past year, November 16, 1904, at her home in Memphis. She became a member of the National Educational Association in 1883, at the Saratoga meeting. At the famous Madison meeting in 1884 she read a paper on "The Needs of Southern Women," and in the following year, at the second meeting in Saratoga, read a paper on "The Child's Environment" before this Council. I had seen her admirable work before a teachers' institute in western Tennessee, in the early seventies. She was brilliant and popular in the work of such institutes in the South. In later years she went frequently to Europe, taking with her some of her school pupils, for the study of art and for visits to scenes famous in history.

I quote from a Memphis paper, the *Scimitar*, the following biographical notes, which curiously reflect public opinion in Memphis, the city of her adoption:

Miss Conway was born in New Orleans about 1850, and came to Memphis while a young girl. Her early school training was at St. Agnes Academy; but later she continued her studies abroad. She was, up to the time of her death, a great reader and deep student and thinker, and, aside from her educational work, was known as a gifted writer and a speaker of the highest attainments. . . . She was connected with the public schools of Memphis in earlier life, and seemed possessed of natural gifts particularly qualifying her for the work of teaching. Her peculiar abilities for imparting knowledge and inspiring to effort all with whom she came in contact were of such rare value as to be quickly recognized. In 1877 Miss Conway founded the school that has since become known as the Clara Conway Institute, and that now stands as a monument to her wonderful genius. Here for the first time kindergarten work was introduced, new methods were adopted, and important improvements in every branch of the educational system were inaugurated.

In the Bureau of Education Circular of Information, No. 51893, *Higher Education in Tennessee* (p. 257), are given particulars of interest regarding the beginning of Miss Conway's School for Girls:

She began in 1877, with fifty pupils, one assistant, and \$300 of borrowed money. In 1884-85 a number of public-spirited citizens of Memphis came to her aid; a stock company was organized, the school incorporated, and a building erected. Miss Conway proposed to call it the "Margaret Fuller School," but the trustees named it the "Clara Conway Institute." From the small beginning of fourteen years ago the institute has grown until its roll of pupils reaches 400; and its property is valued at \$75,000. . . . It prepares for the women's colleges—Vassar, Wellesley, and others—but it does not boast of being a college itself.

Thru these glimpses of her work and its outcome, we can form for ourselves some idea of the great power of Clara Conway's aspiration—the aspiration of the highest order in the teacher's profession, to connect themselves and their pupils with that part of education which deals with ideals. Education seeks to reinforce the present by the past—to add to the mere particular individual the might of his race. It must first create in the pupil the consciousness of the social whole. As the social whole fills the individual with its power, it produces exceptional persons, and these become the heroes and heroines—the ideals for youth. That one circumstance of her chosen name for the institute in Memphis—"The Margaret Fuller School"—reveals the ideal of the woman of the future—the union of manly strength of intellect with womanly tenderness of sentiment. Perhaps it may be called *the* ideal most commonly cherished by American women.

Edwin C. Hewett

BY JOHN W. COOK

Edwin C. Hewett was the son of Timothy and Levina Leonard Hewett, of East Douglas, Worcester county, Mass. His parents were working-people of small means, but had slight need of worldly goods to commend them to the esteem of their neighbors. Descended from the Puritan settlers who gave to the sturdy Massachusetts yeomanry its characteristic qualities, they illustrated in generous measure the stuff that founded that rare old commonwealth, and gave to it an influence in American life quite out of proportion to its area and population.

In his early life Timothy Hewett was a wheelwright and plowmaker. Later he became a farmer in a small way, and died in his ninety-fifth year three miles from the place of his birth. His wife had passed away ten years before, at a ripe old age.

Into the simple life of a frugal, industrious, resolute, liberty-loving, God-fearing people the subject of this sketch was born November 1, 1828. He was always grateful for the conditions that surrounded his childhood. How profoundly they colored his character all who knew him intimately clearly understood. Indeed, it was impossible to interpret him without a knowledge of his forbears. His Puritan inheritance was the dominating energy of his interesting life.

At thirteen he was learning a trade on the bench of the journeyman shoemaker. This experience was a significant factor in his education. He often referred to it, and drew upon its disciplines for apt illustration in his classes in psychology and pedagogy. But the school was dear to the Puritan heart, and labor was always made to yield a place for learning. So to the common school he went, and later to the local academy—one of the many outposts of higher education which Massachusetts so characteristically maintained in the midst of her rural populations. The part which they have played in New England life would fill volumes. They go far to explain the unconscious confidence, gravity, and intelligence with which the average man dealt with the social questions of his time.

At twenty-one, Mr. Hewett became a teacher, receiving for his services thirteen dollars a month—not an unusual compensation for that early day. He won an immediate

and notable success. Soon dissatisfied with his meager attainments, he entered the Bridgewater State Normal School on March 26, 1851. Altho the course was brief, he was mature enough to make the most of it. The school was in charge of Nicholas Tillinghast, a West Point graduate, and a man whose rigid methods and sterling character exactly fitted into his half-conscious scheme of life. Here he also found Richard Edwards, that ardent enthusiast with a prophet's zeal for popular education, who was an assistant to the principal. They were to meet again in the new West eleven years later. These influences wrought mightily upon this earnest poet-Puritan, with his surface play of wit and anecdote, and a background colored with a disposition toward a tender melancholy. They revealed to him the intrinsic dignity of the worthy teacher, and fixed his determination to give his life to the work of education.

It followed naturally enough that he was soon a marked man in the student body. After completing the course, which was about one year, he was engaged at Pittsfield as high-school assistant; but was recalled to Bridgewater the succeeding year, where he remained four years, intensifying in its congenial atmosphere the well-defined features of his marked individuality. A more liberal salary then took him to a Worcester grammar school; but he was soon to have a wider field for the exercise of his rare talents. Charles E. Hovey, principal of the new Illinois State Normal School, tendered him a place in the faculty of that institution, and in October, 1858, he was installed as teacher of geography and history—a position which he continued to hold until his elevation to the head of the school in January, 1876.

Superintendent P. R. Walker, of Rockford, Ill., was a student in the institution when Mr. Hewett assumed his new duties. At the memorial exercises held at the school he gave an interesting description of the impression made upon the class by the first geography assignment by the teacher, who had come to succeed an unsatisfactory instructor. The effect was electric. It was recognized as the beginning of a new epoch in the schools of Illinois.

Four years later, on a Monday afternoon in early September, I saw him for the first time. As I write these lines, the forty-three years that lie between drop into quick oblivion. It was the first day of the new school year, in the delightful autumn weather of central Illinois. The session had closed, but the room was full of the hum of happy conversation, as the students greeted their old friends or welcomed the new. The teachers were at their desks in the assembly hall, completing the details of organization. A late arrival, I gazed upon the scene with an interest that gave it a permanent place in my memory. My guide, an old student, pointed out the objects of special significance with amiable condescension, and with a running accompaniment of critical comment, especially upon the teachers. His enthusiasm reached the high-water mark as he directed my attention to a slight figure, scarce five feet two, topped with a bushy head of hair, and bending over an absorbing task at his desk. This was my distant introduction to a man who was destined to exercise a most significant influence over my life and character, and wherever I can discover its presence I am thankful.

For the succeeding three years, with the exception of a single half-term, I recited to him daily. I left the normal school in 1865 for a single year. For the twenty-four years next following I was intimately associated with him as a member of the faculty of the school. We were further drawn into special intimacy by certain joint business ventures. When he retired from the presidency of the school, in 1890, there was no severance of the long and affectionate relations, altho of necessity our meetings were less frequent. Nine years later I removed to a new community, but saw him with comparative frequency. The day before his death I found him in his chair engaged in reading. A few hours later came the brief message announcing his departure. Forty-three years of friendship without, so far as I know, an hour of alienation.

Mr. Hewett did not possess a commanding personal appearance. As I have indicated, he was of slight figure, weighing rarely more than one hundred and twenty

pounds. One of his common jests, as our social gatherings dissolved, was to caution us against getting his great coat and rubbers. Altho his figure was slight, it was extremely symmetrical, and always suggestive of great intellectual alertness and vigor. As might be surmised, his temperament was nervous and highly energetic. He coupled with these qualities great industry and an ox-like patience in working out details. He well understood his physical limitations, however, and would balk with a most interesting obstinacy when he felt that he was approaching them. But his energy so happily combined with his industry that he quite invariably carried his plans to a triumphant success, whatever may have been the opposition which he encountered.

As a teacher he is thoroly individualized and most clearly defined in the memory of the thousands of pupils who came under his instruction. He had no neutral tints. There was nothing vague or uncertain about him or his methods. First of all, there was the most transparent and unmistakable intellectual honesty. He was on the hunt for truth. I never knew another who drew the line more sharply between what he held tentatively and what he regarded as settled. I have no better description of his intellectual quality than to characterize him as "the man who defines." He loved a fine sincerity of speech, and sought the rugged Saxon with its limited synonyms rather than the more equivocal vocabulary of classic tongues. He would pare his sentences until they were like a row of bayonets, and would manifest especial satisfaction with every possible elimination. He loved the words that bear their meaning on their faces, and would disdainfully discard an ostentatious polysyllable for the terseness of monosyllabic speech, wherever it was possible.

As a consequence of his own essential honesty, he was extremely intolerant of anything approaching pretense on the part of the pupil. Nothing else so excited his hot indignation. For the dull but faithful he had boundless patience. For the sharper and the pretender his keen arrows were dipped in gall. It was this quality that explained the rigor of his recitations. His thoroness was a household word. His pupils always held themselves higher in their own genuine regard after completing his work. The institution with which he was so long connected has always enjoyed the highest repute for the severity of its training, and a large part of that reputation is due to this man.

Mr. Hewett never made the slightest effort to win popularity. That he was not indifferent to praise I well know. But he absolutely lost sight of such considerations when on the trail of truth. He had no favorites, and held all equally responsible for intellectual and moral results. And he was never effusive in his praise. He was rarely fortunate who won more than quiet approval. "He knows what he is about," was an expression of quite extreme commendation. He understood the peculiar force of understatement. In consequence, his influence as a class-room teacher was most healthfully inspiring. He won my ardent admiration when I sat in his classes, and the tempering experiences of twoscore years approve the instinctive wisdom of my youth. I dwell with fondness upon this feature of his career, because it was rather as a teacher than as a president that his greatest work was done.

He came to the presidency of the normal school in January, 1876, upon the resignation of Richard Edwards. In this capacity his crowning merit was the freedom which he permitted to his subordinates. It devolved upon me to succeed to a part of his work, and to introduce methods quite radically opposed to those which he had employed; but not a straw was laid in my way. He was not then in especial sympathy with much of the objective method of modern physical science, declaring that the imagination could furnish its own experiments; but he was an easy convert later, and gave most cordial support to the innovations. While he was a very positive and uncompromising man where his mind had settled upon certain convictions, his conclusions were for himself; he imposed them upon no one. He was naturally indisposed to change, for there was a strong element of conservatism in his nature; but, as I have indicated, the door of opportunity was open to his subordinates, and he was not slow to recognize whatever there was of good that

came out of our excursions into the region of experiment. Colonel Parker was fond of saying that one should never do a thing twice in the same way, while Dr. Hewett was rather disposed to seek for finalities in method, something upon which one could really rest and thus quench his wander thirst. But they were antipodal in many ways; perhaps I should rather characterize them as complementary.

I have said that he was not averse to praise, but that he never sought it. More should be said of this aspect of his character. He was always ready to part company with the world and walk uncomplainingly alone, rather than to swerve in the slightest degree from what he regarded as the clear leadings of truth and duty. The iron of the Puritan was in his blood. He would not go with the crowd unless convinced that the crowd was right. He was never swept away by any sudden enthusiasms. He held his balance with a certain reserve even against his closest friends. He invariably considered before he assented. He belonged to the group that never can be accounted "with us" until we have stated our case and it has commended itself to their sober judgment.

He never wore his heart upon his sleeve, yet he was thoroly sympathetic and approachable. There was no student so humble but found ready access to his heart. He was thoroly democratic, and so simple and unpretentious that he never chilled the advances of the most modest and retiring. He never forgot the days at the bench, nor did he desire to do so. His test of merit was substantial worth, and all other distinctions were to him matters of supreme indifference. His mind centered upon considerations of ultimate value, of fundamental and abiding consequence, and for them he looked when estimating the real value of men and women. He was a trifle slow in making friends, but he rarely lost one. It sometimes seems to me a matter of surprise that he was so tenderly loved by so many, and he so undemonstrative and so little given to expressions of affection. It appeared natural enough in my own case, for I thought myself in a peculiar way within the inner circle of his life; but I found that others thought their relations to him equally exceptional. Aaron Grove wrote of him: "He was at first one of the idols of my young manhood; as years passed and we were heart to heart, I loved him. Integrity, watchfulness, devotion to friends, independence in analysis; a sweet confidant and an absolutely upright man, I count his going as a personal loss; the vacancy can never be filled, neither for me nor for what is greater, the world in which we live." The gifted ex-President Sewall, of Denver, for years associated with him in the normal school, concludes a beautiful tribute to his memory as follows: "He was, taking him all in all, what the world most needs today, and what the world mourns when such a one is gone—a *man*, a nobleman. This too brief statement I do not count as a crown to wreath his brow. His life-work wrought and placed the crown. I humbly, reverently, lay this tribute at his feet." Dr. Boyden, who was a teacher at Bridgewater when Mr. Hewett entered the school, writes of him: "In these early years he gave full assurance of the richness and fullness of his subsequent life. He has been a great blessing to many lives; he has wrought a great work; his life is a great legacy; he leaves a fragrant memory that shall not perish." In a similarly affectionate vein write Dr. Richard Edwards, Hon. Hiram Hadley, Dr. Canfield, George P. Brown, and others.

Socially he was a rare companion. He loved a good story, was a consummate wit, excelled at repartee, and was able to hold his own with the best in heightening the merri-ment of an occasion. Who can ever forget his quaint grotesqueness as he occasionally sang with appropriate action some of the old songs that were current in his boyhood? But for society in the strictest sense he had no fondness. Its formal conventionalities were offensive to him, and its "fuss and feather" were often the object of his unsparring satire. He was a lover of solitude. The little study at the head of the stairs, barely large enough for his books, his table, and his chair, was his favorite resort. There I often found him as I entered an unannounced visitor. There he read and rested, and it was also his "growlery" when the wind was in the east. Withal he had a poetic temperament, and there, like a bird in its leafy covert, that sings for the dear delight of sing-

ing and with no care for the listening ear, he uttered the burden of his deeper thought in an occasional poem which invariably had for its theme the profounder problems of life and destiny. I have spoken of his disposition to dwell upon the shadowy side of life. This became apparent while he was still a young man, and was deepened by the later experiences of life. It is especially evidenced in poems written as early as 1854, while he was yet at Bridgewater. The sense of individualism and of loneliness in the midst of life, which expressed itself in hours of especial intimacy, appears in the following stanza:

Borne onward by the swelling flood,
Each steers his little bark alone;
Though numberless the passing crowd,
Each tiny vessel holds but one.

Was it his Puritan inheritance that led him to brood so persistently over these somber themes? In 1870 he experienced a peculiar sorrow in the death of little Paul, his infant son, who passed away while Mr. Hewett was absent from home. He rarely spoke of the child, but his faithful diary, in which he made a daily record for many years, discloses the secret sorrow that shadowed his life. In 1871 he wrote:

There's a little mound where the maple waves,
Where the grass and the flowers are fair;
'Tis a quiet spot in a "garden of graves,"
And our thoughts turn sadly there.

The little lad's birthdays are noted as the years slip by, and much of the pensive tenderness of later years finds its explanation in the pages of the little book to whose sacred confidence he intrusted the secret story of his heart.

With such characteristics the deep religious vein which gave a marked coloring to his nature was naturally associated. The harmonies of the world, as manifested in the invariable laws of nature, appealed mightily to the characteristic quality of his intellect. His mind could not rest short of a self-conscious First Cause who holds the universe in the hollow of his hand, and who directs its manifestations with the sublime authority of an innerrant reason. In consequence, religion was a necessity to his intellect. But his emotional nature no less craved self-conscious love as the motive of the universe. While in no sense illiberal with regard to the opinions of others, he strongly inclined to the stricter theological views of his Puritan ancestors. There was a period of storm and stress, when he was otherwise inclined. I speak confidently with regard to this matter, for it revealed itself in private conversations. But the influence of his early life reasserted itself, and he returned to his earlier faith with a new ardency; and his fealty never again faltered.

Both his rigorous sense of duty and his natural inclination led him to give much of his time and his means to religious work. He was a remarkable teacher of the Bible, and was always engaged in the work of the Sunday school. Indeed, religious contemplation and religious service were especially congenial employments. His poetic gift was exercised in the composition of several hymns, two of which were sung at his funeral.

As an educational writer Mr. Hewett is known thru two books on education, a treatise on elementary pedagogy, and another on the simpler phases of psychology. He is also the author of a series of arithmetics published by Rand & McNally. He was associated with Mr. Gove, and later with the author of this paper, in the editorship of the *Illinois Schoolmaster*, and recently with Mr. George P. Brown in the editorship of the well-known magazine, *School and Home Education*. He was for many years prominent in Illinois as a lecturer and educational writer. With the exception of one year spent in travel, he was connected with the Illinois State Normal University for thirty-two years. For sixteen and a half years he was professor of geography and history, and for fourteen and a half years president. Only two persons ever connected with that institution have a longer record in its service.

In 1863 he received the degree of A.M. from the old University of Chicago. In 1878 Shurtleff College conferred upon him the degree of LL.D. He was once president of the

Illinois State Teachers' Association, was for five years treasurer of the National Educational Association, and was also a member of this body.

In August, 1857, Mr. Hewett was married to Angelina N. Benton, of Sublette, Ill. They had two children, Mrs. R. R. Reeder, born in 1860, and Paul, born in 1870. Mrs. Reeder resides in New York, where her husband is at the head of a prominent orphan asylum. As was previously stated, Paul died in 1871. Mrs. Hewett, a most estimable woman, passed away, after some years of delicate health, on November 21, 1895. On August 31, 1898, Mr. Hewett was united in marriage to Mrs. Helen E. Paisley, long a resident of Normal and formerly a student in the normal school.

Some ten years ago Mr. Hewett developed a heart weakness that caused grave solicitude on the part of his friends. He had never been obliged to submit himself to the care of a physician, and it was with extreme reluctance that he finally consented to do so. His recovery was slow, but he was restored to something quite like his customary health. Last winter, near the holidays, he had a grave attack of pneumonia. For some days his recovery was regarded as hopeless. He finally rallied, however, and was again about the house and occasionally ventured upon the street. The former heart weakness reappeared in a more aggravated form, but he could not be made to understand that his condition was critical. The afternoon before his death I called upon him and entreated him to submit to medical treatment. He did not think it necessary, believing that his indisposition was temporary, and that he would soon recover. His faithful wife attended him with the most tender and affectionate care, yet full of apprehensions of a fatal result. Her solicitude was well founded, for, as I have said, the news of his death reached me on the afternoon of March 31, 1905, within twenty-four hours of my final visit.

It is a source of gratification to me that before his last illness I tried to convey to him by letter my sense of the obligation that I owed him. He came into my life at a time when I gravely needed him. His precious name is on a sacred altar in my heart. His reply, so tender and modest, I cherish for those who come after me. In speaking thus for myself, I am at the same time uttering what is in the thought of thousands. Wherever that clean and resolute soul may fare, he is followed by the loving gratitude of a multitude who are proud to be numbered among the pupils of Edwin C. Hewett.

DEPARTMENT OF KINDERGARTEN EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY MORNING, JULY 4, 1905

The Department of Kindergarten Education met in the First Congregational Church, Asbury Park, at 9:30 A. M.

Before the formal opening of the session, Miss Maud Lindsay, Tuscumbia, Ala., told two of her charming stories, "Grandmother's Birthday Present" and "The Turkey's Nest."

The meeting was called to order at 9:45 A. M. by the president, Miss Mary Jean Miller, Rochester, N. Y.

In the absence of the secretary, Miss Anna E. Harbaugh, St. Louis, Mo., Miss May Murray, of Springfield, Mass., was appointed secretary *pro tempore*, and Miss Carrie Twitchell was selected as assistant to the secretary.

Miss Miller delivered the opening address, and then introduced Dr. Nathan Oppenheim, New York city, as the first speaker. He presented a paper on the subject, "The Recognition of the Physical Development of the Child in the Training of Kindergartners."

Mrs. Ada Marean Hughes, Toronto, Can., president of the International Kindergarten Union, gave an address on "How Does the Routine of the Kindergarten Develop the Child Physically?"

These papers were discussed by E. Hermann Arnold, director of the Normal School of Gymnastics, New Haven, Conn., and C. F. Carroll, superintendent of schools, Rochester, N. Y.

Like a benediction came the kindly words of Mr. William N. Barringer, Newark, N. J., a teacher of sixty-one years' experience, and one of the earliest and oldest members of the National Educational Association. He spoke words of commendation to the kindergartners for work done in the past, and of encouragement for future endeavor.

A rising vote of thanks was extended Mr. Barringer in appreciation of his remarks.

The president appointed the following committees:

COMMITTEE ON NOMINATIONS

Mrs. Ada Marean Hughes, Toronto, Can. Dr. Jenny B. Merrill, New York, N. Y.
Miss Harriette M. Mills, New York, N. Y.

COMMITTEE ON RESOLUTIONS

Miss Fanniebelle Curtis, Brooklyn, N. Y. Miss Lena R. Bowen, East Orange, N. J.
Miss Ada Van Stone Harris, Rochester, N. Y.

The department then adjourned.

SECOND SESSION.—THURSDAY, JULY 6

The second session of the department was held Thursday afternoon at 2:30, Miss Miller presiding.

Miss Harriette M. Mills, instructor in kindergarten education, Teachers College,

Columbia University, New York city, gave an address on "Methods of Supervision of Public School Kindergartens."

The following took part in the general discussion: J. F. Reigart, New York city; Charles B. Gilbert, New York city; Ossian H. Lang, editor of *School Journal*, New York city; Dr. Jenny B. Merrill, New York city; Miss Ada Van Stone Harris, Rochester, N. Y.; and Miss Fanniebelle Curtis, Brooklyn, N. Y.

A paper on "The Validity of Recent Criticisms of the Kindergarten," by M. V. O'Shea, University of Wisconsin, Madison, Wis., was read by E. G. Lancaster, president of Olivet College, Olivet, Mich.

This paper was discussed by Carroll G. Pearse, Milwaukee, Wis.; Miss Margaret Giddings, Denver, Colo.; and E. G. Lancaster, Olivet, Mich.

The Committee on Resolutions reported resolutions of thanks to the many who had contributed to the success of the meeting, and especially to the officers of the department for their efficient services. On motion, the resolutions were unanimously adopted.

Dr. Jenny B. Merrill, New York city, paid loving tribute to the memory of active members of the department who have died during the year: Mrs. Eudora Hailmann, Miss Florence Lawson, and Miss Emma A. Newman.

The nominating committee presented the following names:

For *President*—Miss Mary C. May, Salt Lake City, Utah.

For *Vice-President*—Elmer E. Brown, Berkeley, Cal.

For *Secretary*—Miss May Murray, Springfield, Mass.

The report of the committee was adopted, and the nominees were declared elected as officers of the department for the ensuing year.

Upon motion, the meeting adjourned.

MAY MURRAY, *Secretary pro tempore*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

MARY JEAN MILLER, NORMAL TRAINING SCHOOL, ROCHESTER, N. Y.

[AN ABSTRACT]

The kindergarten was a natural product of its time, and Froebel a necessary person to discover the method of nature regarding humanity. The kindergarten could not be kept away from America, any more than could Christopher Columbus; and it is as integral a part of our great public-school system as the public school is, in turn, an essential part of our republic.

Rightly to understand the place of the kindergarten in our national system of education, it is necessary to look backward. It is less than a hundred years since the kindergarten had a discoverer in Germany; it is less than fifty years since the kindergarten had an existence in the United States; and it is only thirty-five years since it was first a part of any public school in our country. Today we have more than 300,000 children in kindergartens, and more than 4,000 kindergarten teachers. And why this phenomenal growth?

We are sometimes alarmed when we consider the great material prosperity of our nation. But need we fear, when our great benefactor, the public school, is incorporating into its very being such a system of education as that for which the kindergarten stands—a system which holds (and practices, as far as the public demands and conditions will permit) that the physical as well as the mental, that the moral as well as the religious, that the social and æsthetic as well as the emotional natures must each and all be equally and harmoniously developed?

“We need have no fear, if we educate our children properly,” says Froebel. In the slavery of ignorance only is there danger. In the freedom of all-round development there is salvation for everyone.

We as a nation have many problems. Labor and capital do not co-operate. Competition is still the soul of business; greed and gain at times seem to get the mastery of goodness and godliness. But never in the history of a republic has there been such a recognition of the need for the elimination of vice by the establishment of virtue, or for making an equality for mankind by giving each an opportunity to evolve his best self.

On this greatest of our national holidays, I should be of narrow vision indeed if I could not behold tho in a “glass darkly” the fact that our public-school system is our greatest institution.

The common man, because he has neither extreme of poverty or riches to mar his chance for calm deliberation, is much in the majority, and is our safe background and wall of defense.

As yet our public-school system does not satisfy the needs of all. The elementary school prepares for the secondary school, and that in turn for the college; but only the few can go to college.

The leaven of the kindergarten will require only time to vitalize these various departments which now lack a practical humanitarian touch; for the kindergarten holds to the principle that each is an essential part of the social whole, be he rich or poor, black or white, imprisoned or free; that he therefore is worthy of the development which results from knowing and doing things in the company of others who have equal opportunity with himself.

The Department of Kindergarten Education in its present programs aims to extend the usefulness of the kindergarten by restating some of its fundamental principles, and in noting some of the difficulties which it encounters in their application.

There are stirrings within as well as without the kindergarten fold. The kindergarten is not more perfect in its details than are other institutions of human origin; but it is more complete than the public school to which it has been annexed; hence the apparent antagonism which results. But this opposition is the essential stimulus to better conditions in all portions of our great educational field.

THE RECOGNITION OF THE PHYSICAL DEVELOPMENT OF THE CHILD IN THE TRAINING OF KINDERGARTNERS

NATHAN OPPENHEIM, M.D., NEW YORK CITY

[AN ABSTRACT]

We all know of the time when a man who would take up teaching was necessarily a man who could not do anything else; but gradually, teaching has come to justify itself; has come to show itself in its true worth, so that now there is no occupation more honored. This vocation must be founded on truth, which involves a definite preparation, and a realization of what we are trying to do.

It is true that in most other occupations the idea of preparation has been carried out much more thoroly. We would never for a moment think of allowing a carpenter to put up a house for us, unless we felt sure that he knew what he was going to do, and how he was going to do it. We would never allow a lawyer to try a case for us, unless we felt positive that he understood what he was to do, and that his knowledge was based upon fact. Certainly we would never put into a physician's hands the welfare of our bodies, unless we felt certain he knew what these bodies were, what they were going to do, and how they were going to do it. But when it comes to a question of teaching—the question of taking care of developing minds, of taking a small, immature organism, cramping it in certain ways, giving it full development in others, showing it the way it must go—we have in the past required very little indeed, excepting a certain theory based upon philosophy or metaphysics.

It is evident that the vocation of a teacher and that of a physician are so closely allied that it is extremely difficult to draw the line between them. The physician in the past has been thought to have the care of the body and mind when in disease. But that is not the modern view at all. Nowadays we feel that it is the physician's vocation to take care of the mind and body when in health, so that they may not stray off into disease. The vocation of the teacher is the development of the mind, and when we say that, we must include the body, so that they will both grow in normal ways.

It is a helpful thought that the physician and the teacher must necessarily stand together, must work with each other, must learn from each other. And the message that I want to bring to you today is the message of the medical man who wishes to stand in close touch with you; who wants you to come and take part in his work, and in his view-point, and in his experience.

It is the first part of life that counts. It is the first part that is the basis upon which all the superstructure must rest. And if you are able to aid a child's mind to develop in normal ways, with the least amount of obstruction, you certainly will be doing work that no other person can possibly surpass. But you cannot do that work unless you know the material you are working with. Do not think for a single moment that the child is simply an adult in

the small. There is nothing more harmful in results, nothing which is farther from the truth, than that. Every moment after the beginning of life brings a greater and greater development. This organism goes thru definite changes which are tremendously rapid, and which stop at no time until adult life is attained. The rate of change varies, but change goes on. At first it is so great that differences can be noted from day to day. Gradually this rate of change gets slower and slower, but the organism is always in process of development. There is no time when you can say that every portion of it is developing alike. The forces which you bring to bear upon it are the forces which are going to make or mar it. It is very much like the seeds which are thrown into the ground. Those which have good environmental conditions will develop; those which have not will die. Those portions of the body which have good environmental conditions will develop; others will not.

The question of original and individual action is entirely, as you know, a question of nerve cells. These nerve cells have no fixed and foreordained development. The development they acquire is the development which is permitted to them by their environmental condition. There is nothing fixed. This will come to you with a sense of reality, if you will but stop to think that there is no portion in the human body which is fixed. There is no portion at all in the child which is the same as the analogous portion in the adult. The bones are not the same; the nerve tissue is not the same; the blood, the muscles, the glands, the viscera, all are not the same. There is absolutely nothing in the child which is the exact counterpart of the analogous thing in the adult. There are certain things in the adult which do not exist in the child at all; there are certain things in the child which do not exist in the adult. We know that certain diseases which come in childhood exist on account of this difference between the child and the adult. Now, I believe most decidedly that the person who is to take care of children should have some knowledge of this. He should know something of the peculiarities of the subject-matter with which he works. And the more precious this subject-matter is, the greater is the need for exact knowledge.

To me there is something in a child that is sacred. I feel that the more intimately I come to know these children, the way they change from day to day and from week to week, the better I am able to understand what their individual needs are.

When I see a child restless and nervous, it does not mean to me that the child is a bad child or a naughty child. It means that the center of inhibition in the child's brain, is poorly developed. Such a child cannot sit still, or stand still, unless you tie him down, or cow him. With time and training that center will develop, and the child will become capable of control. This is an example of how the various parts of the brain develop. The various functions and faculties have origins in their several localities in the central nervous system. And normal growth must be taken into account in a scheme of education. You all know that a mole sees poorly; and if you would look

at the mole's brain, you would find his visual center almost rudimentary. Compare it with the corresponding center in an eagle's brain; and even to the eye of the uninitiated the difference will be most striking. This truth, if followed logically in its application to human development, will carry illuminating lessons.

I have had kindergarten teachers tell me most remarkable things about what they believed was the function of the kindergartner. I have had them tell me that certain games should be dispensed with because they interfere with the joints, not knowing what a joint is. They tell me about the action of the child's brain, without knowing at all what the brain really is, or what the development of the brain is. I have had them speak to me about using colors, not knowing that at different times only of a child's life is he able to distinguish certain colors. For instance, a very young child can distinguish red, but it takes a child of older development to distinguish gray or blue. This function, like all others, requires sufficient growth for full action. The ganglion cells in time push out fine processes, neurons and dendrons; gradually these processes acquire medulation and store up their chromatin granules. And until this growth is completed, you may not make unlimited demands upon its unformed organism. The infant exists potentially, mostly in promise. He has not the brain filaments as you may expect them in later times.

All this is not a question of theory; it is the most practical thing in childhood that you can possibly know about; and before a teacher dare talk about what a child may need, or may not need, he must know these plain facts in the physical being of the child. I am unfortunately limited in my time, and so I cannot go on to more details in this regard, but an inkling of the subject you can get.

There have been a few ideas only in this world that have lived. Far, far back in the old world there was an idea of the spiritual life that came out of Palestine; and ever since the world has had a definite religious tendency. In a land farther west the idea of beauty came up, and Greek art has ever since controlled the world. On the seven-hilled banks of the Tiber the idea of law developed, and ever since we have been trying to get the full conception of justice. And farther west and a longer time afterward the idea of the rights of a child came up—the child as an individual, the child of definite being and possibilities and potentialities. This idea I believe is governing the world now, and the world looks forward to its best development. If we get the sort of teacher who will gather the very best knowledge in regard to the facts, we will have a force that has never been equaled before. Such a teacher must necessarily be a controlling fact in this world, for the simple reason that upon her future development depends. Like a glowing flower in a field of grain, like a single star in a dull dark night, like a steadfast heart in a time of doubt so will this teacher stand for all the world, as guide, philosopher, and friend.

HOW DOES THE ROUTINE OF THE KINDERGARTEN DEVELOP THE CHILD PHYSICALLY?

MRS. ADA MAREAN HUGHES, PRESIDENT OF THE INTERNATIONAL KINDERGARTEN UNION, TORONTO, CAN.

Formal physical exercises have no legitimate place in the kindergarten. Intelligent physical culture, vitally taught and understood, should form a much more prominent part of the training of kindergarten students than has been the case. It is of incalculable importance that the kindergartner should have all the power of a personality developed thru a body which lends itself intelligently to freedom of expression. The budding life of the child of kindergarten age is as yet undifferentiated in action of body, mind, and emotional center. It responds in unconscious imitation to the freedom expressed in the leader. We need not look for expressive faces or free, broad gestures in the children, when the kindergartner is in direct contradiction of all she advocates. Naturalness means the harmonious responsiveness of every part of the body to the impulses of the spirit. In the child it is spontaneous, but it is limited to the degree of control the mind has acquired over the various parts of the body. That this spontaneity is lost is owing to disuse or wrong use of the muscles, thru lack of playful exercise, or thru constraint of muscular activity according to conventional ideas of adult direction.

Froebel consciously planned his games and exercises to keep the freedom of action alive in the child thru bringing the emotion and will into activity with physical responsiveness.

Exhibition and expression are very different things, tho the former is so commonly mistaken for the latter in adult training.

The kindergartner creates an atmosphere which stimulates or deadens according to her personality. A well-poised body and rhythmic step are hardly possible in the child when the leader has a slovenly carriage and unresponsive face and manner, or when her movements are mechanical and in accordance with some long-established habit of body, instead of the response of a body gloriously alive thru immediate response to the spirit within.

The kindergartner's influence partakes largely of the character of motherliness in its subtle action. It matters much how she stands, sits, moves, how she greets the children, etc. She needs, and the children need, that she shall be perfectly poised, maintaining a firm center of body, with perfect freedom of all parts of the body around this center. Children are so mobile in character at this stage that they respond imitatively, without resistance, to the freedom of movement in their leader. The routine work of the kindergarten will be intelligently helpful according to the insight of the kindergartner into the nature of the child and the varying periods of its unfoldment.

The exercises of the kindergarten should not be applied to the child, but should work up thru his consciousness into individual expression, creating him anew into larger life thru exercise of that which already exists.

The sympathetic greeting, the handshake, and the look into the friendly eye of the kindergartner all act on the whole being of the child to bring him into physical as well as spiritual harmony with his surroundings. The call for orderly assembling brings a control of body thru social response. Then should follow a moment of relaxation, and then the definite gesture of folded hands, making the contrast clear from play to relaxation, and then to definite posture. The way it is done gives it its value, and tho to the child it should seem purely incidental, it is a vital part of a conscious order to the kindergartner. She gains her point, not thru command, but by comradeship.

Songs and games.—If there is not a clear conception of the difference between the songs and the games in the mind of the kindergartner, much of the value of each is lost to the child. The gesture of the song is largely descriptive, while in the game it is dramatic. The song is a lyric, the game a drama. In the song the music and the words are the chief elements; the gestures are simple movements descriptive of the narrative. The games are more definitely dramatic in their character. The child is no longer the narrator of a story; he is himself the hero of the play. He goes out of himself, and becomes the other character with more or less abandonment of his real identity.

The introduction of voice-training as a conscious exercise in the kindergarten is not consistent with our knowledge of the child's stage of development. The transition from the period of symbolic thinking into that of formal study is quite definite, and any anticipation of that change results disadvantageously. Anything so spontaneous as the voice cannot be prematurely harnessed into drill without great loss of freedom in power and expression. The fact that children are interested (as they may possibly be sometimes) does not change the fact that premature exercise weakens the final result instead of developing into larger power. The gesture of the song has been, and still is, a much-abused exercise, and critics have been justly severe in their criticism, tho seemingly themselves no wiser than the erring ones as to the real wrong done.

Froebel seems to have known the fundamentals of all physical development, if we may judge from the plays of which he really was the author. There has been so much attributed to him by enthusiastic young women, who assume that everything which they have received from their especial training class must have come from the great author, but which we older disciples have seen generated on this prolific western soil. If we study the physical side of his typical plays, we shall find a recognition of the fundamental exercises which form the basis of all established schools of physical culture; viz.: definite center poise; flexions of arms, legs, body, and head, with their infinite variations; breathing exercises infinite in variety, but all growing out of a center and balanced in their variety.

The kind of gesture used in the song or game should be consciously true to right physical exercise, so far as the leader is concerned, but should be the choice of the children from their natural impulse of life-expression, not a

conscious physical exercise to develop this or that organ or set of muscles. There should be such a succession of the games that the vital organs should all have their due stimulant, and in definite order and succession known to the kindergartner, but not to the children.

The tendency to make the games serve the purpose of stimulant to spiritual insight has led in many cases to neglect of the physical process in playing, thru supreme emphasis of the thought-processes. To me it seems that the fact of the larger processes illustrated in games of sequence might with great advantage be left to the discovery by the child in the uniting of his varied experiences in rehearsal with his mother or companions, or by himself. This seems more rational than the common habit of publishing to him such connection thru rehearsing them in a forced manner. We overlook the value to the individual of personal discovery, which at this age is such a vital experience.

It is important that the gesture be definite. There are many kindergartens where the lack of definiteness leads to vagueness in the feeling of the actors, and fails of its physical purpose thru lack of tone to particular organs and muscles. An exercise should always be definite enough to produce a reaction in the body, tho not severe.

Rhythmic marching.—The wave of enthusiasm over rhythmic movements will subside, as other waves have subsided in the past. That it has a certain value is beyond question, but the degree of enthusiasm it has called forth is out of all proportion to that value. It has done good work in modifying and correcting the practice of formal military marching which has prevailed so generally, and which almost without exception tended to abuse of the body in the wrong attitude taken in response to the oft-repeated suggestion or formal command, "Stand up straight." Children and adults alike stiffen up into rigidity of body and, throwing the chest-center back instead of up, make the strain on the vital organs most unnatural. At its best, the rhythmic movement claims to be response to a musical narrative which the child is supposed to interpret for himself thru his body in conformity with the entire group of children with which he is classed.

It seems hardly possible that the majority of children can understand the spiritual counterpart of the music to be interpreted, when so few adults even can enter into the spiritual thought of the composer. In most instances, at any rate, the rhythmic play really is just keeping step to music, and is to the child what dancing is to the adult. It is keeping time to the rhythmic movement, not interpreting an ideal. The kindergartner thinks "the music is holding Billy," but the erratic movements of Master Billy leads the observer to question the hold it has.

The Froebelian songs and games make provision for physical expression, but that is not the highest purpose. The highest is to gain control over the body in making it serve the spiritual impulse. Body, mind, and sympathetic feeling act in unison, and mutually strengthen each other at this stage.

Table games and occupations.—In the table games and occupations the

physical well-being of the child should always be considered and intelligently provided for. I, however, want to voice a protest against a stupidity of criticism which seems to have much of the flavor of self-conceit and ignorance. The kindergarten is often held responsible for many of the physical weaknesses of childhood which abound today. Physicians say that this or that occupation is detrimental to the eyesight or produces too great nerve strain, and it becomes a popular cry. It would modify such opinions materially if these critics would remember that these physical disorders prevail in vicinities where the kindergarten has never been introduced, and they are quite as common among children who have never attended the kindergarten as among those who have. It is true, however, that children in the kindergarten, having definite occupation, reveal these physical weaknesses and defects to observant eyes sooner than if left to undirected occupation.

It is also true that many kindergartens plan work that is too fine for the childish fingers and eyes. This points to a defect in the ideals which they hold and failure to grasp the basic principles of Froebel's work. The occupations as he developed them are primitive industries, and natural for the imitative stage of child-life. They are, according to Froebel's word and practice, organized so as to keep mind and body interactive and lead up to a clear seeing by a simple process thru clear understanding of initial steps.

These activities are no more complicated or unnatural than the child would seek out for himself; the advantage to the child being thru organized material to make the strain of effort less exhausting and unsatisfactory than when the child is left without adult assistance. The co-ordination of hand and eye goes on more simply and easily when things fit naturally. The nerve strain is less, and the child's activity less wearing, when natural play runs easily in ordered channels.

In the handling of the gifts the hand is steadily acquiring strength, and the governing power of the mind is easily and unconsciously gaining control.

There should be a clear consciousness of the two phases of the term "physical culture": on the one side the strenuousness of exercise, building up of muscle, development of strength; on the other, exercise in the infinite variety of ways possible for use of this fundamental strength in the various flexions of the limbs, body, hands, fingers—exercise for elasticity in extension and firmness of reaction with control of relaxed states. Relaxation is not, as so often apprehended, "letting go," so much as subsidence of effort along any especial lines. The physical purpose of exercise is to gain in strength, elasticity, power to conserve, and definiteness to set free again. Grace is not softness or flabbiness; it is based on underlying strength, and is in proportion to the individual's familiarity with the varied forms of use possible in his own body.

DISCUSSION

E. HERMANN ARNOLD, director of New Haven Normal School of Gymnastics, New Haven, Conn.—It has always seemed to me that what a child needs is to be turned loose upon the world, upon nature, upon humanity; sometimes, too, upon papa and mamma; and then, if he is given a chance, he will work out his own salvation. The first thing is to give the child a chance. As long as we have kindergartens of thirty and forty there is always this danger, which the speaker before me has brought out, of overworking some of the children and underworking a great many others. Occasionally I have wandered into a kindergarten. I have seen some vigorously inclined children go into the kindergarten and come out weakened. A child lives a strenuous life. He engages in a number of activities. The kindergarten does not offer the chance for vigorous activity, for digging and jumping and kicking and running. The kindergarten is too nice a place to be very strenuous. There is usually a circle—a nice large circle—of chairs, and a nice little table, etc., which is excellent, but only good for a certain amount of work. Another kind of work the children never can get there. I never have seen it there. That is, to my mind, where your kindergarten falls short. I do not know what you are going to do to change this, unless you make use of the play-ground—an open air playground.

Children are fatigued by continuous play, and it is the good teacher, as the phrase goes, that knows how to interest them, who always carries them along. To my mind that is a dangerous point. The stimulus of the teacher makes them do the work. She does not notice oftentimes that the children are tiring from too much suggestion. Their not being thrown on their own physical and mental resources is a danger. Let the children break up into groups for play, and give them suggestions with the most careful hand, because they, as you know, resent suggestions. Children play nicely for one minute, two minutes, ten minutes; then they fight. I do not know that you let them fight in the kindergarten. There is nothing so refreshing as fighting. The irritability of these children, when they break up their groups, is not always that of bad temper, but oftentimes the end of interest or the end of attention. It is a sign of fatigue, and therefore the fight comes up as an immediate necessity and breaks up the game. They simply fight for a few minutes. After a while a new grouping of powers is made up, and these two and those two come together, and they make up a new game. This is a good thing. I would never interfere with these things. There is danger of too much interference. It strikes me that you are too nice. I do not like it. I am absolutely sure that if they had kept me nice for the length of time you keep these children in the kindergarten nice, I should have died good, and young.

Where to begin and where to end your interference is difficult to know. It is important that the teachers should be only people of experience and great skill; but people of experience cannot always understand children. That question can be solved only by selecting carefully the teachers, giving them a good preparatory training, that they may know clearly what the kindergarten may do and what it may not do.

As far as I am concerned, I do not think that a child, that has a playground, a garden around the house in a nice neighborhood, children as playmates, and parents who have some understanding of childhood and who have sympathy for their children, has any need of a kindergarten at all. I always looked upon the kindergarten as a sort of refuge. I may be wrong. In large cities and crowded neighborhoods, where the conditions or the home surroundings are not favorable, the kindergarten is needed; and you should make the conditions as natural and vigorous and individual as you possibly can.

C. F. CARROLL, superintendent of schools, Rochester, N. Y.—If we look back to the beginning of the century that is past, I am sure we will all agree that there has been a strenuousness in life. The Puritan life has left its mark upon the state and upon the home.

I do not agree with the previous speaker that kindergartens are for unfortunate children. Does he mean to say that no children need the kindergarten except children who are taken no care of at all, or whose mothers do not play with them, or who do not have a playground? Every child is blessed by a good kindergarten, one as much as another, whether it be a child of the slums or a child of the rich home; both need the kindergarten. One needs the civilizing influence, and the other needs its influence to take away selfishness.

Froebel one hundred years ago discovered the principle of play, and he brought it out into child-life as it had not been before. That was but a beginning of play which has leavened the public-school system. That has been the mission of the kindergarten. I am proud to say to you that in the schools of Rochester every child has his free game; that is, ten or fifteen minutes when the game of childhood is played again in every school—in the hall or in the kindergarten room. The teachers learn to play. It has been a great struggle, but now they all play with the children and take their part.

There is a new spirit which has taken possession of the world because of the play of the kindergarten. City conditions prevent, in large measure, the free outdoor life of the past. As a result of these changed conditions, the physical life of both the individual and the nation is threatened with weakness and degeneracy. The existence of the school has implied restraint and inaction of body. Nervousness is often induced early. The school of the old days was inevitably a nursery of unwholesome tendencies. Severity of discipline and rigidity of life were everywhere in evidence. The school literature of the past has been largely a caricature upon these unfavorable conditions. Consciously or unconsciously, Froebel discovered the saving principle which has steadily made its way during the last hundred years in our educational system. It is difficult at this distance for us to discover what impulse affected him in his studies of childhood. As in the case of some great invention, we can only marvel that it had not before occurred to someone that play is not only an instinct, but an educator. In any case, Froebel seized upon the principle that this impulse not only was inborn and universal, but that it called for exercise and encouragement. Before Froebel it would appear that children played only in spite of the attempt of their seniors to prevent them from doing so, and that their games were regarded as the outbreak of an evil spirit which called for repression, so far as possible, on every occasion.

If some of us recall the games of childhood of our own days, we shall remember that it was only after dark, when our seniors were safely engaged in conversation within doors, that our spirits could really break loose in the abandon and joy of games invented apparently for the night and to suit the necessity of the case; or we reveled far out upon the hills or upon the skating-grounds, away from interference, or upon the playground at school and in spite of the admonition of the teacher. Under these conditions we cultivated and exercised this irresistible inclination. The sweetest memories of childhood are a part of these stolen joys.

It is only within the last few years that the doctrine of Froebel has fully taken hold upon the convictions of men and women. The courageous and self-sacrificing efforts of a few leaders made respectable, and finally popularized, this new thing. It is not too much to say that, with the rigid discipline of the school and with the sternness of the Puritan home, as characteristics of our American life, we might well imagine that joy would finally have gone out of the world almost altogether, had it not been for the saving power of Froebel's work.

It is of interest to note that for nearly a century the kindergarten was unrelated to any system of education. It was carried on in private schools and by charitable people, in churches and hired rooms, and was thought of as a nursery and a means of entertainment for children. Its introduction into the public schools was stoutly resisted, especially by teachers themselves, and sometimes by private kindergartens. Even at present, a teacher occasionally affirms that the kindergarten spoils the discipline of a first-grade room; but, as a rule, teachers have discovered the universal benefit that comes to children

who have enjoyed the physical uplift and intellectual awakening which comes from a good kindergarten. Wherever the kindergarten has been judiciously directed it has acted as a leaven upon the grades above. Teachers themselves have been the first to discover their own need of rejuvenation. It is a rare sight to see teachers who have been cramped and rendered excessively proper by the stilted and severe methods of the old time, yielding themselves to the reviving influences of the games of the kindergarten. This they have often cheerfully done, until in many school systems the old-fashioned games are a part of the education of every day and of every grade. Verily the world is coming back to its inheritance, and children are coming into their rightful possession.

What is a game? It is an expression of emotion. It is an outburst of feeling, the exercise of a sentiment and a passion. It is an unconventional expression of an impulse born with us, and a natural outgoing of the physical energy of life. There is no sadder picture than the child who has never learned to play. There is no more weary and abnormal face than that of the prematurely old child, whose existence has been only serious, never joyful. The same face grown to manhood makes almost a monster, and is almost as fatal to normal life and character. Ordinarily the home leads in any educational reform. What is good in the home becomes public sentiment, and is incorporated into school statutes and school-board requirements. But in this case the demonstration of the value of play, as an educator and as a development of physical life, was first illustrated in the kindergarten. The home has quickly followed and has indefinitely extended the influences of the principle involved. The father and the mother of the average home have become companions and playmates of their children, and have themselves entered into sports and recreation as never before. Within the last twenty-five years the whole world has seemed to go to play again. The tennis court, the golf field, the athletic sports of schools and colleges, have all come into existence and have seemed to take possession of the world. There is a new glow of life in old and young—a joyful and saving enthusiasm that is far-reaching and full of hope and promise. As never before we seek recreation, pure and joyful amusement, and vacation. All this but feebly expresses our debt to the kindergartner and its influence in reconstructing and maintaining our physical life.

How far do kindergartners recognize these great principles? Do they play because of kindergarten requirements? Is the joy of life back of their leadership; or is it forced, mechanical, and therefore unavailing? How far do they understand the bearing of the period of early childhood upon the years to follow? How far have they connected the merely physical and merely formal with the individual? How far have they failed to get outside the narrow grooves of the early kindergartners? What is the kindergarten? Is it merely a place in which to play games, to handle sticks and rings and blocks and balls, and follow the mother play? Is it to dance and sing in the merry-go-round? Too often this has been its definition. This has expressed its extent and much of its content. The philosopher and the kindergarten educator have sought to define and to systematize every part of the kindergarten day and week. No other part of our educational system is so walled in by custom, so held down by traditions of a system a hundred years old.

I profess no knowledge of the merit of the discussion so warmly waged; but, upon general principles and from the observation of the larger problem of education, I must claim the privilege of applying a general principle to a particular case. "Freedom" is the dearest word in our educational vocabulary, and this applies to the teachers, to the principal, and the supervisor, and the superintendent. Careful instruction in principles, skill of technique, and a knowledge of the body and the mind and the child in the concrete—all these are a necessary part of our training. But no teacher in a great school, no principal in a school building, no successful worker in any part of the great kingdom of childhood, can do his best unless the sense of initiative and the free exercise of his own resources are successfully called into action. This principal is more vital in the kindergarten even than in any other part of the school system; for the little child is absolutely plastic and helpless in the hands of the kindergartner. If she is following a set program, with orders

assigned to the hour or the day or the week, the mainspring of action and the most powerful element in her being are restricted, and formality and mechanism are bound to follow. All these prescriptions tend to prevent the application of the scientific principle of human development. The good teacher or the good kindergartner, when free and when wise and well trained, seeks for some free expression every hour of the day, at every turn of the road. The story and the song and the game suggest some related activity. This activity calls for the exercise of the hand, for the use of the brush, the crayon, the tools which have been the schoolmasters of the race, and for the free activity which every child exercises in the model home. There is no more beautiful and more interesting sight than is seen when two children, under proper conditions, carry on their games in the chimney corner, or play with their dolls or hobby-horses. Their imaginations teem with original conditions and conceptions. They summon into their presence people and situations far remote. They act the part of men and women, of mothers and fathers, school-teachers and workmen at their daily tasks.

The mechanical and philosophical prescriptions of the daily and weekly program, which have come in to blight this free life of childhood, are no less than a delusion, and certainly act the part of an invention of the evil one. There is no compromising with this situation, if the influence of the kindergarten is to continue to be wholesome, and if it is to remain a part of the public-school system. Any other theory is not only not pedagogical or broadly philosophical, but is isolated and destructive of the unity and the aims which we have long sought, and which we have to a good degree attained because of the existence of freedom and initiative as an individual possession and outfit of the teacher.

Do you ask what all this has to do with the recognition of the physical development of the child? Very much. If the kindergarten represents any new principle, it is spontaneity and freedom in education, where they were not found before. The restraint proposed is rigid and recognizes no difference of advancement, of preparedness, of environment, of mood or taste, or resources; limits activity, invention; in short, reduces by one-half the possible intellectual output of the kindergarten. Intellect and emotion both depend upon the physical for development, and whatever reduces freedom, in the best sense of the word, reacts severely upon both.

We are not creating or developing educational systems for poor kindergartners or for poor teachers. Freedom, life, action, are inseparable. These have been bought for the teacher and kindergartner at a great price, and can never be taken away from her.

METHODS OF SUPERVISION OF PUBLIC-SCHOOL KINDERGARTENS

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The most difficult of all problems presented to the kindergarten supervisor for solution is that of the kindergarten program. In kindergarten circles the interest in this subject is a growing one, since the problem has recently taken definite form in the question: Shall a uniform program be adopted, or shall each kindergartner make her own program? I have been requested to consider the subject of the kindergarten program from the standpoint of the liberal worker, and at the same time to present the claims of the conservative kindergartners.

The issue today between conservative and liberal kindergartners is primarily that of freedom, or, in the words of Froebel: "the right of the individual to reveal his essence in his own life with self-determination and freedom." Kindergarten supervisors and teachers are alive to the necessity of choosing whether they will follow the leadership of Friedrich Froebel as the founder of an imperfectly conceived, and imperfectly organized, institution, or whether they will follow him as one who "advocated a principle and embodied a spirit;" for Froebel did not succeed in establishing a logical system of theory and practice, but he did succeed in presenting a "unity of tendency and endeavor."

Froebel's intellectual grasp was far exceeded by his intuitive insight into the problems of education. These intuitions constitute the dynamic power of the Froebelian philosophy; and the fact that many of them have been, and are being, verified by evolutionary science, genetic psychology, and child study, constitutes an allurements to study that is as fruitful as it is inspiring.

There is today on the part of the kindergarten workers practical unanimity of conviction in favor of planned work. The conservative kindergartners are generally in favor of a uniform program. The liberal kindergartners advocate individual programs.

The most notable effort in program-making, and the one that has gained widest acceptance, is the outline known as "The Uniform Program" by Miss Susan Blow. The fact that this outline has not been published makes the task of presentation exceedingly delicate.

In order to forestall the implication of partial knowledge of the uniform program, I wish to state that I possess a copy of this outline; that I have attended over forty lectures on this subject given by Miss Laura Fisher; and that I have used the program with a group of children from four to six years of age in New York city.

The liberal supervisors and kindergartners recognize that there is no place in the modern school system for an education according to Froebel, any more than there is for an education according to Comenius or Rousseau. They base their contention for freedom and a natural kindergarten upon educational principles that are recognized as valid by all educators. These universal truths are the very spirit of the Froebelian philosophy.

In presenting the point of view of the liberal kindergartner, I shall make repeated reference to Friedrich Froebel. For this I make no apology, since through these references I hope, in some measure, to defend the liberal kindergartner from the charge of being anti-Froebelian.

For the sake of clearness, we will consider the kindergarten program under three divisions:

- I. The reasons for a uniform program, advocated by conservative leaders.
- II. The characteristics of the program suggested.
- III. The kindergarten program from the liberal point of view.

I. The principal reasons for advocating a uniform program, as I have been able to gather them from published articles and public lectures, may be summed up as follows:

1. The general inability of kindergartners to make programs adequately embodying Froebel's principles.
2. The danger of selecting subject-matter far removed from the sympathies and interests of little children.
3. The liability of the kindergartner to become mechanical, repeating from year to year the models acquired during her period of training.

Conservative kindergartners claim that the strength of the uniform program is due to the fact that it embodies the results of long years of experience and observation; that it concentrates the minds of many kindergartners upon the common features of their work; that it supplements the course of professional training; that it rescues the kindergartner from isolation, in which there is danger of self-limitation and self-imitation.

II. *The characteristics of the uniform program.*—The development of this program is known to be based upon fundamental ideas concerning Froebel's *Mother Play*, and the gifts and occupations. The *Mother Play* is accepted as the text-book of the kindergarten. Miss Blow writes in *Symbolic Education*: "It should be the beacon light by which each kindergartner directs her course. It should be the beating heart of every kindergarten. It should be the center around which revolve all the concentric circles of kindergarten activity." True to these convictions, the uniform program finds in the *Mother Play* suggestions for the point of departure, the principles involved, the ideal goal, and the typical songs, games, and stories.

In this program, the gifts and occupations are conceived as materials of intrinsic worth, and are administered largely on the basis of form. They represent the subject-matter of exercises that in their initial steps concentrate upon some abstract notion inherent in the material, such as form, size, number, position, and direction. These ideas are illustrated thru series of exercises that move in logical sequence, by means of which the "mechanical key which unlocks the gate of inorganic nature" is put into the hands of little children.

Where the uniform program is used, the kindergarten supervisor generally dictates it to the teachers from week to week, with such explanations of the ideas and principles involved in the exercises as she thinks necessary. This plan has been advocated as a kind of postgraduate work for young kindergartners.

In justice to the advocates of the uniform program, it should be stated that general suggestions and criticisms of the program have led to eliminations and modifications, until they believe that it represents "the highest effort to concentrate the collective mind of at least one school of kindergartners upon the practical embodiment of Froebel's ideal."

I am aware that these necessarily meager outlines can convey no adequate idea of the skill and force that have been wrought into this program. It is

a great work. Fidelity to a principle led to its formulation and illumines every detail. My deepest regret today is that this outline has not been published and allowed to speak its message to all kindergartners.

III. *The kindergarten program from the liberal standpoint.*—Liberal kindergartners believe in formulating their own programs, and in this they have the co-operation of liberal supervisors. They maintain:

1. That the needs of particular groups of children demand individual plans of work, with subject-matter that touches the immediate life-interests of the group.

2. That program-making is a certain and unailing means of growth in individual skill and insight.

3. That this course has the sanction of the spirit of freedom, which is the fundamental note of the Froebelian philosophy.

From this point of view, maintained by the liberal kindergartners, we will consider the conservative positions regarding the program.

1. The general inability of kindergartners to make programs adequately embodying Froebel's principles. In general, the charge of incompetency should be a lessening one. The standards of admission to all reliable training schools are steadily advancing. Furthermore, before a kindergartner can secure a position in any large public-school system, she must pass examinations that attest her knowledge of, and adaptation for, the work. No one claims for the young kindergartner the insight of mature years, and program-making, under the guidance of a supervisor, may well partake of the nature of post-graduate work. However, the distinguishing characteristic of postgraduate work is that the one pursuing this course is free to find the constituent elements of the subject, and organize them into a systematic whole, bearing the stamp of individual power and self-expression.

It is the privilege of the supervisor to encourage the life-work of the young kindergartner by suggestion, by constructive criticism, and, more, by an unailing faith in her ability to transcend the limitations she discovers within herself.

This course "educates to freedom," and conforms to the thought of John Stuart Mill, who wrote: "The only unailing and permanent source of improvement is liberty, since by it there are as many possible centers of improvement as there are individuals."

The recognition of this truth leads the liberal supervisor to indirect methods of supervision that inspire both young kindergartners and experienced workers to pursue general and special studies, in view of general and particular needs. She will confer with her kindergartners on the large and small interests of the work, but never dictate from week to week the elements that make up the daily routine of the kindergartens under her supervision. Such a course would deprive the teacher of her richest and most assured means of growth. Prescription for the young kindergartner in the subject-matter of the program threatens to consign her "intellect to the abyss of habit." If she is indeed a

child in her appreciation of the Froebelian philosophy, there is grave danger that a program that calls for a given sequence of *Mother Play*, and gift and occupation exercises, will perpetuate the very conditions for which the program was formulated.

The kindergartner who habitually acts under the dictation of others hazards the possibility of ever rising to the recognition of herself as a causal energy. Even tho all possible adaptive liberty be granted in the execution of ready-made programs, the exercise of adaptive power cannot impart the enthusiasm and spirit that come from the consciousness that one's daily plan of work is the result of one's deepest reflective thought, the embodiment of one's highest creative power.

2. The danger of selecting subject-matter far removed from the interests and sympathies of little children. The liberal kindergartner need not fear this danger, for in making her own program she is free to choose the subject-matter most closely related to the lives of the children in her charge. This course is well within the spirit of the Froebelian philosophy. Froebel wrote: "The knowledge of everything, its purposes, and properties, is found most clearly and distinctly in its local conditions and in its relation to surrounding objects." Again: "What is to have a true and formative effect on the child must not only be founded on life as it actually appears, must not only be connected with life, but must also form itself in harmony with the requirements of life, of the surroundings, and of the time, and with what they offer." Therefore Froebel recommends as points of departure "the things of the sitting-room, the house, the garden, the farm, the village (or city), the meadow, the field, the forest, the plain."

The liberal kindergartner secures continuity and progression in her work thru the observation of nature and the response of all living things to the come and go of the seasons. She is true to the pattern set when by simple stories, songs, pictures, plays, and games she lifts the common experiences of everyday life to the level of consciousness, and helps the children to find in them an ideal meaning.

To the observer these selections may seem trivial; but Froebel tells us that "God neither engrafts nor inoculates. He develops the most trivial and imperfect things in continuously ascending series, and in accordance with the eternal self-grounded and self-developing laws."

From the liberal standpoint, the use of the *Mother Play* as subject-matter for the kindergarten is open to serious and well-founded objections. The effort bodily to transplant Froebel's schemes of education into this country ignores the fact that the child of our American cities is a different member of humanity from the child of the German country side with whom Froebel played sixty years ago; the American mother is a very different embodiment of the maternal spirit from the German peasant mothers from whom Froebel gathered materials for his *Mother Play*.

The tentative spirit of Froebel, which is far removed from dogmatic

interpretation and use of the book, is shown in the following quotation from its "Introduction," written to the mothers of Germany:

Accept the book in a kindly, thoughtful spirit; study the plays; study especially the pictures. Be not too critical of the form of one or the artistic merit of the other. Remember that the aim and spirit of the book are novel, and that I am breaking a path through unexplored regions of experience. My success must necessarily be partial and imperfect.

For a moment let us follow these directions. As to the imperfections, no one questions them. They have been held up for comment and ridicule with which kindergartners have no sympathy. But what shall be said of the spirit and aim of the book? In these it is a world-book. Its spirit, a yearning for humanity and a desire to make its uplift sure thru the quickened consciousness of motherhood; its aim, to show mothers how to respond to the manifestations of childhood with conscious insight into the significance and value of "experience—knowledge" that comes to the child thru play. It indicates to the mother that within play-experiences lie the capacities and potencies of ever-widening relationships. It indicates that the mother make intelligent use of varied means and illustrations, that the child may gain control over present experiences, and begin an interpretation of them in harmony with the wider life-relationships of which they are a part.

There is nothing to indicate that these plays were the only ones to be emphasized, or that they be developed in the order presented. Each play is typical of a wide range of experience; but the liberal kindergartner believes that the child is more deeply interested in the real experiences of everyday life than in the typical experience portrayed in the Fröebel book.

The use of the work as a picture-book for children may have been justified in Froebel's time, when reproductions of works of art were unknown, and the possibilities of photography had not made every conceivable subject available in pictured form.

The liberal kindergartner makes use of the gifts and occupations in more or less modified form, but not as materials of inherent worth. She looks upon them as mediating between the constructive and graphic impulses of children, and the experiences they hunger to control and interpret.

In the natural constructive and graphic plays of children, life-forms predominate over those of knowledge—form, size, etc.; or of beauty—forms of symmetry. Wherever forms of knowledge or beauty appear, they are incidental to the life-interests, which, from the child's standpoint, constitute the centralizing element thruout.

3. The danger of mechanical method. It is a matter of common observation that the charge of mechanical method does not apply alone to the young kindergartner, but to the experienced teacher as well. There is always a tendency to repeat exercises and methods that have met with success, and hence in time arises mechanical method.

It is hard to conceive a more productive source of mechanical method than a uniform program, and the danger increases in direct ratio to the ability

and authority of those who formulate and promote it. My observation has been that, in following a given order of exercises, the tendency is to concentrate on the principles or ideas involved in the exercises, and to ignore the capacities and needs of the children. The kindergartner who studies each new group of children, and weighs the subject-matter of her program in the scales of added experience, has caught the secret of self-activity that results in the progressive development of both teacher and pupil. Herein lies the antidote for mechanical method.

The kindergarten worker has need for many programs for all classes of children, under all conditions of environment and nationality, made by kindergartners who have the courage to express in their work the thoughts that are peculiarly and predominately their own. Let these be published, and thus be made available for comparative study.

Dr. Russell, dean of Teachers College, writes: "The progress in kindergarten education waits upon the spirit of critical research which is engendered by a genuine interest in kindergarten philosophy." The kindergarten program offers a field of research and critical study that promises rich reward of insight for the one who will enter and take possession.

Furthermore, we all need a deeper insight into the totality of Froebel's work. When we have this insight, we can say with Whitman: "Then the sight that was bound in my eyes unclosed as to long panoramas of vision;" and we shall see far down the centuries the perfecting of the kindergarten of which Froebel dreamed.

Shall we not, as supervisors and training teachers, encourage our kindergartners to make their own plans of work? In doing this we have the sanction of Froebel's faith in the integrity of the individual, in these words: "And why should not every thoughtful teacher find the right way in himself, if only he give himself up in faithful obedience, without conceit and distrust, to the spirit of his work?"

DISCUSSION

J. F. REIGART, New York city.—We have had an exceedingly clear and fair statement of two opposite points of view. It remains for us to take our choice. I believe that that choice is determined not entirely by argument, but very largely by temperament. We can apply to each point of view the words of Abraham Lincoln: "For those who like that sort of thing, that is just the sort of thing they like." There are some people who are much happier, and can do more effective work, with a feeling of conformity. There are others who can be happier, and do much better work, with a feeling of freedom, at least freedom of choice; and I believe that this temperamental difference is a very much more fundamental difference than the one that is often made between these two points of view, namely, that one represents the constructive side, and the other the destructive side.

If I object to a certain course of study in the public schools thruout the state or the nation, it does not follow that my objection is destructive as regards the entire question of a course of study. It seems to me that the question of constructiveness is a matter rather

of degree. One side would limit the construction to a few; the other would enlarge the range of construction, and utilize the creative ability of all the teachers. This seems to me to be very much more in accordance with the fundamental principle of the kindergarten—the development of the creative power on the part of the child.

Spontaneity in the teacher is the condition of spontaneity in the child. But the objections are made that such work, such constructive work, on the part of the kindergarten teacher is experimental. If we dismiss experimental work, how shall we dispose of the work of Pestalozzi, of Froebel himself, of Colonel Parker, of Professor Dewey, and many others who have suggested much that has been, in its early stages, entirely experimental? I believe that the experimental stage is the vital stage in educational work, and the crystallized point is the point of danger.

The same objection is made against creative power, against spontaneity on the part of the child. Froebel and the kindergarten have had that opposition to contend with in their whole history. The kindergarten stands for faith in the child, and the correlative of that is faith in the teacher. The training of the teacher, too, in these days results in a much more efficient type of kindergartner than was the case years ago. I have had many young girls come to me to study kindergarten work whose only reason was that they knew nothing else to do, or had no capacity for anything else. I think such candidates are very much fewer today. The Pestalozzi-Froebel house in Berlin makes a very pleasant and effective disposition of that class of candidates. They are trained, not for the kindergarten, but for household and nursery duties. When we talk about the kindergartner, we should assume, of course, the efficient, well-trained kindergartner.

But the question of the type of program is not simply a matter of temperament, but it is largely a question of interpretation—the interpretation of Froebel, and the interpretation of the child. As regards the interpretation of Froebel, the fundamental differences between these two points of view seems to me to lie in the method of interpretation. One method is expressed by Sir Joshua Reynolds, in talking to his art students: "It is your place to follow in the path of the great masters, but not in their footsteps." In the interpretation of the kindergarten, it seems to me much more suggestive to follow the path which Froebel laid out, rather than to attempt to walk in his footsteps. It is the spirit, the attitude, which Froebel manifested, rather than the crystallization of his work into certain formulas, methods, and programs.

The student of folk-songs, the investigator in minerals, would find, in these days, a richer field of music, would find larger realms of science; and I do not believe that we need limit the suggestiveness of Froebel to the enthusiastic lover of children to the exact material and exact methods which he was able to suggest. Recall Froebel's "Soliloquy Over the Lily," and you can imagine how he would respond to the influences of today in the direction of art, nature, and music. I believe that we should interpret Froebel not only in the light of his philosophy, but in the light of his political and sociological attitude; and we are liable to overlook the fact that the spirit of liberty or emancipation which resulted in the Declaration of Independence, the French Revolution, and the wars of German liberation was manifested in the field of education thru Rousseau, Pestalozzi, and Froebel; and it was fitting that the young man who fought as a soldier for the liberation of his native land should be the one to proclaim the emancipation of the child; to declare its inalienable right to life, liberty, and the pursuit of happiness.

The question today in the public schools and in the kindergarten is no longer primarily the emancipation of the child, but it is the emancipation of the teacher. Education, Froebel tells us, should be, not categorical and imperative, but following; or rather, supervision must be, not categorical and imperative, but following; for by command a school or kindergarten may seem good outwardly and yet not be good inwardly, lacking the spirit.

Again, there is a difference in the interpretation of the child. Froebel pointed out the great principle of our modern education and the great principle of the kindergarten,

that of development. But in the method of development and in the means of development, the scientific and industrial progress have added very much to Froebel's point of view.

Take the question of the method of development. Development, we are told, takes place thru successive adaptation to environment; not because of the faculty or power of self-activity alone, but at any stage one's progress is determined by previous adaptation. Suppose that we could so regulate the activity and the environment of children that we could secure absolutely uniform conditions; suppose that we could have absolutely uniform environments in the various kindergartens—we could not by such means secure the same experiences. You and I are not gaining the same experience today. No two people in this room can gain the same experience. That is determined by the experience of the past. If, then, we want to secure uniform experience on the part of the child, it cannot be accomplished by uniform programs or uniform environment in the present kindergarten, but only thru uniform homes and nurseries. A uniform program for mothers must precede the uniform program for the kindergarten.

As for the means of development: The advance in the curriculum of the school since the time of Froebel has been enormous. Our ideas of the principles of education have very much enlarged. Modern life has become much more complex. You were referred in the paper to the very great difference between the life of the German peasant, in Froebel's world, and the life of today.

The standard of the liberal movement, as I understand it, is that a very complete use shall be made of all the varied occupations, plays, games, materials, that can be brought to bear. It has been my good fortune to visit the kindergartens in very many cities in this country, and to see the different types in all classes of people and all sorts of schools. I have been able to compare these with kindergartens in London, in Berlin, and in Italy. I could not enumerate in a few minutes the great variety of games, occupations, songs, and all the paraphernalia of the kindergarten; but the impression made upon me, as I have had an opportunity to visit the kindergarten, has not been that of confusion, variety, multiplicity, anarchy, but rather that of unity. All of these kindergartens, by varied means, in many ways, are attempting to work out the same fundamental principles. In all cases the value of the material consists in what the material signifies. It consists in the ideals to which the child can be led, and in all classes of kindergartens the dominant fact is that all are working with a firm faith in childhood, with the effort to help the children to the highest ideals, and to train them for domestic and social service. There are many gifts, but one spirit.

CHARLES B. GILBERT, New York city.—This is no new question. It is merely a technical phase of a question as old as civilization, and people are always siding with one view or the other. It is simply the old question of democracy against autocracy, in whatever form, whether in the state or in the school.

The question is not merely whether kindergartens will be more or less efficiently managed under one plan or the other, any more than the question whether we are better served under a democracy or a benevolent autocracy. The question is whether the ultimate good of all concerned is better served by utilizing all the forces of all the people, or by having the abler few and those with greater executive power direct the many. The permanent future good of the whole requires the development of all the powers of all the people.

I have no doubt that there are some kindergartners who make bad programs. That seems to be one of the arguments in favor of the autocratic program. But are there more poor kindergartens because there are a few who make poor programs, than there would be if all the kindergartners were machines with their work laid out for them?

There is the doctrine of the so-called formal discipline of the faculties, which means that the philosopher sitting in his seat determines *a priori* what the child is, and what the child must have in order to be developed into the man. In the first place, there is

no such thing as the child. That is a fiction of the philosopher. There are children, millions of them; but the child is a generalization which never existed. We must agree that what Froebel was after was not the generalized child. The free teacher in the free school, studying the free souls of these children, must be able to adapt her work to them; and they are not generalized. Suppose she is called to the East Side of New York. Suppose it is in some colored district on the West Side. Must they have the same discipline, altho they have been born differently, and brought up differently, and can understand different things? Shall we give them all the same discipline?

We have always the worshipers of tools and machines. They are the great conservative force, who are always fighting for the old, but always giving away before the newer and more radical forces of truth and freedom. The worshiper of the tools of the kindergarten is an idolator; and if Froebel were living today, he would be the very first of all to devise new engines for training the new child of the new century; and you people who worship Froebel, as well you may, as a great free soul, should remember that the tools he gave were merely tools for his own day, his own immediate needs, and should no more necessarily be used in the next century than the stage-coach in the days of the steam engine. They may be the very best tools, but that does not necessarily follow. If they are, they are to be used, but they are not to be worshiped.

If you are to have good kindergartens in the future, and even in the present, you must have free kindergartners developing themselves by the exercise of free powers. If you are to have free children trained in such institutions, you must have the work of the institution adapted to the particular children that you have.

Education is life. The life of the school must be a part of the whole life. You must always keep, under all circumstances, free teachers for free children; and that means that they must lay out and do their own work.

OSSIAN H. LANG, editor of *School Journal*, New York city.—I am at the fortunate advantage of not having heard the paper; but I was somewhat stirred by the last remarks of Mr. Gilbert, and they reminded me of the time when I was as radical as he expresses himself to be; but I must confess to you an attachment for the older things. There is a liberty that approaches slavery.

There are certain limitations to the kindergarten work, and Froebel himself laid down certain laws, that I believe every kindergartner should adhere to. He did not send out his gifts or his principles of education as mere experiments or guesses at truth. They were the result of long thinking upon the needs of children and sympathetic dealing with them. These results are worth at least a very careful study, and a teacher should not brush them away without having fully considered them, and then deciding for herself whether that which she would put in that place is better than that which he suggested. Carrying the logic of this thought a little farther, there are supervisors of kindergartens who may have given more thought to all the questions involved than the individual kindergartner could possibly have given those questions, and any directions or suggestions coming from them should be just as carefully considered as are the principles laid down by Froebel on the same basis of reasoning. If there is something better, of course we expect the sympathetic supervisor to be only too glad to receive all suggestions or questions that may arise in the mind of the individual kindergartner, as to the wisdom of this program.

While I may be wrong as regards programs, I want to leave with you simply the feeling that it may be wise not to judge too quickly in matters of program or no program, in matters of supervision or no supervision. It is not only the individual kindergartner and the individual child that are to be talked about. There are years ahead to be planned for. That is where the kindergartners usually fail to do their duty, I believe. They fail to look toward the primary school, and toward the grammar school, and toward the high school. They forget that stimulating the child too much, overstimulating the child at the very start of his work, may result in arrested development by the time he reaches the high school.

It is well to have someone outside of our four walls to come in now and then, and regulate these matters—someone who knows what is going on in the whole school, someone who is interested and who brings, not the very best program that might be, but the best that can be with all other things considered. That speaks for a fixed program of some kind. Let it be limited, but have a basis to work upon, and the freedom of the teacher is not going to be curtailed. Not one of us is free to do as he or she may choose to do. We are all under the law, and the less we want to be under law, the less free we are. We must bind ourselves to certain considerations. The child is the very first limitation of our freedom. Shall the teacher be free? How, then, can the child be free? We have heard that free souls can be taught only by free souls. If the child wants to have what he would like to have, and the teacher at that moment does not want to give it to him, then who is going to be free at that moment? There is more heresy about the freedom of the child than about any other question just now. We are free when we accomplish the results that we are supposed to produce, but we must produce these results, and there we are limited right away. Do you not believe it would be better to have an agreement among the workers upon certain fundamental laws? Those of Froebel are good enough to accept where they are fundamental. Let us accept those laws, give up our liberty to that extent, and work by them.

MISS JENNY B. MERRILL, New York city.—I am heartily in accord with Miss Mills' statement that a distinction should be made between training-school work and post-graduate or conference work. It is the work of a training school to teach its pupils how to plan daily programs. If a supervisor gives a program week by week to the kindergartners under her direction, however good it may be, I believe she belittles their professional status. I believe that in so doing she violates the rights of the individual teacher, that she fails to grasp the far-reaching meaning of the principle of creative self-activity and individual initiative so clearly announced by Froebel.

Several years ago, Mr. James L. Hughes, in discussing the value of the program, said: "What kindergartners need is not a uniform program, but specific outlines of the work that should be accomplished in the kindergarten, and directive laws for making programs." Professor Thorndike suggests also the necessity for general outlines in the *Teachers College Record*, November, 1904, in his article upon the "Psychology of the Kindergarten."

Similar suggestions have been made by many superintendents and principals who, not being familiar with the details of kindergarten procedure, still desire to test its general results. Associate Superintendent Davis, of New York city, suggested to me, in preparing outlines of the kindergarten for exhibit at the Paris Exposition, that an attempt be made to correlate the statement of work to be accomplished in the kindergarten with the statement of the first-year primary by using as far as possible similar headings for both. Accordingly, the usual kindergarten nomenclature was abandoned and the following classification adopted: nature study; physical training and games; language; number and form; music; hand-work; moral training.¹ I believe that such outlines, worked out in the fuller details of a syllabus, would be a safer guide for the kindergartner than a specific daily program. Some such outlines are a necessary method of supervision in cities when the kindergarten is recognized as definitely related to the school. Such outlines suggest to the kindergartner the scope of her work without unnecessarily limiting her method.

I believe that weekly conferences should not be necessary with trained kindergartners; that in monthly conferences it is preferable to discuss one subject at a time, as, for example, stories, games, some one form of handwork, or some phase of child study. Specimens of one kind of handwork should be presented at a time for comparison, that each may learn from all and all from each. I believe that three or four kindergartners may well

¹ See *Kindergarten Review*, September, 1905, for such a syllabus.

study together the special needs of a particular neighborhood. Special conferences should be held to help those who are deficient in a particular line of work. Such conferences may be led by those exceptionally successful, thus giving an opportunity for the development of leaders.

Is it not possible that the need of a detailed program was suggested years ago because so many kindergartners were not then high-school graduates? Such kindergartners may have failed to grasp and apply general principles.

I believe with Miss Mills that the *Mother Play* book is a book of illustrative pictures and talks for mothers from which general principles may be drawn; but it should not be considered as a text-book. It is rich, indeed, in suggestion. Froebel knew children; but is it not necessary to study our own children and their present conditions of life?

We may go too far in discarding books, but it appears to me a reactionary movement to teach kindergartners to use the pictures of any one book as a constant base of subject-matter. The uniform program does this by selecting thirty-eight pictures from one book, arranging them in a fixed order, and fitting them to the weeks of the school year. It appears to me more in accord with the spirit of Froebel to base our kindergarten program directly upon nature and environment.

MISS ADA VAN STONE HARRIS, supervisor of kindergartens, public schools, Rochester, N. Y.—I wish first to recommend one point which has just been made, and that is the looking beyond the kindergarten into the elementary school. One of the chief functions of the supervisor is to gather about her her kindergartners, and outline a general scheme of work which may be a course of study for the kindergarten. If we would look at the program as a course of study, there would be no less need of discussion, because what is made for the kindergarten would then relate to the outline which is made for the course beyond, and it seems to me most essential that the plans for work should be so made, planned, and outlined. It is not necessary to do it all in the kindergarten. I make this plea for kindergartners, whether supervisors or not: Study the course of study of the elementary school, and shape your plans accordingly. My experience has been that it is impossible to follow a uniform program, where the outline must be adapted to the course of study that is to follow.

CURRENT CRITICISM OF THE KINDERGARTEN

M. V. O'SHEA, PROFESSOR OF EDUCATION, UNIVERSITY OF WISCONSIN

It may be well to acknowledge at the outset that there is no department of educational activity, from the kindergarten to the university, which is not under fire today. There has been no vital proposition made the past ten years, and affecting either curricula or methods or management, which has not had illustrious names alike for advocates and for opponents. The radicals in education, of which the number is constantly increasing, are dissatisfied with the mediæval character, as they maintain, of much of our current theory and practice; while the conservative people among us lament that we have already strayed so far from the traditions of the fathers. The times are ill at ease in all things educational. Those who view education from the standpoint of contemporary scientific thought feel that much of the philosophy that has come down to us from other times is unsound, because it is founded upon a very incomplete and largely erroneous knowledge of the mind of man.

The new conceptions of human nature growing out of evolutionary doctrine are producing active fermentation in all departments of teaching, and it is inevitable that they should create disaffection with the present order. Whether we like it or not, there is no escape from this situation. The innovators, having faith in the new light being shed by modern science, will be urging us forward; they will be pointing out the crudity of things as they are; while the conservative will be sounding the praises of the ancient régime and bemoaning the decadence of modern institutions.

Now, so far as I can tell, the kindergarten is not subject to more extensive or harsher criticism today than other departments of our educational system, tho the critics have attacked it so recently that the shortcomings ascribed to it are fresh in the public mind. It is charged, in the first place, by the conservatives and disciplinarians, such as Münsterberg and Briggs, with sentimentalism; it humors its children, and does not develop in them respect for authority, or habits of industry and self-control. Its pupils acquire the notion that the school is a place for fairy-tales and play; and they must suffer many hard knocks in the elementary school before they learn that they should restrain their spontaneous activities and apply themselves to hard tasks. Teachers of the old school have testified that children entering the primary grade from the kindergarten are considerably worse off than their fellows who have been left to run at large, for they have gained wrong notions respecting their duties and privileges in the schoolroom. They expect the teacher to entertain them; and as for learning the lessons assigned them, they strenuously rebel. It should be added that these charges have all been denied by teachers of high standing, with the result that the evidence is contradictory at every point.

Like all other educational questions, this one is so complex that it is impossible to do more than offer opinions upon it. We are certainly without any reliable data whatever showing that the kindergarten is spoiling its pupils in the manner indicated. The few complainants, so far as I have read them, present no evidence that would receive the slightest attention in any scientific camp. They rely upon the method of ridicule; and they imagine that, when they have turned a laugh upon some practice of the kindergarten, they have proved a point against it. And it is easy for many people to make merry over any of the innovations in teaching, which is equally true of every thing novel. When old fogies cannot adjust themselves to changing conditions, they console and strengthen themselves in their helplessness by poking fun at all things new.

This is not to say that the criticisms of the kindergarten are without foundation, but only that the critics have not complied with the simplest principles of scientific procedure in pointing out defects. It is possible that the whole matter is purely relative anyway. It is easily conceivable that when children have had much freedom and life in a kindergarten, and are then transplanted to a dry, desert-like primary grade, it will take them some time to become acclimated. I have observed very closely a situation of just

this sort, and I have wondered often whether the habits and expectations acquired in the kindergarten were not a disadvantage under the changed conditions. The children were subject to constant nagging in the new situation, and it took some time for them to learn to sit still, keep their mouths shut, learn their lessons, and always do as they were bid. But in the primary school, where rigidity and militarism give place to vital, interesting activity, I have observed that the kindergarten child is more completely *en rapport* with his environment than his less fortunate comrade. He has more self-confidence; is more executive, dynamic, expressive; and from the very beginning he reacts more effectively to the educative stimulations of the class-room. In the University of Wisconsin during the past year special studies have been made upon the abilities of children trained in different ways; and we are confident that the kindergarten child has himself better in hand, in all this means, than the child of the street or the home or the formal primary grade.

It is suggestive to note in this connection that, according to my observations, children who have thoroly enjoyed the kindergarten sometimes thoroly dislike the restrictions and formalism of the primary grade. I realize that the disciplinarians regard this as a point against the kindergarten; for children need for their soul's health to do tasks which they dislike. Now, it is needless to wrangle over this question; no one's views can be changed by argument about it. If you are a formalist and believe in the prophylactic value of drudgery, you will find fault with the kindergarten, and you can find plenty of reasons to fortify your position. If, however, you are a naturalist and have faith in the moral worth of following lines of interest in educational work, then you will indorse the fundamental principles of the kindergarten; but you cannot demonstrate the soundness of your doctrines to those whose conception of human nature and whose temperament are the antithesis of yours. We cannot at present prove anything regarding this complex question; we have devised no system of experiments that will show precisely what is the motor, intellectual, emotional, and moral status of the kindergarten as compared with the non-kindergarten child at different stages in his development. Viewing the situation with my conceptions of human nature and education, I feel that the year or two spent under a wise kindergartner are of positive value.

But, having said this, I must hasten to add that I believe there is room for improvement in the kindergarten in respect of some of the matters we have been discussing. I fear that sentiment plays too large a part in the treatment of many children; and by sentiment is meant the desire and the effort to shield the child from all pains and penalties as a natural consequence of his experiments with people and things. The kindergartner is sometimes taught that a child comes among us fresh from the hand of the Creator, and he is pure and spiritual in his tendencies and impulses. If he never have experience with anything but gentleness and tenderness in the people about him, the divinity within him will enfold most readily. The kindergartner would save the child his trials and tribulations by taking them upon herself,

little thinking that to spare the child the results of his acts now is to heap up difficulties for him in the future. So far as I can discern, all contemporary science treating of human nature suggests the conception that the child is equipped at birth mainly with impulses which are bequeathed to him from his primitive ancestors, but which are not adapted to modern society in just the way in which they are inherited. So that the education of the individual consists in no small measure in learning to inhibit his original tendencies. He can undoubtedly acquire these inhibitions best by forming strong attachments for modes of conduct in harmony with existing social institutions and practices, so that in the kindergarten, as elsewhere, we must aim primarily to win the novice in behavior to social and moral interests and actions. But, so far as I can discover, there has never been worked out any plan by which the child can be brought into line with his social environment without having some experience with penalties for unsocial conduct. The social lessons are not learned without a struggle; and the longer they are deferred, the harder they become. If the child never suffers for non-social conduct in the kindergarten, he will be likely to make it up with heavy interest farther along. Pain is, when it results from violation of social and ethical laws, a most valuable prophylactic agent, if it come early enough, before attitudes and expectations become established. So it has seemed to me it would be well if the kindergarten, while preserving all of its positive methods in making the child a social being, would at the same time help the child to appreciate, as a result of vital, significant experience, that it pays in terms of pleasure and pain to meet his fellows half-way, and not to trespass on their rights for his own advantage. The kindergartner ought to help in making children appreciate that a bullying attitude leads to unhappy consequences.

I come now to say a word respecting the fundamental conceptions of the kindergarten, which have been vigorously assailed by certain distinguished present-day naturalists. It is charged that the Froebelian philosophy is mystical and fanciful, and that it is not founded, to any extent, upon exact observation of the developing human mind. It has resulted then that materials and processes which are artificial and formal have found their way into the kindergarten, the doctrine of symbolism being especially faulty. The child is kept at the gifts when he ought to be in contact with nature, and doing things of genuine value. To my mind, this general criticism is merited in many kindergartens. I think all we know of the functioning of the human mind, as an instrument for securing adjustment to the world, to which may be added the results of experience, testify to the fruitlessness of trying to instruct babes by means of symbols. The time devoted to this work ought to be spent in dealing at first hand with real objects in the real world environing the child. Even if the gifts be used for constructive activities, the work is still apt to be more or less artificial and trivial. The spontaneous activities of the child outside of the kindergarten are apt to be considerably more energetic and significant and effective. I have seen boys of six held to activities

in the kindergarten which they had outgrown at four; or at least their abilities at the time were quite beyond the simple and mechanical tasks they were performing. I am confident this objection will not apply to all kindergartens, but I fear that the average orthodox one has underestimated the general dynamic needs and possibilities of most of its children, while at the same time it has very greatly overestimated the generalizing powers of the young mind. Consequently, some of its processes are ill-suited to the normal child of five or six.

I think, however, that movements are already in progress which promise to bring about needed reforms in the kindergarten. In general, these reforms should make its work more natural, more closely related to the life the child lives outside of school. The kindergarten, disclaiming as it does any intention to give the child a knowledge of linguistic arts, should be chiefly serviceable in furnishing models for his spontaneous activities. It should give him suggestions to guide him in his construction and play-activities, so that these may be made constantly more complex and give him increasing executive skill, self-control, and social insight and co-operation. The kindergarten, as I have seen it, is doing considerable in this direction now, but it might do more if it would base all its activities upon the nature and needs of the actual child with his primitive and motor tendencies, rather than upon the idealized and metaphysical being which the Froebelian philosophy, as popularly expounded among us, does seem to construct.

There is space left to say but a word respecting the current criticisms of the training of the kindergartner. There is a deep-seated conviction among the naturalists that the majority, perhaps, of the kindergarten novitiates have their intellects trained too little and their emotions stimulated too much. They are, it is said, quite deficient in the ordinary subjects of mental discipline—mathematics, history, language, science. They have very slight foundation for undertaking a study of the most intricate object in the world—the developing human mind. It follows inevitably, then, that they get a very superficial knowledge of the true nature of the child and his educational needs. They learn the traditional phrases of the cult, but they cannot employ them to guide themselves in concrete situations. It is universally acknowledged, so far as I have been able to ascertain, that the kindergartner usually has the right general attitude toward her special work, but she lacks the understanding to particularize this attitude in special situations, and to devise the most effective means to accomplish the ends which she would attain. I think it very likely that the naturalists have some reason for their complaint, tho there are signs of improvement in this respect too. In some training schools, at any rate, the kindergarten is well grounded in contemporary psychological and biological science as a foundation for her special study of kindergarten theory and practice.

I conclude much as I began: We lack today sufficient data of scientific value to discuss the problems of the kindergarten in a definite or final manner.

But experience and contemporary conceptions of human nature and education lead us to the view that the kindergarten is thoroly sound in most of its fundamental attitudes and processes. It should not be disturbed by the criticisms of the ultra-conservatives, who place their faith in drudgery and formal discipline in education. At the same time, it appears that kindergartners have maintained such steadfast devotion to the founder of the kindergarten that they have not in many cases kept abreast of the development of educational theory and practice. What is needed now above everything else is to require of candidates for positions as kindergartners a thoro grounding in contemporary science relating to human development and general education, as a perquisite for special kindergarten training.

DISCUSSION

CARROLL G. PEARSE, superintendent of schools, Milwaukée, Wis.—I wish to discuss this matter as one who thoroly believes in the kindergarten, and in the value of the kindergarten teaching and training.

I have had to meet the question of cost. I remember visiting a model kindergarten in a school dedicated to the educational training of kindergartners, and I saw a little class of kindergarten children, four or five, with a teacher receiving \$1,200 or \$1,500 a year. I was told that the normal attendance of this class was seven or eight children, but there were only four or five present then. On another occasion I was present at a series of lectures given by one of the most eminent theoretical kindergartners that I know. There had been some little conflict in theory between two schools of kindergarten practice in this city in which the lectures were delivered, and the gentleman was asked how many children he thought ought to be apportioned to a kindergarten teacher, and he said: "Never more than ten." Now, those who are charged with the management of public schools are well aware that kindergartens of this sort are impracticable for them. It is only in private kindergartens sustained as philanthropic enterprises, or in the paid kindergartens, that we can have anything like such a small number of children. In the public-school kindergartens—if we are to have kindergartens connected with the public schools—the number must be run up a good deal larger than this. The question of the number of children that ought to be assigned to the kindergarten becomes a serious matter. It is not necessarily the willingness of people to have kindergartens, or of children to receive the benefits of them; it is the ability to pay for them. If the kindergartner can take more than a couple of dozen instead of less than a dozen, and do something like good work, we are able to have kindergartens in many communities as part of the public-school system, where we could not if the cost were greater, and the number of children to the teacher perhaps more near the ideal.

A kindergartner cannot do other than restrict somewhat the activities of little children. If children can run on the grass, climb the trees, chase butterflies, and do other things that natural, hearty children do in the fresh air, and under wholesome natural conditions, it is a question in my mind whether they are not better off than in the best kind of a kindergarten. The training of their natural activities, together with the wholesome air, is worth more to them, and the physical power they acquire in this way is better, than any kind of training which they could get at the tender age at which they are sometimes put in the kindergarten.

The preparation of the kindergartner has been rather better than that of the average grade teacher, and higher standards, as a rule, have been required. Perhaps it is an

advantage that a young girl cannot begin the work of a kindergartner in any respectable way without some special preparation.

I was much interested in the discussion of the program. I take it that your word "program" means course of study, as we use it in the grades, and I have no doubt that eventually you will agree upon certain subjects to take up with your kindergarten children, and come to a more general agreement upon the proper order, and apportionment of time to be devoted to these different topics.

In addition is this discussion with reference to the attitude of the child in the kindergarten towards his work. In a city in which I lived for some ten years I found there were two schools of kindergarten theory and practice. In one of these the little children, as expressed by the teacher, could come and work out their little God-given natures. Opposed to that was a theory that a child ought to have freedom in the kindergarten, that he ought to have a right to express himself, but he should be led to practice a certain amount of self-restraint, and be taught that in the kindergarten it was proper to give obedience to law.

In the city referred to, when the kindergarten was first started, there was no supervision, and the results of the first few years were exceedingly unsatisfactory to the teachers in the grades. They claimed that the children were much worse off than if they had no kindergarten training, since the "God given nature" theory was abandoned; but there has been for many years the best understanding and the most cordial feeling between the kindergartners and primary teachers.

MARGARET GIDDINGS, supervisor of Kindergartens and First Grades, Public Schools, Denver, Colo.—The time has gone by when we must defend the kindergarten as an institution. Surely it has been with us long enough, and its growth has been sufficient, to prove that it has come to stay, even if we did not have the approval of the most important educators in the country. We are not perfect, and there are many phases of our work which must be improved; but the time is ripe for two things in particular, toward whose accomplishment we must bend our efforts, if we wish more fully to establish our kindergartens. First, more scientific training for our kindergartners, along psychological and child-study lines, as well as pedagogical; and when I say "pedagogical," I do not mean simply the pedagogy pertaining to kindergarten, but instead a comprehensive study of the whole scheme of education, or at least enough to enable the kindergartner to know the general pedagogic principles upon which the child's whole education must be based.

I wish that child study might always be taught to our normal students by one who, as G. Stanley Hall says, has not so far outgrown his or her adolescence that his attitude toward children is not one of sympathy and understanding; one, in short, who could not only instill into the young teacher a desire for study and research along these lines, but who also, and foremost, might plant an abiding conviction that the child is a growing, living, and lovable human soul, and that we must always consider and deal with him from this point of view.

We have been, and still are, called exclusive. It has been said that we hold ourselves aloft from other teachers; and it is as true as is the fact that our public-school kindergartens, while they are supported by the public funds and counted as part of the general school system, are in reality, in most cities, isolated departments sufficient unto themselves and looked upon as something apart from the rest of the educational scheme.

I have wished sometimes that we might have a kindergarten class for some of our superintendents and principals. It is not long ago that a well-known city superintendent told me that he did not often visit his kindergartens, because he felt such a fool when he was in one. He left all the supervision of that department to his kindergarten supervisor. Is it much wonder that our kindergartens are still too apt to be annexes or appendages, as someone has called them? But, on the other hand, unless a superintendent possesses a

knowledge of kindergarten principles, and is progressive enough to know that they should, and sometimes will, be the governing principles of all education, it is far better that he keep his hands off.

The time is approaching when the kindergarten supervisor will be merged into the primary supervisor and the two offices will be filled by one person. It is being done in many places now, and with great success, when, as I said about the superintendent, the person who holds the position is one who thoroly understands and appreciates Froebel's philosophy, and is capable of adapting it to the succeeding stages of the child's development. Then we shall have bridged the chasm between the kindergarten and the primary.

I have heard Colonel Parker say that the day is fast coming when there will be no special kindergarten training teachers; that in our training schools the principles which kindergartners used to look upon as belonging especially to them will be used for all stages of education; and that the kindergarten will differ only in the methods and in the use of materials.

E. G. LANCASTER, president of Olivet College, Olivet, Mich.—There were two things in the paper which attracted my attention. First: The author said he was unable to prove that the kindergarten children were more or less able to carry the grade work. There is such a collection of data. Superintendent Aaron Gove, of Denver, made such a collection, and read the paper two or three years ago at the meeting of the Colorado State Teachers' Association. After compiling facts by asking the primary teachers whether or not the children coming out from the kindergarten were more or less able to carry the grade work, and were more or less agreeable in doing it, he was thoroly and absolutely convinced that the kindergarten child not only was better fitted to carry the first-grade work, but was much better disciplined, and in every way more agreeable to the first-grade teacher.

The play idea which was started in the paper, I believe, needs exploiting. Froebel is the only man who put proper emphasis on play, but Froebel did not know what play was. Only in late years has play been defined, and I would suggest that all kindergartners make a thoro study of the great genetic idea in child study. The child must be looked at from the standpoint of evolution. The child under five never inherits his father's, his grandfather's, nor his great-grandfather's characteristics. He will imitate his father in some things, but for his instincts look at his past. The young child inherits the distant past. From that past he inherits energy and motor activity which must be worked off. Play is always the using up of this inherited motor energy within the child, and no kindergartner can prescribe a play without doing a serious injury. Did you ever see anybody that invented a play? You know how the world over the boys play ball. Can you make them play it in the fall? With the greatest difficulty. In the winter? No. Why do they play marbles at a certain period of the year? Ball makes use of an inherited energy which must be worked off, or the child will explode, and nothing else will use up that energy. The child must do something with it.

The man in primitive times who could throw most accurately, who could run the fastest when it was necessary to run, who could strike most accurately, was the man who could defend himself and his family, and whose children would survive; and you have all these in baseball. It is a universal game, and all children will play it, and you cannot prescribe play.

DEPARTMENT OF ELEMENTARY EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 5, 1905

The Department of Elementary Education met in the Asbury Park Auditorium at 2:30 P. M., with Miss N. Cropsey presiding.

The following program was presented:

President's Address, by Miss N. Cropsey, assistant superintendent of schools, Indianapolis, Ind.

"Teaching of Arithmetic in Elementary Schools," by M. A. Bailey, department of mathematics, Training School for Teachers, New York city.

Discussion by James M. Greenwood, superintendent of schools, Kansas City, Mo., and J. W. Cook, president of State Normal School, De Kalb, Illinois.

The president appointed the following committees:

COMMITTEE ON NOMINATIONS

Wilbur F. Gordy, Springfield, Mass. L. E. Wolfe, San Antonio, Tex.
Jenny B. Merril, New York.

COMMITTEE ON RESOLUTIONS

L. H. Jones, Ypsilanti, Mich. J. F. Reigart, New York, N. Y.
Margaret Giddings, Denver, Colo.

The general session then resolved itself into the following round table conferences, of which Sections A and B met in Asbury Park Auditorium, and Section C in the Brunswick Hotel.

A. "On Handwork in the Primary Grades." Discussion was led by Miss Wilhelmina Seegmiller, director of art instruction, Indianapolis, Ind., and was continued by Mary C. May, State Normal School, Salt Lake City, Utah; Ada Van Stone Harris, supervisor of primary grades, Rochester, N. Y.; Mrs. Ida Hood Clark, supervisor of manual training, Milwaukee public schools.

B. On "Right Methods of Studying History and Geography by Children." Leader: Frank M. McMurry, professor of theory and practice of teaching, Teachers College, New York city.

C. On "Reading in the First School Year." Leader: Mrs. Alice W. Cooley, assistant professor of education, University of North Dakota. Part in the discussion was taken by J. F. Reigart, New York city; Mary J. Brady, St. Louis, Mo.; W. E. Crosby, New York city; A. Grace Gibson, New York Training School for Teachers; and Fannie B. Griffith, St. Louis, Mo.

SECOND SESSION.—FRIDAY, JULY 7

The department met in the Asbury Park Auditorium at 9:30 A. M. The following program was presented:

1. "The Psychology of Reading and Writing," by Robert MacDougall, professor of descriptive psychology, New York University, New York city.

Discussion was led by Stuart H. Rowe, head of the department of psychology and history of education, Brooklyn Training School for Teachers, Brooklyn, N. Y.

2. "On the Study of English Composition as a Means of Acquiring Power," by Miss Georgia Alexander, supervising principal of schools, Indianapolis, Ind.

Discussion by Miss Emma L. Johnston, principal of Brooklyn Training School for Teachers, Brooklyn, N. Y., and Wilbur F. Gordy, Springfield, Mass.

3. "Teaching Our Language to Non-English-Speaking Pupils," by Gustave Straubenmüller, district superintendent of schools, New York city.

Discussion was led by Miss Ida Mighell, principal of Bryant School, Chicago, Ill.

The Committee on Nominations made the following report:

For *President*—Mrs. Alice W. Cooley, Grand Forks, N. D.

For *Vice-President*—C. F. Carroll, Rochester, N. Y.

For *Secretary*—Mrs. Josephine Heermans, Kansas City, Mo.

This report was accepted and adopted, and the session was declared adjourned.

LIDA B. EARHART, *Secretary*.

PAPERS AND DISCUSSIONS

A SHORT REVIEW OF THE EDUCATIONAL PROGRESS OF THE YEAR, AND A DISCUSSION OF SOME PHASES OF THE CURRICULUM OF THE ELEMENTARY SCHOOL

MISS N. CROPSEY, ASSISTANT SUPERINTENDENT OF SCHOOLS, INDIANAPOLIS, IND.

To determine the events which mark the progress of a year is difficult. No year stands apart as a section of progress, and it is a wise man who understands his own time.

The meeting of the National Educational Association at St. Louis, in 1904, was followed by the International Congress of Arts and Sciences. The department of education was represented by some of the ablest men of our time. Perhaps no greater contribution has been made to the year's progress than the papers and discussions of this meeting, giving a deeper and clearer view of the meaning of education.

The highway of progress is opened by the scientific and philosophic thinkers, and we follow where they lead; or wander in narrow, unfrequented paths, which never bring us into the great world-movement by which the quality of our work is tested, whether it be temporary or whether it be enduring.

The paper contributed by Dr. William T. Harris, United States Commissioner of Education, upon "School Culture in the Form of Education and Religion," should be studied by every leader of educational thought, and by all who wish to get a clearer view of the relation of church and school. Years of waste and fruitless effort in education are saved to the schools of the nation by the clear vision of its leaders.

One of the richest contributions to the explanation of our time, in the light of the movement of the century just passed, was made by Bishop Spalding, of Peoria, in his discussion of the "Development of Educational Ideas in the Nineteenth Century."

The controlling idea in philosophy and science is that of organic unity, implying a world-wide process of development. . . . To understand what anything is, it is necessary to know how it has come to be. In learning to know how things have become what

they are, we have gained insight into methods by which they may be made better than they are.

Superintendent William H. Maxwell, of New York city, stated the aim of education in a democratic government, and defended a course of study in accordance with this aim.

In a democratic society the object is not to develop a particular type of citizen, but to develop the fullest efficiency, individual and social, of each citizen.

And this, it seems to me, gives the general view which must always determine the special lines of instruction to be given in the elementary schools of a democratic society.

The past year has been marked by unusual interest in education by the whole people. One of the most inspiring movements in the year's progress has been the organization, in Virginia, of all forces for the betterment of the common school. The Co-operative Education Commission of Virginia was organized something more than a year ago for the purpose of unifying all the educational agencies of the state and directing these combined agencies to the work of improving the common schools.

In this movement every political party, all religious denominations, and all the institutions of learning have united in a common effort for the betterment of the elementary schools, and especially for the improvement of the country schools. The situation was brought before the people in the May campaign, when educational mass-meetings were planned for almost every community in the state.

New York and Virginia stand together for democracy, based upon the education of the whole people.

Virginia stands for well-trained teachers, efficient supervision, industrial training, the correlation of public libraries and public schools, and a high school within reasonable distance of every child. Jefferson's idea of a system of public schools is probably nearer its realization in his native state than at any time since it originated in the mind of the great philosopher.

In New York city the people were asked to consider the value of the studies in the curriculum of the elementary school. The answer of the people was in favor of education, rather than for early specialization upon reading and writing alone. In smaller cities the people have been a committee of the whole, to ask that the mechanics of reading and writing be taught, but to say that this alone will not prepare for efficiency. If this were sufficient, the school need not spend time and money upon the child's education beyond his tenth year.

When the question is asked of the democratic people, "What shall be taught in the public schools?" the answer which is returned will agree with the insight of the wisest thinkers of all times. We shall not use the terms of the philosophers, of Plato and of Froebel, but we shall confirm what they have set forth. We shall say that the school must undertake whatever will give the greatest return to the individual in efficiency and happiness.

We somehow believe that the individual is the first consideration, and we shall not ask for peasant schools, where early specialization upon the mechanics

of reading and spelling, or upon sewing and wood-work, may take the place of training for efficiency, for character, by means of all the subjects taught and thru the spirit of the whole.

We are not so far away from the Report of the Committee of Fifteen but that we may recall the fundamental principle stated as determining the curriculum of the elementary school:

The civilization into which a child is born determines not only what the child shall study, but what habits and customs he shall be taught, in the school and in the family.

A democratic government places a high value upon the individual, and if manual training and music and drawing and physical training, in addition to the language arts which are of the first importance, are necessary to assist in the process of education, they will be taught in the schools.

The curriculum, in general and in its essentials, is not so different now from what it has always been for the fortunate child, trained by wise parents, when the conditions of living gave opportunity for manual training and nature study in the home. But now the matter is the concern of the whole people. We are only becoming more conscious of what has been striving for expression always, and what has had such rapid and such forceful utterance in our century. As Bishop Spalding has said:

It was a century in which not single minds alone, but whole peoples, were stirred to a higher and more persistent self-activity. The whole course of events tended to confirm popular faith in the might and worth of education, which ceases to be the concern of scholars merely.

We shall all agree that the language arts—reading, writing, spelling, and English composition—are the most important subjects taught in the primary and elementary schools, because it is thru these arts so largely that the child must come into the spiritual inheritance of the race, and it is by means of these arts that, in our time, he carries on the business of everyday life. The degree to which reading can be taught to the individual seems to be a matter of confusion in the minds of whole communities.

We forget that one can read only according to one's capacity and knowledge, and that all our experiences and acquirements are the measure of our power to read. It is not possible to teach the language arts, even in their most elementary form, unrelated to anything else; and the proper teaching of these subjects yields so great a return in discipline and knowledge because they require knowledge and experience as their ground for use. The school must provide the opportunity to gain knowledge and experience in order to give occasion for language..

What does the ability to read literature, geography, and history imply? Some first-hand knowledge, some experience, and the exercise of imagination and judgment. The shortest road to the ability to read these subjects is their careful study under the leadership of a capable teacher. As a rule, we find that people who have had no early training in history read this subject as often and with about as much interest as they read algebra. The history

stories read and told in the primary and elementary schools are a preparation for the more extended and more closely organized study of the subject. We appreciate this preparation when we see the result in the quality of the books called for at the public library. The effort to teach geography and history with some meaning, and to teach children to read the best literature, has led to the conclusion that a great many new subjects have been added to the curriculum. To teach the three R's, there must necessarily be a broad curriculum, but not broad in the sense that many unrelated subjects have been introduced.

We may test the law of the mind, that the getting of knowledge is a process of recognition, by asking ourselves to what degree we can read Carlyle's *French Revolution*, or a technical treatise on the theory of electricity and its application to the various kinds of motors. We must take something to a subject in order to get something from it.

I believe that nearly all children, even those of very slow development, under our present improved methods of instruction, and the better methods which are to come, can be taught to read simple elementary reading, and to write and spell a simple vocabulary. I state the gain made in reading in very moderate terms, when I say that there has been a gain of a year or more to the child within the last fifteen or twenty years. Children nine years of age now read as well as children of ten or eleven, twenty years ago.

The demand that all be taught to read to an equal degree of insight and knowledge, or even to an equal degree of mechanical accuracy, can never be fulfilled by any school under any system of training. But the school should undertake to teach children to read and to write up to their capacity. More than half the time, perhaps three-fourths of the time, should be given to the language arts, up to the fourth year in school. Emphasis should be placed upon the language arts, and upon manual expression, with a large element of imitation and memory, in method. The school day should be of reasonable length, with provision for free outdoor play.

The number of minutes upon the daily program of recitation is not the only factor, however, to be considered in teaching reading and spelling, and language expression. The individuality of the child to be instructed and his physical health are fundamental conditions to be taken into the problem.

Setting free the child's power, thru hand-expression, physical training, and free play, has increased his capacity for learning to read. The demand on the part of the school for such forms of expression as manual training and drawing shows an advance in the appreciation of individuality. But, unless these are subordinated to the development of moral and mental power, the growth of the higher nature may be arrested. Dexterity in the mechanism of hand-work may be acquired, while the judgment, the imagination, and expression thru language have little exercise. This it is the office of the school to prevent.

There is danger in a democracy that the demand be made of the schools

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that the same attainments be secured to all who have an equal opportunity for instruction, and in the same length of time. We have emphasized unity and equality to such a degree that we are in danger of forgetting that there is also variety. Freedom has not been too greatly emphasized, and it is the glory of our time that we recognize the duty of training the capacity for freedom to its highest expression.

There are children to whom the language arts are so difficult that they will leave school and work at the hardest and most disagreeable manual employment, rather than try to master the art of reading upon its most elementary plane. The mind cannot make the adjustment to what requires so complex and intense a mental process. Most of these pupils can be taught to read by the insight, skill, and patience of the expert teacher, but not in the same length of time that is required to teach children who have average aptitude for learning written and printed forms, and interpreting their meaning. The teaching of language, both oral and written, should not be postponed with these pupils, and they should not be abandoned by the school. There should be a large element of manual and motor expression, and definite manual training, which is mental training also, and which may form a gradual approach toward what must be the closer mental adjustment required in learning to read. The child who has learned to read and to spell the words of a First Reader, and to write his name with a fair degree of legibility, has a vast advantage, in his equipment for life, compared with the entire lack of such skill, elementary as this preparation seems, and inadequate as it really is. We know that this is not preparation for citizenship in a republic.

The demand upon the part of the public that these pupils all be taught to write a well-balanced and sensible letter, perfect in mechanical form, to fit any occasion, will not be soon fulfilled. This means some maturity of judgment—the ability to distinguish the important from the unimportant. Our use of language reveals our degree of development, and language cannot be improved without improving the quality of mind.

Much of the work of our modern business world requires quick discrimination, concentration, accuracy, and rapidity in execution. To make a combination of endurance and fine discrimination is a problem of growth which superficial thinkers have yet to consider. Fine and quick execution requires physical strength, and quick and accurate judgment. Compare the work of the expert shorthand reporter and typewriter with the ordinary employments requiring the use of the large movements of the body, little mental discrimination, and slow execution. The machine, and expert training, have raised the standard of accuracy in writing and spelling beyond what can be attained by a considerable minority with our present system of penmanship and an unphonetic language.

Perhaps the greatest evidence of progress during the year is in the increased recognition of the value of the teacher, as compared with the value of buildings and equipment. More money for the teachers of the elementary schools is

now one of the most important measures to be considered in the development of the school in our country. The teacher is the school. Money will not make good schools, excepting in so far as it enables the best people to give their services to teaching. Bishop Spalding says:

A message of the nineteenth to the twentieth century is this: "So mold public opinion that it shall lead the best men and women to choose teaching as a vocation."

Can we reduce the amount of money invested in drugs, prisons, and battle-ships, and make a condition of civilization in which these things will not use so great a part of the energy and creative force of life?

Some progress has been made in the adjustment of the work of the elementary school to the high school. This has been made possible by the departmental plan of teaching in the higher classes of the grammar schools, and also by a better understanding of the capacity of the pupils, and better teaching in grades below the grammar schools.

While there is great waste in trying to get little children to think beyond their capacity, there is equal waste in failing to require abstract thinking up to the pupil's maturity of development. While the time given to arithmetic and grammar should probably not be increased, these subjects should be emphasized by the manner in which they are taught, both as to method and extent. I believe that Latin in the seventh or eighth grade would bring a more exact study of English, and that the beginnings of algebra would assist in understanding some of the more complex processes of arithmetic.

A very marked advance has been made in the recognition of the value of play. School grounds in cities have been enlarged, and outdoor play has been encouraged by intelligent direction and organization. The meaning of play is not yet understood. Froebel has done more than anyone else to explain its meaning and to show us its value, its necessity, in the life of the child. Its value to all stages of development needs to be recognized, and the school should show that play can be recreation. There is a tendency to organize play into a strenuous employment, and to use up all the forces of life in preparation for battle, which requires savage alertness and ferocity. Play should teach temperance in action, and should form a habit of normal and healthful reaction.

Progress has been made in the appreciation of the value of individual instruction. The preceptor idea was inaugurated at Princeton University a year ago.

These preceptors are to take students, individually or in small groups, and train them to work. This work is to consist, not primarily in preparing lessons, but rather in reading, and preparing written reports upon the matter read.

This individual help is necessary for the college student; there is no machinery which will take the place of the personality of the teacher. It is necessary for the little child in the primary school, and for the maturing youth in the elementary school.

There is an effort, in all progressive school systems, to give closer individual

instruction, either by dividing the school into small groups, or by employing an assistant to teach special classes or individuals. President Eliot's demand for the enrichment of the course of study meant more teachers, smaller classes, more individual instruction, and better preparation for teaching. It means that we can no longer teach children mechanically and in the mass.

Back of the demand for the enrichment of the course of study is the nature, the capacity, of the child, which has never been met by an adequate environment. That atrophy of power may set in very early, for want of the adaptation of conditions to growth, we all believe. That the school is striving to meet this demand, this great meeting of earnest teachers is evidence.

The teachers of the primary and elementary schools speak to the whole nation. There is no more inspiring sight, nothing which brings such hope, nothing that gives such evidence, that the man of the present has, to a great degree, power over the future, as this annual meeting of the teachers of the nation.

THE TEACHING OF ARITHMETIC IN ELEMENTARY SCHOOLS

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The principal factors in the teaching of arithmetic are the course of study, the text-book, and the teacher. The office of the course of study is to indicate the order in which the topics shall be considered, and to assign the time within which each shall be completed; the office of the text-book is to indicate the order of the topics, and to present them in such a manner that the learner may master them without other assistance; the office of the teacher is to give the same instruction by word of mouth which is given in the text-book by the printed page, and to direct the learner. Thus the course of study and the text-book have the order of topics in common, and the text-book and the teacher have the imparting of instruction in common.

The outline in both the course of study and in the text-book should be the same, that the learner may have before him in consecutive order everything that he has studied, and that he may be able to find readily whatever he may need. Otherwise he is obliged to keep a notebook, to study pages widely separated, and, it may be, to use several text-books at the same time. The practice in most of the large cities of outlining a course of study in detail, and of authorizing the use of one or more text-books no one of which follows the prescribed order, is indefensible in theory and unsatisfactory in practice. One of two things should be done: either a series of text-books should be selected, and the course of study should be made to conform to its outline; or a course of study should be approved, and a series of text-books should be written to carry out its provisions.

What shall be the order of the topics? Every step in mathematics has been taken in response to a need and as a means to an end. The satisfaction

of a need has given rise to other needs, their satisfaction to still other needs, and so on. The adaptation of means to an end is the law of human development. Hence the order of topics may be found by investigating the workings of this law. The first need in connection with number is to find how many individuals there are in a single group. After this need is satisfied, there are only five primary problems, and each may be solved by counting:

1. To find how many individuals there are in two or more groups, from the numbers in the groups.
2. To find how many individuals are left, from the number in the original group and the number taken away.
3. To find how many individuals there are in two or more equal groups, from the number in one group and the number of groups.
4. To find how many equal groups there are, from the number of individuals in all and the number in one group.
5. To find how many individuals there are in one group, from the number in all and the number of equal groups.

Hence the first stage may consist of notation and numeration thru some definite limit, as a hundred, and of the solution of the five primary problems by counting.

As soon as the numbers become large, the need is felt for shorter methods. The need of a method shorter than counting for finding the sum of two or more numbers is satisfied by calling from memory the sum of the first two numbers in each order, the sum of the result and a third, and so on. This necessitates memorizing the sums of the first nine numbers taken two and two, and of applying these combinations to increasing numbers of two orders by a number of one order. The need of a method shorter than counting for finding the difference between two numbers is satisfied by calling from memory the differences between the numbers in each order separately. This necessitates memorizing the differences in the combinations of subtraction which grow out of the combinations in addition. Hence the second stage may consist of the addition and subtraction tables, and of their applications to problems involving these operations thru some definite limit, as a thousand.

The need of a method shorter than counting for multiplication is met by addition, and the need of a method shorter than addition, by calling from memory the products of the numbers in the several orders of the multiplicand by the numbers in the several orders of the multiplier. This necessitates memorizing the products of the first nine numbers taken two and two. The need of a method shorter than counting for the two cases of division is met by subtraction, and the need of a method shorter than subtraction, by calling from memory the quotients of the numbers in the orders of the dividend by a number of one order. This necessitates memorizing the quotients in the combinations of division which grow out of the combinations in multiplication. Hence the third stage may consist of the multiplication and division tables, and of their applications to problems involving these operations thru some definite limit, as a million.

The fourth stage may consist of the mastery of the fundamental operations upon integers thru some definite limit, as a quadrillion. Integers must precede fractions, decimals must precede percentage, and percentage must precede interest, because each is the basis of its follower. Hence the fifth stage may consist of common fractions; the sixth, of decimals and denominate numbers; the seventh, of percentage and interest; and the eighth, of mensuration and miscellaneous topics. The tendency during the past fifteen years has been to carry the spiral method to the extreme. Eight-book series have been used, and the children have been whirled about in this merry-go-round so rapidly as to make them dizzy. The work has never been well done; the only wonder is that it has been done at all. It is encouraging to note that the pendulum is now swinging toward the topical plan and a two-book series.

The plan of instruction to be followed both by the text-book and by the teacher should be the same, in order that the learner may acquire the power of mastering a subject from the printed page, and in order that he may be able to refer to a topic and to find a method of treatment with which he is familiar. Great care should be exercised in the selection of the text-book in the first place; but after the book has once been selected, the teacher should be required to follow its presentation.

What is the proper method of instruction? This question will be discussed under subject-matter, operations, and problems, because everything in arithmetic falls under one of these heads, and because each demands a method of treatment different from each of the others.

The subject-matter includes integers, fractions, decimals, per cent. expressions, denominate numbers, lines, surfaces, solids, commission, interest, and other terms found in problems. Since they are mental products, they should not be brought to the attention of the learner, like minerals, plants, and animals, as entities ready formed in nature, but they should first be created in the mind. The steps are: developing, to create the product in the mind; naming, to secure ease in reference; and defining, to give expression to the mental product.

We will present the subject-matter of common fractions:

Developing.—Fold a piece of paper thru its middle line. Into how many equal parts has the paper been divided? One of the folds is what part of the whole? We write one-half by placing the figure 2 under a horizontal line to show that the unit has been divided into two equal parts, and by placing the figure 1 above the line to show that one part is considered. Fold the paper again. Into how many equal parts has the paper been divided now? One of the folds is what part of the whole? Three of the folds are together what part of the whole? How shall we denote the number of equal parts into which the unit has been divided? How shall we denote the number of equal parts that are considered? Write three-fourths.

Naming.—The number written under the line is the denominator; the number above the line, the numerator; the whole expression, a fraction.

Defining.—What is a fraction? the denominator? the numerator?

Ability to define accurately and concisely should be gained by the study of arithmetic. To emphasize the way of accomplishing this end, we will

present the subject-matter of the triangle. What is the least number of straight lines which can inclose a surface? Draw a plane surface inclosed by three straight lines and name it *triangle*. What is a triangle? The learner will say that a triangle is a plane surface inclosed by three straight lines. He learns to include the term to be defined under a more general term, and then to mention one or more of the qualities which the general term does not possess. Let us carry the development another stage. What must be true of three straight lines with respect to length? Draw a triangle having its three sides equal, another having two of its sides equal, and another having no two of its sides equal. Name them *equilateral*, *isosceles*, and *scalene* respectively. Define each. In defining the equilateral triangle, the learner will see that he may begin with the more general term and say: "An equilateral triangle is a plane surface inclosed by three straight lines, and having its sides all equal;" in which case he adds two qualities to the genus. Or he may begin with the proximate genus and say: "An equilateral triangle is a triangle having its three sides equal;" in which case he adds only one quality. Neither the book nor the teacher should give the definition directly, but the former should correct the learner by definitions arranged alphabetically in a glossary, and the latter, by word of mouth at the time of the development.

The operations include addition, subtraction, multiplication, division, involution, and evolution of the topics already named under subject-matter. The teaching of these operations involves the discovery of the general principle for each and its application to individual examples. The general principle must be discovered by finding the method of procedure for a single example, by showing that every other individual included in the class is exactly similar to this in all respects essential to the demonstration, and by concluding that the method found is true for all cases. In other words, it consists of an argument in rational induction. The application of the general principle to the individual examples must be made by stating the general principle, by showing that the individual is included within the general, and by treating the individual in the same way as the general. In other words, it consists of an argument in deduction. Thus the teaching of an operation makes the full round of reasoning, from the individual to the general, and then back again from the general to the individual. This process is embraced in the five formal steps of the Herbartians: preparation, presentation, comparison, generalization, and application.

Let us illustrate by teaching the multiplication of a fraction by an integer. Preparation consists of making sure that the learner has in mind the knowledge thru which the discovery of the general principle is to be made. What does $\frac{3}{8}$ denote? What does the denominator denote? What does the numerator denote? Presentation consists in selecting an example and in finding a method of performing the operation. This may be done objectively or abstractly. We will choose the former. Let us take $\frac{3}{8} \times 2$. We will draw a circle, separate it into eight equal parts, and shade three of them to represent

$\frac{3}{8}$. Multiplying $\frac{3}{8}$ by 2 we obtain six of these parts, or $\frac{6}{8}$. To multiply $\frac{3}{8}$ by 2, we multiply the numerator. Comparison consists in showing that every other example in the multiplication of a fraction by an integer is exactly similar to $\frac{3}{8} \times 2$ in all respects essential to the demonstration. This is true because multiplying the numerator of every fraction by an integer will multiply the number of equal parts that are taken without affecting the size of the parts. Generalization consists in stating the general principle. To multiply a fraction by an integer, multiply the numerator. Application consists in following this general principle in the solution of individual examples. Multiply $\frac{8}{13}$ by 9. $\frac{8}{13} \times 9$ is an example in the multiplication of a fraction by an integer; to multiply a fraction by an integer, multiply the numerator; to multiply $\frac{8}{13}$ by 9, multiply the numerator.

In teaching operations for finding perimeters, areas, and volumes, experimental induction must be substituted for rational induction, because the rational proof calls for a knowledge of geometry. In this case presentation consists in finding by trial rules for several examples, comparison consists in discovering that these rules agree, and generalization consists in stating that this rule is probably true in all cases. Let us find the ratio of the circumference to the diameter of a circle. By measurement we find that in one case the ratio is $3\frac{1}{7}$, that in another case the ratio is $3\frac{1}{7}$, and that in another case the ratio is $3\frac{1}{7}$. Finding that the result is the same in each case, we conclude that the ratio of the circumference to the diameter of every circle is probably $3\frac{1}{7}$. This form of induction is often employed both by text-books and by teachers in presenting operations other than those in mensuration, but it is not of the highest form, because it can never establish the conclusion as more than probably true.

Problems include all the examples in arithmetic in which the operations are not directly stated. They are divided into simple, involving only one operation, and complex, involving more than one operation. With the exception of those found in mensuration, involution, and evolution, all simple problems may be classed under the five primary forms already mentioned. Their solution consists in discovering and performing the operation. The discovery of the operation is always made thru that form of reasoning which is known as traduction. Three statements are involved. The major states the relation between the required term and the given term; the minor states that the given term is equivalent to a second term; and the conclusion makes the same statement involving the second term which the major premise makes involving the first term. The conclusion is valid, because, in any proposition, a term may be replaced by a second term, provided the second term is equivalent to the first.

We will illustrate by a problem involving multiplication:

If 1 apple costs 3 cents, how much will 5 apples cost?

Maj.: "The cost of 5 apples" is 5 times "the cost of 1 apple."

Min.: "The cost of 1 apple" is "3 cents."

Con.: The cost of 5 apples is 5 times "3 cents."

The major premise states the relation between "the cost of 5 apples" and "the cost of 1 apple;" the minor premise states that "the cost of 1 apple" is equivalent to "3 cents;" and the conclusion makes the same statement involving "3 cents" that the major premise makes involving "the cost of 1 apple." It is customary to abbreviate the argument by the omission of one of the premises. In some localities the major is omitted, giving the form: "Since the cost of 1 apple is 3 cents, the cost of 5 apples is 5 times 3 cents;" in others, the minor is omitted, giving the form: "Since the cost of 5 apples is 5 times the cost of 1 apple, the cost of 5 apples is 5 times 3 cents." The major premise states the operation, while the minor states the term upon which the operation is to be performed. Since the selection of the operation must be determined by reasoning, while the object of the operation is stated in the problem, the major premise is more important, and therefore the one that ought to be retained.

The evil effects of invariably omitting the major premise will be shown by two illustrations. Let us take a problem involving division in which the relation is indirect:

If 1 man requires 6 days for a piece of work, how many days will 2 men require?

Maj.: 2 men require $\frac{1}{2}$ as many days as 1 man.

Min.: 1 man requires 6 days.

Con.: 2 men require $\frac{1}{2}$ of 6 days.

If the learner does not keep the major premise in mind, misled by the similarity of the problem to one involving multiplication, he will say: "Since 1 man requires 6 days, 2 men will require 2 times 6 days." If he retains the major, he will reason correctly: "Since 2 men require $\frac{1}{2}$ as many days as 1 man, 2 men require $\frac{1}{2}$ of 6 days."

Let us take a problem apparently involving multiplication, but really involving no one of the operations:

If a dog standing on 1 leg weighs 15 pounds, how much will he weigh when standing on 4 legs?

Maj.: The dog standing on 4 legs weighs the same as when standing on 1 leg.

Min.: The dog standing on 1 leg weighs 15 pounds.

Con.: The dog standing on 4 legs weighs 15 pounds.

If the learner does not attend to the major premise, he will pronounce this a problem involving multiplication, and will say: "Since a dog standing on 1 leg weighs 15 pounds, when standing on 4 legs he will weigh 4 times 15 pounds." The discovery of the major premise will correct this error: "Since the dog standing on 4 legs weighs the same as when standing on 1 leg, when standing on 4 legs he will weigh 15 pounds."

Every complex problem may be separated into two or more simple problems each of which involves a single operation. This indicates that its solution must be effected by separating it into simple problems and by solving each. The solution of the first problem will give for its answer a term which forms the basis of a second problem; its solution will give a term which forms the basis of a third problem; and so on. The exact bearing of the first simple

problem may not be seen at the beginning, but the learner should be encouraged to form any simple problem that he can discover, to find its answer, to use the answer in the formation of a second, and to continue in the same way until he discovers a simple problem whose answer is the answer to the original complex problem. This process may be conducted directly, by representing the required answer by x , and by solving the last simple problem by the technical laws of algebra; or indirectly, by avoiding unknown letters, and by solving the last simple problem by traduction. The former is the algebraic method; it is usually, but improperly, omitted from elementary arithmetic, because the reduction of easy equations is erroneously thought to be too difficult for children at this period of their development. The latter is known as analysis; it is the form commonly used in arithmetic. We shall illustrate each of these methods by a single problem:

If a certain number is increased by 4, the sum divided by 2, the quotient diminished by 3, and the remainder multiplied by 6, the result is 12. Find the number.

DIRECT

If x is increased by 4, what is the sum? *Ans.*: $x+4$.

If $x+4$ is divided by 2, what is the quotient? *Ans.*: $\frac{x}{2}+2$.

If $\frac{x}{2}+2$ is diminished by 3, what is the remainder? *Ans.*: $\frac{x}{2}-1$.

If $\frac{x}{2}-1$ is multiplied by 6, what is the product? *Ans.*: $3x-6$.

If $3x-6=12$, what is the value of x ?
Ans.: 6.

INDIRECT

If the result is 12 when a number is multiplied by 6, what is the number?
Ans.: 2.

If the result is 2 when a number is diminished by 3, what is the number?
Ans.: 5.

If the result is 5 when a number is divided by 2, what is the number?
Ans.: 10.

If the result is 10 when a number is increased by 4, what is the number?
Ans.: 6.

The complex problems which arise from the combinations of multiplication and division may often be solved more easily by a single argument as in simple problems. Thus:

At 3 for 5 cents, how many apples can be bought for 10 cents?

Max.: 10 cents will buy 2 times as many apples as 5 cents.

Min.: 5 cents will buy 3 apples.

Con.: 10 cents will buy 2 times 3 apples.

This may be abbreviated:

Since 10 cents will buy 2 times as many apples as 5 cents, 10 cents will buy 2 times 3 apples.

It remains to consider the part in instruction which the teacher does not share with the text-book. This consists chiefly in studying the individual pupils, in order to discover what points they are failing to grasp, in order to direct their efforts, and in order to stimulate their interest. The teacher should

prepare for each class exercise by answering the following questions: What is the exact scope of the exercise? For what purpose is it to be given? What knowledge immediately leading up to the topic is now in the mind of the learner? What steps must be taken by the learner to pass from his present condition to the condition of knowledge required? What means must be employed by the teacher to induce these steps?

DISCUSSION

JOHN W. COOK, president of Northern Illinois State Normal School, De Kalb, Ill.—Let me say that I think every teacher should know all that Professor Bailey has said this afternoon. This patient analysis of subject-matter should be familiar to every teacher. I note two slips. I suggest to Mr. Bailey that he include in his next paper the fact that the apples are of equal value. Again, in multiplying $\frac{3}{4}$ by 2, he suggested the shading of one of the $\frac{3}{4}$. I suggest that two of the $\frac{3}{4}$ be shaded.

How are we to tell what is in the mind of the child? Are we to assume that some of these processes are not in his mind and to insist upon formal statements? If you are going from here, and are going to use what Mr. Bailey has given patiently and exhaustively, without knowing whether the child needs it or not, you will make a dreadful mistake. Use formal analysis when it is needed, but do not use it when it is not needed.

I regard the arrangement of subject-matter as somewhat faulty. I visited the Kansas City schools and testify that Mr. Greenwood has not overestimated the conditions in his schools. I found the processes illustrated with concrete material. The child needs the image to lean upon. I took the work home with me which the third-grade children were doing and tried it on the normal-school students, and they could not do it as rapidly as those children could. With a clue, they gained in rapidity, however.

Take this careful analysis of subject-matter and of mental processes, and if the children want to take a short-cut, let them do it.

We have had two distinct aspects of this subject presented to our consideration. In the former instance the procedure was under the form of a series of propositions, logically arranged, and derived from clearly stated premises. This is the logical arrangement of the subject-matter. In the second case the procedure starts with well-defined mental images and deals with them under the conditions of the problem. The latter is the child's point of view; hence it may be termed the psychological movement. Both views are necessary for a complete grasp of the subject.

ROUND TABLE CONFERENCE A

TOPIC: HAND-WORK IN PRIMARY SCHOOLS

[REPORTED BY MRS. IDA HOOD CLARK]

LEADER: WILHELMINA SEEGMILLER, DIRECTOR OF ART INSTRUCTION, INDIANAPOLIS PUBLIC SCHOOLS

INTRODUCTION BY THE LEADER

Since the congregation of the masses of people into great urban centers, children are deprived of sharing in the occupations which at one time were necessary to the existence of the home. Planting, tending stock, felling trees, chopping wood, carrying water

spinning and weaving, were occupations which aided in the development of sterling qualities.

As the "No Admittance" signs are prominent above the portals of the great centers of industrial activity of today, there is little opportunity for children to enter into a sympathetic understanding of the present industrial forces.

When the home no longer provides opportunity for industrial occupation, and the centers of industrial activity are practically closed, it behooves the school, for social, educational, and industrial reasons, to make provision for bringing children into sympathy with the great industrial forces which move the world, and to provide opportunity for a measure of creative work in the fashioning of materials into forms of use and beauty. The school recognizes the need, and educators are earnestly endeavoring to provide for it. Our presence here today is indicative of our interest in the endeavor.

Gathering together from widely scattered parts of our great continent, working under a variety of conditions, we no doubt have widely varying experiences. There are among us those who have based their creed on race development, and, from a historical study of the part which industry has played in the upbuilding and maintaining of social life, are furnishing stimulus for interest and expression, that the child may develop in the manner of the race. From those who are presenting manual work thru the grades according to the various stages in the progress of civilization, we should very much like to hear.

East and west, north and south, there are a few special schools with every possible equipment. In a school where there is an average of one thoroly trained teacher to each ten or a dozen pupils, and unlimited financial support, it is possible to do delightful work in the interrelation of various lines of interest.

I have in mind a recent visit to such a school. The pupils of the first year were having a reading-lesson. The books had covers decorated by themselves; the sheets slipped into place from day to day were printed on a press kept in operation for the sole benefit of the school. The reading-matter of the day gave directions for the making of a doll's chair from a given piece of wood. Pupils read the text, and then with ruler and pencil went to work with the planning, measuring, and ruling. Inches, half-inches, and quarters were thoroly comprehended by all. When the planning was complete, the teacher and the little family went to the shop to cut out and put together the pieces of the chairs. The chairs when completed were to be a part of the furnishing of a playhouse of two stories and an attic, which was being furnished on the community plan, the mattings, curtains, and other things made by the children being already in place. On the window ledges the plants were growing in little flower-pots shaped by the children and baked in the school kiln. Outside the windows stretched the school gardens. A large central bed represented the school in general; a somewhat smaller bed, each schoolroom; about these in orderly array came the beds of the individual pupils. As it was the time of planting, maps of the gardens made by the older pupils were given the little people. The school bed and class bed were pointed out, and each pupil's individual bed, which he painted red with his water-color. Going into the garden, the pupils got the points of the compass in mind. After finding the two beds in which all shared, each pupil found his own little particular plot, in which he was to have a personal and loving interest. Given a desire to understand a map, there was no difficulty on the part of the little six-year-old people in acquiring the knowledge. The work of the older pupils was planned in the same delightful way, and at noon the luncheon served in the school dining-room seemed the completing touch in making the school as nearly a home as it can be made. I have been referring to the Francis W. Parker School in Chicago.

To the schools which have ideal conditions we look for the establishment of ideals. From those who represent special schools, in the different parts of the country, or those who are familiar with their work, we should very much like to hear.

The problem of manual work in the cities is of necessity a very different one from that of the well-equipped special school. Most cities do not have ideal conditions. There

are tens of thousands of children to be provided with material, and a very small amount of capital available. There are poorly paid teachers with too many pupils in their care. These same underpaid, overburdened teachers are working with a fine courage and zeal. They are not wasting time thinking of "what were fair in life providing it might be," but "thinking of just what may be making it fair up to their means."

Many cities are represented here today. An exchange of experiences will be helpful to all. These are a few of the questions we should like to hear discussed, and there are no doubt many others:

1. What lines of industrial work are being carried on in primary schools, and what materials are being used?
2. Should manual work be given to the grade teacher or placed in the hands of the specialist?
3. To what extent is manual work being related to art study, geography, history, literature, music, arithmetic?
4. How are excursions being conducted to bring children into touch with the industries of their communities, the textile factories, the potteries, the printing-presses, the building construction?
5. What experiences are there to relate about gardening, in the schoolroom, the school grounds, the home?
6. Is it best for boys to learn to cook and sew, and for girls to work at the bench?
7. How far is it possible to provide work which needs only a limited time on the part of the teacher for instruction, and can be carried on by the children as seat occupation work?
8. With what freedom may children profitably work in construction? Of what benefit is the purely guided work?

DISCUSSION

MISS MARY C. MAY, State Normal School, Salt Lake City, Utah, gave an interesting account of the work done in the normal classes in the training department of that school. She said they had done some good work along the line of correlating the hand-work for the students with the other subjects in the curriculum. They had used as their central thought social environment in its relation to the life of the children. Some pedagogical problems had also been worked out, and much of this work consisted of thought and action put into concrete forms. She believed that all work must have a motive worthy of the child. She compared the life of olden times with that of the present time. First-grade work centers around the home, so they had made playhouses and furnished them. The art side of this had been met by modeling clay dishes for the cooking, etc. They had done something very valuable in the Christmas work, this work having entered largely into the homes of the children. The children had also been encouraged to use materials around their own city. She had tried to have the number work closely related to the other work of the school curriculum.

MISS ADA VAN STONE HARRIS, supervisor of primary instruction, Rochester, N. Y.—In schools where the children of a grade are divided into three or more groups, they must spend more than one-third of the time in their seats. The problem of wholesome, educational seat-work or hand-work is one that confronts every primary teacher. The directed work of the art and manual training should aid in the solving of this problem, in that it should be constantly utilized as a means of expression. It should enable the child to express his ideas relative to all subjects studied in a free and undirected manner. I believe the occupation or hand-work is as imperative in its claims as the recitation. This work demands most thoughtful planning and preparation. It must be so adapted and presented that it will arouse and strengthen ideas in the child's mind, and will also provide conditions for gaining new ideas.

These ideas must be so related to the child's experience that they are of real interest

and become a part of his life. The child reveals his interests, his experiences and powers, thru the various modes or media of expression, such as modeling in sand or clay, paper-cutting and pasting, painting with water-colors and ink, drawing on blackboard or paper, making articles of use from various materials to illustrate the subject at hand, and lastly in oral and written language. The materials or media of expression depend upon the nature of the subject. Such material should be used in every instance as will allow the fullest and most satisfactory expression.

I believe the hand-work of the elementary grades should follow three lines of procedure: (1) That which teaches a lesson in and of itself; under this head would come the more formal or directed work. (2) That which supplements a lesson already taught; here the child expresses the ideas or images formed in his mind, as the result of the recitation in the various subjects, in a free and undirected manner. (3) That which is a preparation for a new lesson where the child works out a definite assigned task.

In planning the hand-work of the elementary grades, the teacher should constantly apply certain tests by asking herself certain questions regarding the work. For example: Is it educative? Is it physically good work? Does the material provide the best possible opportunities for free expression or study? Does the result show an actual expression of the child's power? Can the criticism of the work come from the child himself?

If the work is educative, the children will feel its necessity and give their best effort; their interests will be directed, not forced.

If it is physically good work, it will not require the children to keep a certain position injurious to body or mind. It will not require them to use the same muscle during two successive periods, unless an exercise has been given which will relieve congestion and render the blood-flow natural.

In planning hand-work with the children, time should be taken for discussion and explanation, ascertaining that every child knows clearly what he is to make, what material he would like to use, how he is going to make it, and to what use it will be put; also that he feels so sure of materials and plans that he can work freely and independently.

Creative expression or construction work widens the range of expression, and thus extends and intensifies images; it promotes motor and sensory activities, permits more progressive individual growth, and is an invaluable means in developing the language of all children, and especially children of foreign parentage.

The individual should be free in forming his image. He should be free in expressing it. This expression may not be perfect, but we should remember that the appreciable is always deeper than the describable; also, that no value should be given to any expression that lacks appreciation. On the other hand, every encouragement should be given for all modes of expression, with pen and pencil, with crayon, color, and brush, with clay and sand, with putty and pulp, with scissors and knife, saw and plane, and with any and all tools and possessions he may be able to utilize. The medium used to express the idea or thing must always be selected as the best; that is, adapted to a clear and definite expression of the image formed.

Criticism, commendation, and encouragement are tools in the hands of the teacher to inspire closer study, and awaken enthusiasm and desire for improvement, on the part of the pupils. The pupil should be allowed to be his own critic first. Improvement must be noticed by the teacher. Growth will be shown in the pupils' work after a just criticism has given rise to more accurate observation.

In all work the children should be trained to habits of economy in the use of materials, neatness and order in care of materials, and honesty and accuracy in having the work so well done that it fulfills its intended purpose.

MRS. IDA HOOD CLARK, supervisor of manual training, Milwaukee Public Schools, spoke in brief of the introduction of manual training into the Milwaukee schools. This was done about a year and a half ago. Her talk was illustrated by the exhibition of the work of the first six grades in manual training. One of the important points brought out

was the necessity for the proper attitude of the grade teacher toward the introduction of a special subject. In many cities this had prevented the growth of the manual-training work. Teachers in the primary grades had believed that it was a new subject with which they were very unfamiliar, and had recognized it as an added burden to an already over-crowded curriculum.

The speaker then exhibited specimens of work done by the Milwaukee children, showing considerable co-ordination of subject. These specimens consisted of work in applied design, such as book-covers, portfolios, designs in stencil work as applied to decorating curtains for the schoolroom made by the pupils in the sewing classes. The sense of need and the desires of the children in self-expression had dominated the outline for this hand-work. Designs for basket-weaving accompanied the baskets; letters for marking table linen and designs for borders of towels were also shown. Weaving in the first grade was exhibited, made into a community piece of work in pillows for the couch used in the teacher's room. Furnishing of doll-houses, in which the children of the first and second grades all had a part, was used as a basis for future work. Designs in drawing had been applied to decorate book-bags and portfolios used in the schoolroom. All this work was taught by the regular teachers in their own class-rooms, in the first six grades. The seventh and eighth grades were taught by special teachers, the hand-work taking the form of domestic science for girls, and shop-work for boys. Here much good work was done in illustrating work in history and geography, as well as in science and nature study, thru the medium of wood and iron in making scientific apparatus.

ROUND TABLE CONFERENCE B

TOPIC: RIGHT METHODS OF STUDYING HISTORY AND GEOGRAPHY BY CHILDREN

[REPORTED BY MISS ANNA BROCKHAUSEN]

LEADER: FRANK M. MCMURRY, PROFESSOR OF THEORY AND PRACTICE OF TEACHING,
TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK CITY

THESES DISCUSSED BY THE LEADER

1. Knowledge of right methods of studying history and geography should be one of the prominent aims of instruction in these subjects; comparable in importance to knowledge of their subject-matter.
2. One of the things that children should be expected to do is to supplement the text by utilizing their past experience.
3. A second thing that they should do is to group facts into large topics or points.
4. A third thing that they should do is to arrive at some conclusions as to the relative values of different parts of the text.
5. Conscious effort to memorize the substance of the lesson should follow, not precede, the parts of study here mentioned.
6. The recitation period should be largely occupied in thus studying the lesson, thereby throwing primary emphasis on thinking rather than memorizing.
7. Independence of pupils in these tasks requires that they take the initiative in recitation for more than is customary even in our "better schools."
8. The measure of success in such instruction is found in the extent to which the teacher is reduced to silence because the pupils do what is necessary without her.
1. The present methods of study from the primary thru the college are unintelligent. Examples proving this can be collected by anyone. The effect of such poor work on the digestion of facts is certainly bad; the resulting effect on the attitude toward attendance at school also is bad; and the final result is to discourage one's self-confidence in the

III. Of these means, the teaching of reading may be made to exert the most potent influences, the most vital, the most permanent. But the word "reading" must be given its full, legitimate meaning; and the teaching of reading, even in its first stages, must be understood to mean much more than teaching to recognize and pronounce words.

Reading always and everywhere has its twofold phase: it is imaging and thinking, with joy in these activities; it is also mastery of the symbols, with joy in this also. Oral reading is always and everywhere (1) seeing, thinking, and feeling incited by written words; (2) giving to another in the same words spoken the pictures found in the words written, for the purpose of rousing sympathetic thought and feeling in the listener. The first steps in teaching reading should be so taken that this should be the abiding impression left in the mind of the learner. His attitude toward words, toward reading, is more important than the number of words learned per month.

Learning to read in the lower grades differs from learning to read better in later years only in the emphasis of certain elements or steps in the process, not in the elements themselves. And this varying emphasis follows the development of the pupil. One can find in the words of another only so much as his own experience can interpret. But to teach *reading* to pupils of any age, in or out of school, is to accomplish many results. It is to develop literary taste, whether that taste be in its germ, bud, or flower; it is to cultivate and train the imagination; to lead to clearer and more definite thinking; to increase the pleasure in reading as the reader finds himself, a larger self, in what he reads—his own loves and hates, his own vaguely felt aspirations and half-conscious joys and sorrows embodied in the pictures of another's experience; to give increased facility in quick (at last, unconscious) recognition of word-forms. To teach oral reading is to do all these things, and, in addition, to train the reader to communicate this thought with distinct, correct pronunciation and in well-modulated tones.

The first steps in learning to read must then be getting vivid pictures—larger, clearer, more definite thoughts—of objects and events worth thinking and reading about, with higher ideals of beauty of form and sound. This can be done only by (1) contact with real things worth while to know; (2) enlarged experience; (3) expression in word and by hand; (4) ear-familiarity with stories and poems that portray in a simple and beautiful way experiences to some degree familiar; (5) increasingly accurate and distinct pronunciation, with ever better voice modulation and control.

The next steps unite with these (1) the associating of mental pictures with written forms and their sounds; (2) the increasing of ability, to give its meaning to others in spoken words at sight of the written form.

The question as to how many of these steps shall be taken in the first year of school is practically the question of completing the process of reading in that year; and this question is left open for discussion. The writer believes that children should be taught to read in the first year.

IV. Again, let us not forget, in teaching reading, the great danger of swinging too far away from the fundamental first principles that demand simplicity and naturalness. We have too often built up an elaborate system that is artificial, belittling, and smothering. In a simple, natural way, children still learn to talk; and, fortunately, we have not yet interfered.

The child's mind, primarily engaged with what it wishes to communicate thru sound-symbols, marks out for itself certain paths of activity. In helping him we follow those paths. Let us hope that no overzealous reformer will construct an intricate word-system requiring each baby to practice repeating a series of meaningless monosyllables before he shall be allowed to mispronounce or miscall words in making known his ideas and wishes. Yet this is the same child whose next step is from the spoken to the written form; and he remains under the same laws of imitation, association, repetition, and interest. Not to forget—this would help many to teach reading.

V. Among the causes of departure from simple, natural growth to a hothouse growth

that does not promote health and real vigor are: (1) half-concealed and half-conscious admiration of the uniformity of machine-made or system-made products; (2) tendency to lose in a beautiful system the life it was designed to preserve; (3) hurry to get tangible and percentable results; (4) the fact that it requires of the teacher less insight and real skill, less individuality and power, to perfect form than to develop spirit.

The following practical questions are offered for discussion. All relate to teaching reading in the first school year. The theses stated hold in solution the key to the answers.

I. What are the essential conditions?

II. What preparation, general and specific, is required of the teacher?

III. What shall be the character of the lessons: (1) the subject-matter; (2) the phraseology?

IV. What relation between these reading-lessons and so-called language lessons?

V. What relation between these lessons in reading and expression by hand in writing? drawing? painting? modeling? constructive work?

VI. Is systematic work in phonics valuable? If so, what? when? how taught?

VII. Granting that actual reading shall be taught the first year, are word-drills valuable? If so, word-drills of what nature? when? how?

VIII. What independent study shall be required of the child?

IX. What shall be the general method of conducting a regular reading-exercise, or series of exercises?

X. When and how shall criticisms be made?

XI. What mental discipline in learning to read? What ethical training?

DISCUSSION

PROFESSOR J. F. REIGART, New York city.—The purpose of reading is the creation of thought at the suggestion of the printed page. The essentials in making the page suggestive are (1) ideas; (2) association of word and symbol; (3) creation, thru description, problems, etc. The question arises as to how these essentials are provided. The ideas are furnished in the kindergarten, nature study, constructive work, etc. More is gained by spending some time upon these than by spending all of the time upon reading. The association of the word and the symbol is usually understood as teaching reading. This is essential, but is not the art of reading. Time may be thus spent for years without much progress. The primary object in teaching reading is to arouse creative thought, but there must be the association of word and symbol. When the child realizes the significance of this association as a means of creative thought, he is reading. This point is illustrated in the early education of Laura Bridgman and Helen Keller. The fault with early reading is that the child goes thru it blindly. In many cases the impetus to reading comes from the home.

The selection of material is important. The material is of two kinds. The first is the drill material. The second is the real reading material. It is calculated to arouse the creative thought. The two kinds should not be confused. The characteristics of the best reading material are (1) that it must arouse interest; it must provide something for the child to work for; (2) that it must be connected; the association of rhyme and rhythm is a help in arousing interest and forming connections; (3) that it should influence taste. Do not wait for the period of adolescence to arouse taste. Unless it is aroused sooner, it is not likely to be aroused then. The old-fashioned reading of the Bible was not a bad thing. The newer reading-books contain much good literature, but are padded with too much drill material.

The difficulty of method remains. We are afraid to rely upon this literature. The characteristic of method is that it should arouse thought and use the material. We learn to read by reading. The synthetic movement is essential. There must also be analysis. There comes a time when the child is ready to point out the words in the sentences. These

sentences may be parts of familiar verses. Then the words should be used in other connections. They should be associated with activities and used in giving directions. New words should be learned in the context.

Phonic analysis should be used thruout as a key. It is the great means to independence, but should not be associated at first with the reading, because reading is distinct from phonics.

As for age, the legal school age is not necessarily the one when the child should begin to read. The children in the kindergarten should learn mottoes and verses, should commit verses, pick out words, and have phonic analysis.

In conclusion I would say: Read only good literature, do away with the made-up material still found in our readers, and make phonic analysis the key.

MR. PRENTISS, Brooklyn, N. Y.—What is the relation of phonics to reading under Mr. Reigart's system, and does he call learning *Mother Goose* reading?

MR. REIGART.—The principle of isolation is one that can be used with economy in teaching phonics. As to committing to memory, I find in teaching reading that there is the same help in reading what has been committed to memory as in committing poems when learning a foreign language.

MISS M. J. BRADY, primary supervisor, public schools, St. Louis, Mo.—One element to be considered in the teaching of reading is phonics. Just how much phonics, and when to begin it, are questions that are worth considering.

If we consider that right mental habits in reading are of greatest importance, then sounding will not begin with the early reading-lessons. Looking at words, or rather thru them, to get the thought they symbolize, is what reading means. We do this in actual practice, and we see words and phrases as wholes, and are not at all conscious of their parts. It would seem, then, that this habit of recognizing words and phrases as wholes should be the first habit to be established in the child's mind, as first habits are generally the ones to prevail.

It has been argued that pupils learn more words in a given time by having phonics from the beginning. This is undoubtedly true; but is glib word-calling reading? No; we all agree that it is not. So we simply have to choose whether we will do what will mean real growth for the child, or do what will make a show for the time being.

There comes a time, however, in later reading-lessons, when it would be a serious mistake not to give the child the key to the pronunciation of unfamiliar words. And this is the function of phonics—always a means to an end, and never an end in itself. With proper teaching, children feel this word-study to be subordinate to reading, while they enjoy it and are happy over the power it gives them to help themselves.

A short time ago we all taught the sound of every letter in the word, and used diacritical marks from the beginning. Groups of letters—phonograms, as they are called—may be taught as phonetic units, and sounds of separate letters taught only when it is impossible to find a larger phonetic unit. After a few phonograms are learned, the child delights in building new words out of the old elements by changing the initial consonant, or adding another phonogram, or both. When he is once able to do this, the teacher has only to direct the attention of the child to the familiar elements in new words as they occur. The children gradually come to take the initiative in dealing with new words, and soon cease to be dependent on the teacher or on diacritical marks. As these marks occur only in word-lists in school readers, they are of no assistance to the child when he meets unfamiliar words in his reading, and may well be postponed.

W. E. CROSBY, New York city.—Reading is the most important of subjects considered by teachers. All learning found in books comes within its scope. No subject of the printed page that cannot be intelligently read can be understood. Expression is the end of teaching reading.

Conversation is creative. Reading is the expression of the creations of others. In practice the ear must be made acquainted with the voice before proper expression can be given to the ideas found in words. The ear is most intimately associated with the voice. The speaking and singing voices must be distinguished by the teacher before due expression can be secured. This is the doctrine of Dr. Rush, the greatest authority on the human voice.

RELATION OF DRAWING TO FIRST-YEAR READING

MISS A. GRACE GIBSON, Model School, New York Training School for Teachers.—“Words, like window-panes, are things to look thru, not things to look at.” Reading in the best sense is thought-getting, not word-accumulation. Hence the necessity of storing thought material in the child’s mind and thus laying a foundation for reading. Otherwise reading may become an accurate expressing of words rather than a grasping of the content of the lesson. The less conscious the child is of words, in an analytic sense, the farther his little mind may travel with the person or object of which he reads. Thoughts thus secured may arouse others, and a whole train springs up and unfolds, if the simple lesson be untrammelled by phonic drills, word-construction lessons, word-analysis, etc. These things are altogether necessary, but they belong to the “shop” and should be dealt with at a distinct time, lest the child become conscious of the process and miss the aim of the lesson.

Reading time should be the “holiday” when our little fellow goes out with his playmates on a pleasure trip, not in search of a vocabulary, but of ideas which may come to him thru the phrase, word, or sentence. Ability to secure the idea makes a ready reader. Unconscious of structure, whether by word or picture or combination of these, he gleans the thoughts, and his mind becomes alive with them.

To this end drawing—the illustration of words, phrases, and sentences—becomes of inestimable help to the beginner, especially in cramped city life, where the child’s horizon is so narrowed by the tenements about him. So simple a thing as a nest on a branch is a foundation for a full page. Sketch the bird also, the eggs in the nest, or the baby birds. Allow one child to form a story (sentence). Let another read it. Keep the work free, and the child’s interest will be sustained. It was well said today that the word “Washington” was as easy to read as “Joe” if the interest was equal.

Phrases may be taught as a whole thru picture-making. Let us follow a few simple sketches: in the tree, on the branch, over the roof, thru the flowers, by the house, near the brook, etc. In this way a child becomes familiar with location, movement, direction, etc., and the phrase becomes a unit of thought as fully as an individual word may do so. The child may picture objects and write their names to impress new words.

Three steps may help the reading for beginners: (1) Conversations, nature and object-lessons, stories, rhymes, etc. (2) Convert these into reality by allowing the child to reproduce by word and picture. (3) Let the teacher put these into reading form by sentence and picture, allowing the child to read and reproduce, not in his own words; but in the form presented by the picture.

THE RELATION OF WRITING TO READING

MISS FANNIE B. GRIFFITHS, primary supervisor, public schools, St. Louis, Mo.—A child entering the primary finds two new and difficult problems awaiting him: that of getting thought thru a medium which is entirely new to him—the printed page, and that of expressing thought thru the equally unfamiliar medium of writing. He no longer comes unwillingly to school to learn these; for modern methods and attractive and interesting books have robbed these problems of much of their former tediousness. He comes well prepared, too; for during the earlier years of his life he has made considerable progress in learning. Gradually, without conscious effort and without conscious tuition, he has

sentences may be parts of familiar verses. Then the words should be used in other connections. They should be associated with activities and used in giving directions. New words should be learned in the context.

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MISS M. J. BRADY, primary supervisor, public schools, St. Louis, Mo.—One element to be considered in the teaching of reading is phonics. Just how much phonics, and when to begin it, are questions that are worth considering.

If we consider that right mental habits in reading are of greatest importance, then sounding will not begin with the early reading-lessons. Looking at words, or rather thru them, to get the thought they symbolize, is what reading means. We do this in actual practice, and we see words and phrases as wholes, and are not at all conscious of their parts. It would seem, then, that this habit of recognizing words and phrases as wholes should be the first habit to be established in the child's mind, as first habits are generally the ones to prevail.

It has been argued that pupils learn more words in a given time by having phonics from the beginning. This is undoubtedly true; but is glib word-calling reading? No; we all agree that it is not. So we simply have to choose whether we will do what will mean real growth for the child, or do what will make a show for the time being.

There comes a time, however, in later reading-lessons, when it would be a serious mistake not to give the child the key to the pronunciation of unfamiliar words. And this is the function of phonics—always a means to an end, and never an end in itself. With proper teaching, children feel this word-study to be subordinate to reading, while they enjoy it and are happy over the power it gives them to help themselves.

A short time ago we all taught the sound of every letter in the word, and used diacritical marks from the beginning. Groups of letters—phonograms, as they are called—may be taught as phonetic units, and sounds of separate letters taught only when it is impossible to find a larger phonetic unit. After a few phonograms are learned, the child delights in building new words out of the old elements by changing the initial consonant, or adding another phonogram, or both. When he is once able to do this, the teacher has only to direct the attention of the child to the familiar elements in new words as they occur. The children gradually come to take the initiative in dealing with new words, and soon cease to be dependent on the teacher or on diacritical marks. As these marks occur only in word-lists in school readers, they are of no assistance to the child when he meets unfamiliar words in his reading, and may well be postponed.

W. E. CROSBY, New York city.—Reading is the most important of subjects considered by teachers. All learning found in books comes within its scope. No subject of the printed page that cannot be intelligently read can be understood. Expression is the end of teaching reading.

Conversation is creative. Reading is the expression of the creations of others. In practice the ear must be made acquainted with the voice before proper expression can be given to the ideas found in words. The ear is most intimately associated with the voice. The speaking and singing voices must be distinguished by the teacher before due expression can be secured. This is the doctrine of Dr. Rush, the greatest authority on the human voice.

RELATION OF DRAWING TO FIRST-YEAR READING

MISS A. GRACE GIBSON, Model School, New York Training School for Teachers.—“Words, like window-panes, are things to look thru, not things to look at.” Reading in the best sense is thought-getting, not word-accumulation. Hence the necessity of storing thought material in the child’s mind and thus laying a foundation for reading. Otherwise reading may become an accurate expressing of words rather than a grasping of the content of the lesson. The less conscious the child is of words, in an analytic sense, the farther his little mind may travel with the person or object of which he reads. Thoughts thus secured may arouse others, and a whole train springs up and unfolds, if the simple lesson be untrammelled by phonic drills, word-construction lessons, word-analysis, etc. These things are altogether necessary, but they belong to the “shop” and should be dealt with at a distinct time, lest the child become conscious of the process and miss the aim of the lesson.

Reading time should be the “holiday” when our little fellow goes out with his playmates on a pleasure trip, not in search of a vocabulary, but of ideas which may come to him thru the phrase, word, or sentence. Ability to secure the idea makes a ready reader. Unconscious of structure, whether by word or picture or combination of these, he gleans the thoughts, and his mind becomes alive with them.

To this end drawing—the illustration of words, phrases, and sentences—becomes of inestimable help to the beginner, especially in cramped city life, where the child’s horizon is so narrowed by the tenements about him. So simple a thing as a nest on a branch is a foundation for a full page. Sketch the bird also, the eggs in the nest, or the baby birds. Allow one child to form a story (sentence). Let another read it. Keep the work free, and the child’s interest will be sustained. It was well said today that the word “Washington” was as easy to read as “Joe” if the interest was equal.

Phrases may be taught as a whole thru picture-making. Let us follow a few simple sketches: in the tree, on the branch, over the roof, thru the flowers, by the house, near the brook, etc. In this way a child becomes familiar with location, movement, direction, etc., and the phrase becomes a unit of thought as fully as an individual word may do so. The child may picture objects and write their names to impress new words.

Three steps may help the reading for beginners: (1) Conversations, nature and object-lessons, stories, rhymes, etc. (2) Convert these into reality by allowing the child to reproduce by word and picture. (3) Let the teacher put these into reading form by sentence and picture, allowing the child to read and reproduce, not in his own words, but in the form presented by the picture.

THE RELATION OF WRITING TO READING

MISS FANNIE B. GRIFFITHS, primary supervisor, public schools, St. Louis, Mo.—A child entering the primary finds two new and difficult problems awaiting him: that of getting thought thru a medium which is entirely new to him—the printed page, and that of expressing thought thru the equally unfamiliar medium of writing. He no longer comes unwillingly to school to learn these; for modern methods and attractive and interesting books have robbed these problems of much of their former tediousness. He comes well prepared, too; for during the earlier years of his life he has made considerable progress in learning. Gradually, without conscious effort and without conscious tuition, he has

acquired a store of knowledge, and has learned language well enough to understand others when they talk, and to convey his own thoughts to them thru oral speech.

This language power has been acquired by unconscious imitation of the speech of those around him, and is perfect or imperfect according to the way he has heard language spoken. In acquiring this power there has been constant interaction between thought and expression. Every effort made to clothe his thoughts in fitting words, so that others may understand them, reacts on his thinking, making it clearer; and clearer thinking means increased power to get new thought.

Reading and writing open up new avenues for getting and expressing thought. As both are dependent on thought and closely related, they should be taught at the same time. Experience has proved that the highest degree of interest and self-activity is enlisted when they are taught as interconnected processes.

The child enjoys writing the words which he has read. To do this correctly he is obliged to observe closely their form and the order of the letters which compose them. The almost universal practice of having the first reading-lessons written on the board affords the opportunity for doing this. As the children, interested and observant, watch the sentences grow, they not only become familiar with the visual image of the words, but see how they are made by watching the teacher's movements as she writes. This is apparent by the comparative ease with which they afterward reproduce them on the board. When the visual and auditory memory of the words is reinforced by the motor memory which comes from using them in writing, they become permanently photographed on the mind. As the child in learning to talk modeled his first sentences upon those he heard, he also in learning to write naturally imitates the sentences he sees written on the board. Hence the importance of having from the very beginning good models for him to copy.

While reading and writing are started at the same time, the child's growth in expression is far slower than his power to appreciate and appropriate what he reads.

As soon as the habit of associating the printed with the spoken word and its idea has been formed, his progress in learning to read becomes rapid. This is especially true where books are used in which his interests and needs have been considered and cared for. Here interest in the story furnishes the motive for mastering the symbols of thought, and he works with great zest.

In reading, his mind is in a receptive attitude. He not only gains new ideas, but the proper forms of expression for them. His vocabulary, too, grows rapidly as he masters the new words which he meets in his reading. In this way his mind becomes enriched, his vocabulary enlarged, and his language power increased. When he talks or writes his mind is more active than when he listens or reads; for here he must determine his own thought, while in listening or reading his thoughts are determined by another.

As it is the child's self-activity that educates, he should be given frequent opportunity to express his thoughts both thru speech and writing. Thruout the first year lessons which provide for free spontaneous oral expression should predominate. These lessons pave the way for written expression where to the difficulties of composition are added those of writing, spelling, and punctuation.

As the aim in writing is to secure free and effective expression, the child should be asked to write about only such things as are of vital interest to him and which he enjoys talking about, such as: himself, his family, his pet, games, sports, toys, school, etc.

The written expression should be made to follow the oral expression so naturally that he will consider writing as only another way of talking. He will enjoy writing his thoughts as he has before enjoyed telling them.

ON THE PSYCHOLOGY OF READING AND WRITING

ROBERT MACDOUGALL, PROFESSOR OF DESCRIPTIVE PSYCHOLOGY, NEW YORK UNIVERSITY, NEW YORK CITY

In this paper I have been asked to speak of the mental processes involved in reading and writing, and the consequent nature of the problems which their teaching presents. With the first of these topics the teacher has primarily nothing to do. He seeks results. To make of the child a good reader and writer is his aim, and the question whether he is conscious or unconscious of the special methods by which this end is attained is a matter of little consequence.

With the psychologist it is different. His interest lies just in those processes of mind, in teacher and pupil alike, of which the activities of instruction and learning are the expression; and the practical result is as secondary a matter for him as are the underlying processes for the teacher.

Yet, in spite of this apparent incompatibility of aim, you must daily feel that these two activities are intimately related and their studies complementary to each other. For its perfect development practice rests upon understanding, and in no work is this truer than in the direction which the teacher undertakes in connection with the unfolding of the soul of a child. Intuition must be supplemented by analytic knowledge, for theoretical science is the ultimate basis of the successful control of material in every field of human activity. It is to these principles of mental development that all practical method finally owes its validity, for the only right way of teaching any subject is that which consciously or unconsciously adapts itself to the child's mode of assimilation and growth. The discussion of the mental processes involved in reading and writing thus forms the rational propædæutic to the teaching of these branches.

Reading and writing are two highly specialized variants of human speech, and all intelligent analysis of their phenomena must start from an understanding of the type in which they have their common root. Speech is a mode of adaptive reaction in which the primitive response has been replaced by a description of the act or its consequences, and which becomes possible only thru the development of representative thought and the establishment of social habits. Thought is a function of consciousness interpolated between stimulus and reaction which, from the biological point of view, constitutes a device whereby economy of action is attained thru the elimination of unfit alternatives at the level of imagination instead of at that of movement. The reconstructions of thought thus form a vicarious treatment of the problems of life which has had its rise as part of the immediate process of adaptation for which it serves as a general preparation thru the habitual representation of imaginary problems and their theoretical solutions. Thru the freeing of consciousness from its direct practical relations an independent value comes to attach to all its manifestations, and thought and speech are cultivated as impersonal and æsthetic media.

This highly refined type of reaction involves a system of ideas representable by social symbols and a process of expression consisting of a complex set of movements changing character in dependence upon the variations in the ideational content. As human speech essentially reflects intelligence, its development presupposes the whole process of experience in which the self takes shape, with its gradual definition of responses, and the rise of a system of perceptions, memories, and judgments; and as it involves a complex process of utterance, it must wait for its completion upon the development of co-ordinated nerve centers and incessant habituation. The understanding of speech is gained thru a process of trial and error, the system of concepts being clarified and corrected thru repeated exemplifications, and its use is mastered only thru persistent practice of its elements. To the study of reading the child thus comes with a relatively full equipment of ideas and a fluency in their use which is of immediate service in the new field of work.

Reading differs from speech thru the addition of a complex set of movements of sensory adaptation and a succession of apperceptive reconstructions necessary to the understanding of what is read. Sensory adaptation, which in the adult takes place with precision and facility, has largely to be established in connection with the reading habit. Tho the control of eye-movements is in general well developed when the child begins to read, they have hitherto been made in a freely extended visual field under the influence of reflex attraction or motives of immediate practical or æsthetic importance. Now they must be applied to the disentanglement of a system of conventional and uninteresting symbols distributed in wholly artificial space relations and necessitating a constant strain. The adult has little notion of the errors of adaptation under which the young reader suffers, and of the consequent importance of carefully considering the size of type to be used, the color and surface of the paper, the length of line, and the continuity of print from side to side of the page in the beginner's reading-matter. So long as these difficulties persist, the disturbance which they involve will destroy the integrity of the ideational and expressive functions and make it impossible for the child either to understand clearly or to read expressively. Sensory control, however, is not the chief difficulty which confronts the beginner. Since the whole system of symbols is novel and embarrassing, that anticipation of verbal construction and swift supplementation of text by context which enables the fluent reader to leap forward from phrase to phrase is here impossible. Each word must be studied, even its letters verified; with the result that in this analytic process the sense of all larger relations is lost, and the sentence becomes scarcely more than a series of isolated substantives and connectives. Until this process of apperceptive construction becomes a matter of routine, no reading, in the proper sense of the term, can be said to exist.

The problems involved in reading are thus twofold—the understanding of what is written and its interpretative expression. The mastering of the system of conventional symbols in which written language consists is commonly

complicated by the fact that the ideas for which they stand are only in part known, so that the young reader is confronted with a world of novel realities as well as with an unfamiliar set of signs. While the following of the type and the translation of its symbols into mental images continue to involve friction, therefore, it becomes important to select reading-matter whose elements are already familiar to the child, so that as nearly as possible his whole attention may be given to fixing in mind the relation between the symbol and that for which it stands. To provide the child with a stock of visual verbal equivalents for familiar objects and relations should be the first aim in teaching him to read.

The means, by which this task must be approached consists specifically in the child's possession of oral speech which enables him to translate the printed symbols directly into significant terms. It is this which differentiates learning to read from the acquisition of speech itself, for in the earlier process the child sets out with no such interpretative basis, but must discover the meaning of each sound and combination of sounds from the practical situation in which they are uttered and the actions with which they are associated. Tho the problem of learning to read is thus greatly simplified, there still remains the essential difficulty that in becoming conventional and abstract all logical relation between the sign and the thing signified vanishes, and the child must simply ask and be told the meaning of each term. The only possible modification of this rule is embodied in the phonetic method, the application of which makes feasible the translation of any written combination into its auditory equivalent and the discovery of its meaning, provided it represents a known object. In a logically constructed language such a method is of the utmost value, but its application is restricted in proportion to the phonetic irregularity of a speech.

The general employment of phonetic methods tends to the establishment of a habit of uttering each word as it is met—a custom which appears naturally in the early stages of reading, and which in most persons is but partially suppressed in later years. This motor accompaniment is a purely secondary process which theoretically constitutes an incubus upon rapidity and clearness alike, for an apprehension of what is read thru visual perception alone is all that reading logically involves. Lip-movement is a residual function which has been carried over into silent reading from the earlier office of speech as a medium of social communication, and statistical investigation has shown that the most rapid and retentive readers are those in whom this habit has been most fully suppressed. Nevertheless, the employment of these supplementary motor processes is an indispensable accompaniment of the earliest stages of reading. The child comes into possession of his vocabulary thru the use of the terms which compose it, and in learning to read the word is mastered only thru the repeated utterance of its sound in connection with the perception of its visual form. In proportion, however, as attention can be withdrawn from the cultivation of utterance, and emphasis laid upon the

significant content, the child should be systematically trained to suppress this motor accompaniment and to translate the visual symbols directly into mental terms.

The second general problem in reading is that of interpretation, which includes two elements—the production of the voice and dramatic expression. The proper production of the voice begins with the correct breathing, the cultivation of which is related to conditions of health, exercise, clothing, and posture. Speech itself involves a wholly secondary use of the respiratory apparatus, and that the conditions of reading further complicate this function is shown in the fatigue entailed by a period of reading which would hardly tire the speaking voice at all. The second element in voice-production is phonation, the use of the vocal cords in producing sound. The quality of the voice as thin, full, high, flexible, and the like, is commonly regarded as constitutional and unalterable. No greater incubus than this delusion could exist. As a matter of fact, most of us have voices poor in tone, range, and pliancy; but just as truly might the majority of us have had good voices. The larynx is a most sensitive instrument, responding alike to good and evil influences; and while certain bounds to its functions are indeed set, its character, pitch, and variability within these limits are largely matters of models and use. Constant adaptation molds the voice to the quality as well as form of the sounds in which it is exercised, until at last its dominant pitch-level and modulations, just as surely as its habits of articulation and accent, become fixed and unalterable. Congenital voice quality does exist, but its chief determinant is to be found in the prevailing speech of the neighborhood; and we must attribute that high, harsh character which has been called the American voice to habitual abuse and not to lack of endowment. The third element of voice-production is articulation—the molding of the tones produced by the larynx into the forms of speech, in which the whole buccal cavity participates. The determinants of word-formation are in part organic, in so far as developmental or degenerative changes in the mouth-parts and neuromuscular apparatus condition variations in articulation; but, apart from universal or pathological characters, they are wholly functional, since the form of the individual's utterance arises from adaptation to the models presented for imitation during the formative period of speech-development. The child unreflectively, but with extraordinary fidelity, reproduces the vocal peculiarities of those about him, and the only final way to insure correct speaking is to hear good speech used continuously; for in the face of a home environment in which incorrect pronunciation and faulty grammar prevail, the school can do little to mold the child's habit of speech.

The training of the voice, however, touches but the elements of method; for reading is the employment of all these means, respiratory, vocal, and articulatory, to give expression to one's interpretation of written thought. The patient study of expression and discipline of the voice which this involves are exemplified in the lifelong training of the actor which centers in the manage-

ment of the voice as the final and perfect instrument of his art. Almost the first and last word in this connection is the cultivation of a lively and sympathetic imagination. To have vividly conceived the situation to which one is to give expression is to go far toward securing the conditions for an adequate reproduction of it.

Writing is a late and highly specialized form of language which differs from oral speech, in which it had its rise, not only in its medium, but also in the degree to which its analysis of verbal forms has been carried. In reading as well as speech one needs only to identify the word and to associate therewith the proper meaning. The word is analyzed into simpler constituents only when, for the purpose of writing, it is necessary to reconstruct it by the representation of its phonic elements in a series of visual symbols. The problem of writing, like that of reading, has two aspects, significant and mechanical. The first of these is spelling—the mastering of the orderly arrangement of letters in which each word consists, so that in writing they may be reproduced readily in their proper sequence. In connection with spelling two questions arise—the need of its existence and the medium of practice. The written word, unlike natural objects, is a serial arrangement of elements, and in order to learn its constitution one must finally reconstruct this arrangement thru an actual succession of reactions by naming the letters in their proper order one after another; in other words, one learns to spell only by spelling. To look at the word as a whole does not give this power; it can be developed only thru systematic drill in spelling as such.

In regard to the medium of practice, the interpolation of a speech-motor process between the perception of the word and its reproduction in writing seems artificial and superfluous. If the eye cannot be trusted, in connection with the act of reading itself, to supply the necessary data for the correct reproduction of words the supplementary drill should surely be got in terms of that very function in which it is ultimately to be realized. The question of the relative value of eye, ear, and hand in spelling practice is finally one of the relation of the span of consciousness to its contents. In reading, since the ultimate real unit is the word, that analytic knowledge of its structure upon which writing depends is not to be looked for. Since the function of spelling is just to bring this inner constitution to light, some other method than that of reading must be sought. But in the act of writing itself, while the word is necessarily broken up into its successive constituents, the process of reconstruction is so complicated, and the act by which each letter is reproduced makes in the beginning such demand upon the attention, that the word becomes for the child a series of isolated letters instead of an integrated system of elements.

In oral spelling, on account of the facility with which speech-motor adjustments are made, these two essential factors combine. The word is systematically analyzed into its elements as in writing, yet under such conditions that the mind is not absorbed in the effort to reproduce each letter separately,

but retains thruout an intuition of the word-form as a whole. It is because oral spelling thus preserves the rhythm of the word in the very act of translating it into a series of letters, that it becomes an indispensable aid to spelling.

Mechanically the problem of writing consists in the acquisition of exact and facile control over a highly specialized system of movements for which much less congenital preparation is made than is the case with the function of speech, and which is much later than the latter in development. The earlier life of the child presents two classes of activities which afford preparatory training for the process of writing: a general preparation in the gradual acquisition of control over bodily movements at large, including those of hands and fingers, and a special training in the whole series of acts thru which the child attempts an imitative reconstruction of the external world. Of the latter the constructive play of the nursery is among the first to appear, along with which arises the habit of imitating the social and industrial life of the home, and later dramatic plays in which complicated actions and situations are introduced. While the whole body is thus receiving training in a multitude of movements, the mind is developing the general idea of imitative and constructive processes upon which all subsequent conscious adaptation is to depend. Upon this preparation follows a variety of special occupations, at home and in the school, in which the child either playfully practices movements later to be turned into account in writing, or seriously sets himself to reproduce the forms of objects about him. The molding and weaving, coloring and drawing work of the kindergarten brings the form of this training more and more closely into relation with the specific features of writing, so that, when the study of the new and largely uninteresting models is taken up in the school, the child has already had a large amount of experience and exercise which can be put to immediate service in the new function he is to perform.

Even with this preparation, method for beginners must be modified by a regard for the fact that in both co-ordination and resistance the organism is still imperfectly developed. Practice should begin with the simplest forms, the movements should be large and free, the most controllable medium should be employed; and since the child is engaged in an occupation which induces a general strain, conditions of fatigue are early set up, making it advisable to break the exercise by frequent intervals of rest. To continue work beyond this point is to interfere with, rather to advance, the child's acquisition of the writing habit; for the object in learning to write is not merely to reproduce letters and combine them into words with ease and rapidity, but also to secure legibility and beauty in the product. Writing is, indeed, taught in order that a special medium for the free expression of thought may be provided, and from this point of view its single desideratum is freedom from friction; but since this function is served only when the record thus made is communicated to some other mind, its primary requisite becomes legibility, which must chiefly be sought by the teacher, since ease and rapidity follow as the natural

results of practice, but correctness and grace can be attained only thru systematic and persistent training.

DISCUSSION

STUART H. ROWE, head of department of psychology and pedagogy, Brooklyn Teachers' Training School, Brooklyn, N. Y.—As the standpoint of the paper has been rather introspective, this discussion is based rather on the experimental point of view. We have considerable data from this point of view on the subject of reading, but not very much on the subject of writing. I have examined carefully what we have, and will endeavor to give the chief points in as brief form as possible, and give them clearness.

The eyes see nothing while in movement. You can easily test that by trying to see your own eyes move while looking at a mirror; a possible exception being that a very significant stimulus may induce, or tend to induce, fixation of the eye at the point of stimulation. The eyes are in movement, according to Erdmann and Dodge, from $\frac{1}{4}$ to $\frac{1}{2}$ of the time. One fixation point is focused upon, then the eye is jumped to another, an inch or so away, and so on, according to certain habits of casting forward and of inferring from what is seen. The first fixation in reading falls within the line, not at the extreme outside edge. The child's difficulty in fixation is shown by his instinctive tendency to point to the line or words being read. While the fixation point is focused upon, the eye gets an impression from all letters within a certain radius of that point. No more time is needed for five letters than for one letter. Beyond or outside of that radius the eye may get an impression sufficient to indicate the approximate length of a short word, or especially prominent letter. For example, the child's confusion of "what" with "that" is due to the fact that he sees only the *h-a-t* part of the word. Similarly, if any of us should see the letters "teleg," we should know that it must be either "telegram" or "telegraph." If one did not fit, we should immediately infer the other.

Words "making sense"—that is, phrases or clauses—and letters making words can be read more quickly than those not thus connected. In the range of clear vision it is the upper half of the small letters which is really significant. There are other ways which the mind may use in interpreting letters; for example, the *o* may be regarded as a patch of dark with a light spot in it, and the *e* may be a patch of dark with two light spots in it.

The average angle of vision is found to differ according to the familiarity of the passages. With unfamiliar passages it was found by Erdmann and Dodge to be three degrees and forty-five minutes; for familiar passages, four degrees and fourteen to five degrees and thirty-six minutes. It is shown, in Dr. Dearborn's recent valuable investigation of this subject at Columbia, that the fixation point is not absolutely immovable; there are certain vibratory movements probably of some value in determining significance of stimuli. The eye may move back to re-read symbols which are not understood, are possibly misinterpreted, or to catch impressions which have been lost. Experiments made by Mr. Weigel, in the Yale Psychological Laboratory, go to show that the return movements of the eye often go to point where the voice is speaking the words, presumably to catch lost impressions. Mesmer showed fifteen letters for one two-thousandths of a second. He found three exposures necessary to see the whole; some persons took five or more exposures.

The interpretation of the eye symbols and the interpretation of meaning go on simultaneously, but usually the eye keeps ahead of the meaning—not always. In oral reading the expression normally would follow both the eye and the interpretation of meaning, but may precede the meaning. There are two complex fusions—one of the elements of the symbols to give them unity, and the other of the words with the thought, making a complex process which baffles analysis and is doubtless different in different individuals.

On the basis of these original data, fancy plays and the higher mental processes are evoked; but all fancies which are recognized as inconsistent with the previously acquired trend of thought, those that are ridiculous or impossible, are subconsciously rejected.

The success of the child in silent reading—that is, in interpreting—is based then, first, on his success in getting the symbols; secondly, on his ability to let his fancy play about the words suggested; thirdly, on his ability to stick to the data, ruling out or inhibiting all inconsistent or incongruous fancies.

Oral reading is to be distinguished from pronouncing. The secretary who reads the minutes of a legislative body at break-neck speed, with no understanding, becomes a mere pronouncing machine. The child's success in oral reading depends, aside from the features just mentioned in connection with silent reading, first, on the purely mechanical ability to reproduce combinations of sound, and, secondly, on the added ability to imitate the expressive features of his talking processes.

In the light of recent educational theory, it is hardly necessary to say that interest and feeling heighten the success of the reading process at every point, whether instinctive, imitative, or acquired.

For one who is endeavoring to be both a scientist and a pedagog—a hard stretch, I admit—it may not be safe to yield to the demand for applications. I venture, however, the following, as suggested directly by the results and investigations made, altho I acknowledge that other external considerations might render them inadvisable. The child should from the first be accustomed to pass his eyes along the line as he expresses meaning, especially when he has the idea, but has not the exact form of the expression of the book or blackboard. This means that the child should not try to see every letter by fixating upon it, especially. This is not necessary, as we have already seen that he can see five letters as quickly and readily, as one. Pointing to the line should be allowed, but not to the word, and much less the letter. Children will be aided by reading, not lists of disconnected words, but sentences or phrases. The confusion, to which Professor McDougall alludes, of the processes of getting the symbols and of getting the meaning may be avoided by giving the child in advance a familiarity with one or the other before he attempts to read. Rapidity of reproduction, or at least the readiness on the part of the child to try himself, and to see if he can reproduce the meaning in the words of the book after a single glance, will also aid in getting the maximum value out of the sense data furnished by the momentary fixation.

The significance of the upper part of the letter means that especial attention should be given to that by the teacher, in order to show the children the feature which brands it instantly.

The same attention should be given any significant part of a letter. It will be equally advantageous to pick out significant parts of words, and as these are even more useful than signs of letters, we have a still stronger argument for the phonograms.

Stories should be reproduced, and points or data omitted in a child's fancying should be discovered, and the place should be shown him where mistakes have been made. Teachers should gradually increase the difficulty and amount of data given. Such selections and subjects as are adapted to the knowledge of the child and appeal to his feeling, will be most productive.

The books should be held away from the eye to get the full benefit of the angle of vision. The farther away a distinct image can be gained, the readier the reading. Words arranged in blocks, rather than in lines, would make it easier to take in more at a single glance.

ON THE STUDY OF ENGLISH COMPOSITION AS A MEANS OF ACQUIRING POWER

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In modern education the tendency is to train for power thru self-expression, particularly for expression thru the medium of art. The emphasis that is now placed upon the manual arts, including drawing and color, upon music, and especially upon English composition, or expression in language, is indicative of this tendency. Of all these avenues of expression that of language is the most fundamental. All thinking is done in words by a self-conscious mind, and the language that a man uses is the measure of his thought.

By virtue of its very intangibility, language is the most direct mode of communication from soul to soul, and attains a power over the mind of the listener beyond that of the more concrete expressions of thought. Beautiful as is Westminster Abbey, it has never swayed the hearts of men as has that hymn so often sung within its walls:

So long Thy power has blest me, sure it still
Will lead me on.

The first means of developing power is conceded to be association with nature. That man who has seen the majesty of the mountains, or the shimmer of the sea, who has known seedtime and harvest, has forever had his thoughts ennobled by the great thought of which these are but the symbols. But nature alone does not suffice for the development of power. The first man, Adam, in a complete environment of nature, contributed only negatively to the world's advancement. The centuries thru which man has toiled since then have testified that the curse of labor pronounced upon Adam was but a blessing in disguise. Man has learned that he earns not only his bread by the sweat of his brow, but his heaven also.

Looking farther along, we see Abraham, a colossal figure towering over the great plains of Moab, surrounded by nature, yet not subdued by it. The care of flocks has given him food and shelter, has established the family and the altar. Truly, Abraham was a man of power. "The Hebrew patriarchs had small libraries, I think, if any," says the Autocrat; "yet they represent to our imaginations very complete ideas of manhood; and I think, if we could ask in Abraham to dine with us men of letters next Saturday, we should feel honored by his company."

We have, however, the greatest embodiment of power in that man who has added to his personal experience with nature and in society the experience of the great men of all time, found in literature and in art. In other words, the scholar is the man of power. Is not David a perfect example of one in whom these forces met? Did he not have contact with nature, the discipline that comes from labor and social intercourse, and in addition the culture of scholarship? We see him a shepherd lad wandering over the green hills

of Judea, lying at night under the stars; a minstrel with music so sweet that he comforts King Saul; a warrior so mighty that his triumphs become a song; a king of wisdom so beautiful that he is forever the ideal of the Jews; but, above all, the divine psalmist whose words express the most exalted thought of God ever conceived by man. Do we wonder that the man who was able through the alembic of his nature to distill such language from his experience in life was the progenitor of Him who said, "Consider the lilies?"

With this idea that the power of any man is dependent upon the virility of his thought, and that his thought is the product of his living, we have come to a new notion of the relative importance of a number of things in the school. The old-time school, with its barren drill upon the three R's, has been incorporated into a fuller, richer school which attempts to develop the child by giving him life thru nature, labor, and scholarship, and by training him in the use of language, the expression of that life in words.

This modern school is working under new conditions, the result of our rapidly increasing urban population. Its problem is how, on the one hand, to give to the city child that association with nature and that discipline of labor which his home environment does not supply, and how, on the other hand, to help him to realize upon the riches of literary culture with which he is surrounded. The child from the city tenement has had no such experience with nature as had the roving shepherd lad David, but he does have Tennyson and the "flower in the crannied wall," and under happy conditions may just as truly know "what God and man is."

So much for the nurture of power in the child. Perhaps I have dwelt too long upon it; but the child in his lisping, and the statesman in his power, each delivers in speech just what he has garnered from living. It is common enough to hear "No impression without expression," but "No expression without impression" is a truth more fundamental, and one that is peculiarly true of expression in language.

This modern school is consciously organized as a social community in which each child as a member in full standing discusses his work freely and spontaneously with his fellows. This is in marked contrast to the old-time method in which the child recited his lesson from the book verbatim and solely to the teacher, and was not encouraged to reorganize its thought and make it fully his own. Now every lesson is consciously a language lesson, in which the teacher judges of the definiteness and accuracy of the child's concepts in arithmetic, in history, or in geography, by the aptness of the words in which he clothes them. Moreover, the child himself is helped to clarify his thought in these subjects by expressing them in words of his own choosing.

In addition to this general work in language, there is usually in the day's program a period devoted exclusively to the study of English composition. During this period there is practice in short themes as the most efficient means of developing facility and power. These themes fall into two main classes—the reproduction of classic models, and the composition of original exercises.

Reproduction exercises are not, strictly speaking, exercises in composition, but they are invaluable in giving the child those necessary tools of composition, vocabulary, and style. Such exercises, however, are irksome to the child, who has naturally a passionate desire for self-expression. Following the dictates of modern thought in education, that a child best learns form, not as a thing apart in itself, but as a necessary and most convenient mode of expressing his thought, original exercises have become the chief part of the composition work. In these he embodies all he has learned from the study of literary models and from the more formal instruction in the making of sentences, rules of syntax, and the mechanics of writing. Thus he reveals to his teacher just what he has mastered, both in thought and form, and better than he could possibly do in any other way.

The recognition that language serves a distinctly social purpose has transformed the requirements in composition. The child no longer bends over long essays on "Friendship," or excerpts from encyclopædias which neither he nor anyone else ever wishes to hear. Rather, his exercise is the recital of some little thing which he has found interesting in his daily life, and which he knows his schoolmates will wish to hear.

Further, the mode of delivery has also changed to meet this social requirement. It is now often oral, or, when written, it is directly addressed to some person or persons. This social training is most stimulating to the child and helps him to find his place in the world. He must present his thoughts not only in logical order and in agreeable phrase, but also in that modulated voice and with that poise of body that accompany the speech of the well-bred.

The choice of subjects for this composition work is limited only by the experience of the child and his power of comprehension. He talks or writes of what has appealed to him, and his teacher skillfully correlates his language-expression with his observation work in his nature study and geographry, with his manual work and his little home tasks, and with his culture work in history and literature. The child writes on the opening of the spring buds as he sees them on his way to school, tells how he made a sled, or dramatizes an episode from his history lesson. Of these exercises the last kind gives him by far the greatest delight, because it affords his imagination free play.

Perhaps letter-writing is the most distinctly social form of written composition. A letter presupposes a person to whom it is addressed, and between whom and the writer there is a common bond of interest. A letter from Hans Christian Andersen to his little niece, Marie, was given at the midyear test to our fourth-grade classes which had been preparing to celebrate the centenary of his birth, and they were asked to answer it.

COPENHAGEN, June 14, 1850.

DEAR LITTLE MARIE:

I am in the country now as you are. It is so nice, and I have had some strawberries—large, red strawberries—with cream. Have you had any?

Yesterday I went down to the sea and sat on a rock by the shore. Presently a large white bird that they call a gull came flying along. It flew right toward me, so that I

fancied it would have slapped me with its wings; but, mercy on us, it said, "Mamaree!" "Why, what's the matter?" I asked. "Mama-ree!" it said again, and then, of course, I understood that "Ma-ma-ree" meant Marie. "Oh," said I, "then you bring me a greeting from Marie, that's what it is, eh?" "Ya-ya! Ma-ma-ree, Ma-ma-ree," it said. It couldn't say it any better than that, for it only knew the gull language, and that is not very much like ours. "Thanks for the greeting," said I, and off flew the gull.

After that, as I was walking in the garden, a little sparrow came flying up. "I suppose you now have flown a long way?" said I. "Vit, vit" (far, far), it said. "Did you see Marie?" I asked. "Tit, tit, tit" (often, often, often), it said. "Then you give my greeting to Marie, for I suppose you are going back," I said. "Lit, lit" (a little, little), it replied. If it has not come yet, it will come later on, but first I'll send you this letter. You may feed the little bird, if you like, but you must not squeeze it.

Now greet for me all good people, all sensible beasts and all the pretty flowers that wither before I see them. Isn't it nice to be in the country, to paddle in the water, to eat lots of nice things, and to get a letter from

Your sweetheart,

HANS CHRISTIAN ANDERSEN.

[Adapted from Dye's *Letters and Letter Writing*.]

The personal appeal of the letter was so strong that, tho many of the children had never seen the sea or the sea-bird of which he wrote, tho it was a cold January day with ice and sleet on the ground, and, more than all, tho they knew that Hans Andersen is dead, their power of imagination under the influence of the letter overcame all difficulties, and they responded astonishingly well. The following is typical of many others of equal quality:

INDIANAPOLIS, IND., Jan. 11, 1905.

DEAR UNKIL:

Yes, I am in the country. I love to pick wild flowers. I found a bird nest full of young birds. But I didnt touch them for fear I would make the bird angry. I was sitting under the tree when presently the mother sparrow came and fed her young ones. Then she flew towards me and chirped. I could not understand. But after I got your letter, I knew that she brought a message from you. I gave the message to the gull to give to you. As you was speaking about strawberries and milk, I like to pick them myself, put them in my own saucer, skim the cream of the fresh milk and put it on the berries, and have a little dinner. Then I am a fine lady with a cabbage leaf hat. I pretend my bare feet is two big white horses and I ride acrost the stream. Once a craw fish pinched my toe and I fell down. I thought I would take a ride in the little boat, so I took the boat down to the deep part and jumped in. I sailed smoothly for a while. But directly I hit a rock, tumbled out and got all wet. You may be sure that I never sailed in that boat again.

Good by Uncle Hans,

From your niece, MARIE.

A recent experiment in story-telling in which the same picture was used in every grade, from the first thru the eighth, was an interesting one. The picture chosen was the frontispiece to Henry van Dyke's *Fisherman's Luck*.

A study of the construction of the compositions showed a steady increase in power and in complexity of thought and form from grade to grade. The children were allowed to write for as long a time as they chose. In the second grade the average composition contained three sentences; in the fourth grade, nine sentences; in the sixth, twelve sentences; and in the eighth,

fifteen sentences. The number of simple sentences decreased from 88 per cent. of the whole in the second grade, to 35 per cent. in the eighth. In the sixth, seventh, and eighth grades the sentences were very long and involved, showing that the child was grappling with thoughts which he could not yet fully express. From the beginning the adverbial clause was used, but there were not many adjective clauses until about the fourth grade, and then there continued to be about three times as many adverbial clauses as adjective clauses. If this is universally true, as it probably is, it would indicate that the mind instinctively uses the relations of time, place, and cause as more fundamental than embellishments thru description.

A further study of the papers showed an increase in imagination and thought power from grade to grade, developing markedly about the fourth grade, and gradually rising to the sixth, but showing a decided decrease in the seventh and eighth grades, where the child has grown self-conscious. In the earlier grades there was no past nor future to the stories, the social relations between the boys in the picture did not prompt explanation, and there was a painful recital of just how many fish each boy caught. In very few instances in any grade was the lunch omitted, and at night all had fried fish for supper.

The idea of an ethical purpose necessarily underlying every story was evidently, tho unconsciously, in the minds of many of the children. Carelessness and disobedience met sure and swift punishment. The boy who disobeyed his mother was stung by bees or caught on his own fishing-hook. The children were significantly silent as to the rewards of merit, picturing the world as it is often presented to them, that a child should be good anyway. Indeed, if one had the insight, one could by reading these spontaneous exercises find all that the child has stored from his life-experience. He will express it there in concrete form; just as in the psalms we find all the life of David: shepherd boy, minstrel, warrior, king, philosopher, poet.

The teacher's responsibility in this work cannot be overestimated. "Who is the Master?" says someone. "The one who awakens." "Who is the scholar?" "The one who answers." What responsibility then rests upon him who dares to call forth a child's thought in language! How must he ever conceive himself as creator and artist making for this child his spiritual body? He must have what Froebel has called the *Glied-ganzes*, the view of the whole—and he must plan that this child, his creation, shall fill it beautifully, graciously, unctiously. Nay more, he should gradually awaken his pupil to a sense of his destiny, that he may begin to mold himself in conformity to the great Ideal; so that day by day and year by year he may grow in foresight, in judgment, and in desire to serve the world. In other words, that he may become a man of power. And how shall you know a man? Says Confucius: "A man can never be hid."

DISCUSSION

MISS EMMA L. JOHNSTON, principal of Brooklyn Training School for Teachers, Brooklyn, N. Y.—I once heard the President of this Association say that to be excellent a paper such as we have just heard should arouse opposition, should provoke debate. If I had to judge Miss Alexander's paper according to this standard, I should have to pronounce it a failure, since there is no part of it with which I do not heartily agree.

I take it that the main thought of Miss Alexander's paper was that thru three great forces man acquires power. These forces are nature, work, literature, and art. It was to be expected that a person from Indiana would emphasize the third of these forces rather than the other two, since, according to a literary authority in that state, Indiana has by actual count 22,837 authors. Let it be my province then to enlarge a little on Miss Alexander's theory regarding the potency of nature and work, to give some homely illustrations of the way in which, thru practice in composition, both nature study and manual training may be improved, and, in consequence, the learner's power may be increased.

We have just heard that the effort to express thought in language clarifies the thought. Now, the effort to express thought regarding the phenomena of nature and the work of one's hands makes more keen and accurate the observation of nature, and more precise and effective the work of one's hands. It is not the amount of educative material lying within reach of a man that educates him; it is the use he makes of some part of this material, be it ever so small a part. There were many roving shepherd lads in David's time, but how many could have composed a psalm? On the other hand, I believe that for a David born and bred in a city tenement day unto day would utter speech, and night unto night would show knowledge.

It is a mistake to think that because the woods and the fields have gone from the city, Nature herself has fled. Nature is more than woods and fields. What the city teacher needs to do is not merely to plan for her pupils trips to park and country. These are good, but better still is it to cause her pupils thru exercises in speaking and writing to hear above the city's roar the still small voice of Nature.

Cold and heat, frost and dew, rain and snow, are as interesting in the city as in the country; the wind is as wonderful, mysterious in its effects; the thunder and lightning as awe-inspiring. No matter how narrow the street, the sky with its changing colors, its clouds, and its stars is visible above it to the child who has been taught to look up. It is affectation to regard the products of the florist's care and skill as objects unfitted for use in nature study. They may not be so good for studies in scientific classification, but they are just as much to marvel at and to admire. The florist's window is a fruitful and inspiring theme for oral and written description to the class whose teacher knows how to utilize the educative material that is near at hand. The poorest-paid teacher in the city can afford to have every day thru winter and summer a flower—one flower—on her desk. And the bean or the grain of corn sprouting in its little pot or its tomato can—is there not a miracle here just as there might be in a wide field—a miracle wrought by that most mysterious power called life? I can think of a hundred city sights, from the green-grocer's stall to the wan moon appearing in the daytime, which, by being made subjects for oral or written composition exercises in school, would attract the children's attention out-of-doors and teach them some of the rhymes of the universe.

Altho we may not be able as yet, for reasons connected with school machinery of one sort or another, to give an effective school course in manual training, manual training will go on inside and outside of school as long as children instinctively use whatever is within their reach for making and unmaking. Tops will be spun, marbles rolled, balls tossed, kites flown, mud pies mixed and baked. The girl will fashion garments for her doll; the boy will whittle and carve, build and pull down. The country lad will have his chores, the city boy his errands, the girl her many domestic duties. But the teacher of language

is neglecting this field of doing for the field of mere seeing and hearing. No better subjects for exposition can be found than those which are suggested by the commonplace plays and work of children. In a certain new text-book in rhetoric I notice that the title of one of the compositions serving as a model for children is "How to Peel an Onion."

A better lesson on the dignity of labor can be given indirectly thru an exercise in composition than thru a sermon preached by the teacher. Let the girl explain clearly and accurately how to set a table and the boy how to make the kitchen fire, while the teacher commends or criticises as gravely as tho the theme were "Solitude" or "Friendship;" and the much-needed lesson will be given that "who sweeps a room as by God's laws makes that and the action fine."

The point I am trying to emphasize is this: In the old-fashioned school the titles of compositions were pretty well fixed by tradition. The teacher could find a list of them in a standard text-book, and could either let her class make a choice from this list, or could herself choose for the class. She had only to ask herself: "Do my pupils know enough of this subject to write on it, or can I put them in the way of getting sufficient matter for a composition on this subject?" With the new conception of the aims and methods of teaching composition has come a new and important responsibility for the teacher of English. She must ask herself, not, "Do my pupils know enough of this subject to write on it?" but rather: "Do I want my pupils to know something of this subject? Will their coming to know give them a richer and fuller life thru the operation of that divine threefold force which, as Miss Alexander has so beautifully shown us, made David the man he was?"

WILBUR F. GORDY, superintendent of schools, Springfield, Mass.—As I have sat and listened to these superb expressions as to the best way of developing power by composition, I have felt encouraged. The speakers have said about all that is to be said. I was much struck with the central thought: "No expression without impression." Great mental power should be cultivated, and then this great power to express by voice and pen should be increased. Give the child nature, literature, and art, and then teach him to express that which is a part of his very being. We overemphasize the formal side—sentence structure, spelling, etc.—and sometimes are merely juggling with words; and the result is a struggle to say something in a certain way without having much to say. The great point emphasized today is the cultivation of thought.

The social side must be developed. This comes thru subjects chosen for consideration in study and composition. The imagination must be developed. The child may thus identify himself with great persons and movements of the past. He may think of himself as the Lady of the Lake, Ivanhoe, Perry, etc., and express himself as they might have done. We will in the future put our emphasis upon what the child has to say before he tries to say it. Thus we increase the spontaneity and his power.

TEACHING OUR LANGUAGE TO NON-ENGLISH-SPEAKING PUPILS

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The great problem, confronting our general government, of distributing the annual alien arrivals, now approximating 1,000,000, is a civic problem of really prime importance; but the greater problem of assimilating these foreign elements into our civic life is educational in nature, and belongs

especially to the localities in which are to be found colonies wholly alien to American civilization and American ideals.

In the fiscal year ending June 30, 1904, 840,714 aliens arrived in the United States, and 606,019 of that number landed in New York. We find, in analyzing the report of the commissioner-general of immigration that 109,150 were under fourteen years of age; 172,856 were illiterate or almost so; 501,530 brought less than \$50 with them; and only 90,000 of these people spoke English. This report also proves that emigration was particularly heavy from countries with limited educational facilities for the masses. Each one of the items enumerated above should appeal strongly to our educational authorities, and should impel them to provide effective and expeditious methods for amalgamation.

The problem of assimilating great masses of people with different tongues and customs is not a new one—not even in our country, where the Indian problem still confronts us. The Russians, the Austrians, the French, and the Germans are engaged, with varying degrees of success, in teaching their languages and their customs to peoples foreign to them in vernacular and habits of thought. They, however, are contending with obstacles external to the school as a hindrance to rapid assimilation. A subjugated race clings with pertinacity to its mother-tongue; it fosters it in the home circle; and it encourages secretly, and often openly, the retention and cultivation of its vernacular.

In our country we have no external opposition to overcome; our problem is merely one of internal school management. Our aliens are not unwilling subjects; they have come to make their home with us, and do not actively oppose efforts to teach them and their children the language of our country. Non-English-speaking people may be divided broadly, for our purpose, into two classes—those that are under fourteen years of age, and those that are older. The former will gravitate naturally toward the elementary school, and will become our charges.

A speaking and reading knowledge of English is one of the most effective instruments in assimilation; and as these children not only present an opportunity for the most effective work in assimilation, but are active agents in the same cause with their elders at home, it is plainly our duty to devise ways and means of bringing our language, and hence our ideals, within their understanding. It is manifestly the duty of educational authorities to establish classes for non-English-speaking children, to place none but competent language teachers in charge of them, and to provide them with an elastic and adaptable, but definite, course of study.

In the schools of New York city, wherever possible, two distinct classes for non-English-speaking children have been formed: the one for those that are five, six, or seven years of age, and the other for those older who, by reason of more mature development, can advance more rapidly and should not be placed in the same class with the little ones. The aim is the same in both

classes, viz.: to give them such a knowledge of English as will enable them to understand the spoken and written expression of thought, and give them the ability to express their own thought in words either spoken or written, and to fit them as quickly as possible to enter a regularly graded class suitable to their age and mental development.

The mother-tongue of the child cannot be used as the intermediary for the comprehension of English, because of the heterogeneous composition of these classes. English must, therefore, be the language of the class-room, and translations are out of the question for obvious reasons.

The conditions that confront the teacher of non-English-speaking children are:

1. A class unacquainted with English sounds, and with little or no foundation of English words on which to build.

2. A class in which no one foreign common language can be used as a medium for communication between teacher and pupil.

3. A class that may consist of two or more grades, each of which requires special treatment.

THE TEACHER'S TOOLS

As the instruction must be objective with beginners, illustrative material should be abundant and should be used extensively. The name of an object or action should not be given unless the object is present or the action is performed. Children's toys may be used to illustrate objects that children are familiar with, but that cannot be brought into the class-room. If objects or models cannot be obtained, pictures and charts will prove serviceable; even outline pictures on the board may be used. Objects themselves are preferable at all times. Pictures of scenes in the everyday life of the pupil are a fertile source of a working vocabulary, and supply abundant material for conversation exercises. It is advisable to begin with the objects and the activities of the school-room, as they are nearest and most accessible; then proceed to the parts of the body, to home activities, and the common objects found there, including furniture and kitchen utensils. Later on, pictures illustrative of street scenes, river scenes, landscapes, or historic occurrences may be used.

SOME BASIC PRINCIPLES

English is a living language and must be taught for practical application.

The spoken language must be taught first.

Clear enunciation must be established by constant practice; it must become a habit. At no time can the teacher afford to neglect this in himself. Slovenly pronunciation must not be tolerated.

Answers must be given in complete sentences.

Instruction must be objective.

Words must be learned by direct association, that is, in connection with the object, idea, or action that they represent.

Words must be learned by using them.

The order of teaching words and sentences should be: (1) meaning, (2) pronunciation, (3) reading, and (4) writing; the idea must precede the word, the object and the activity must precede the name.

The sentences of a lesson must be interrelated; disconnected and unrelated work is waste time.

All grammatical forms must be taught concretely to develop what might be termed a feeling for grammatical relations, an intuition for syntax, or, as it is expressed to a nicety in German, *ein Sprachgefühl*.

Translations into the mother-tongue of the child, or *vice versa*, while at times desirable, is as a rule impracticable in our country, and when practicable should be indulged in sparingly.

Gestures and play of features are important aids in conveying ideas.

Pupils should not be interrupted while speaking; mistakes should be corrected after the pupil has finished the statement.

The verb is the soul or substance of a sentence; teachers should learn to give more attention to the verb; the emphasis of instruction should be placed on the verb.

Common idiomatic phrases and expressions, the despair of the foreigner, should be carefully selected and learned by practice in the use of them.

Prepositions and their idiomatic use also call for particular attention.

Practice, incessant practice, in speaking, in the actual use of the language, is the one way to learn how to use it; discreet silence on part of the teacher gives the pupil more frequent opportunity to speak.

SOUND AND SOUND PHYSIOLOGY

As the non-English-speaking child is bewildered by the sounds he hears, the training of the ear and the vocal organs of these children is one of immediate necessity. It is a truth that spoken language is an imitative art, and that young children learn sounds quickly and successfully by mere imitation; but these foreign children have at times great difficulty in the perception, and therefore in the proper utterance, of certain English sounds. To train the ear to new sounds, the teacher must at all times speak slowly and enunciate clearly, for a pupil cannot imitate what he does not hear. To train the pupil in proper sound-production, the teacher must know how speech sounds and tones are produced, must show the proper position of the vocal organs in uttering sounds not familiar to the pupil, and then have frequent practice on the elements and combination of elements. Directions for producing or uttering sounds are not to be memorized; distinct utterance is to be practiced. As accent is a necessary element of correct pronunciation, and as foreign children frequently misplace the accent and thus mystify the hearer, attention must be given to proper accentuation.

Sounds should not be studied abstractly, but by analysis of words. The first exercise should consist of hearing and repeating the spoken word of the teacher; the repetition is to be first by individual members of the class, then by the class. Let us suppose the time has come to isolate the sound of an individual letter. It will be well to begin with sounds that may be easily prolonged, or made continuous, because the child can do this readily, and hence feels he has attained something when he does it. Select some word beginning with the sound to be isolated, as "in," "ice," "on," "old," "at," "ate." The teacher pronounces the word distinctly; individuals and class repeat. The teacher then pronounces the word again, and draws or lengthens

the letter to be isolated; individuals and class repeat. The sound is then isolated from the word and sounded by itself.

Blending of sounds is good practice. Blending, according to Landon, is giving in succession the sounds of the various letters at first separately, and then with more rapid utterance until they blend into what is required. A German writer suggests that, if the sounds of two letters are to be blended, their symbols should be cut out of pasteboard, held at a distance from each other, be sounded separately, and then, as they are actually moved nearer to each other, blended. By another method the teacher sounds the letters, and the children blend them into syllables or words.

There must be drill on the clear enunciation of all letters with somewhat similar sounds, as *d-t*, *b-p*, *g-k*, *j-v*, *s-z*; on *d* and *t* in words ending in *-nds*, *-nts*, *-cts*; on the sounds of *wh* and *w*; on terminations usually mutilated, as *-ness*, *-less*, *-ment*, *-ing*; on the sound of *r* in such words as "door," "art;" on the sounds of *v* and *w* frequently interchanged; on the voice-sound and breath-sound of *th*. The teacher must also be on guard not to permit the substitution of the sound of one letter for another, as *t* for *th*, *sh* for *ch*, or the addition or omission of any sound or syllable.

As timidity is frequently the cause of indistinct articulation, concert recitation of sounds, sound groups, and short sentences should receive some attention, to accustom the pupil to the sound of his own voice, to give confidence to the bashful, and to give more practice than is possible by individual recitation. The teacher can easily select a pupil who is not in harmony with the others, and call upon him to recite individually. Deliberate whispering is also a good exercise, because it develops the articulating powers.

Names of letters should be taught only after the sounds have been mastered, and the sounds and names of the letters should be taught in connection with words whose meanings have been taught.

ORAL PRACTICE

With non-English-speaking children, instruction at the beginning should be largely restricted to oral practice in conversation exercises and object-lessons.

The object-lessons should consist in teaching the names of familiar objects, what they are, where they are, what they do, what can be done with them, what their form, parts, and color are. The conversation lessons must be what the name indicates; they must be conversations. They may be based on games, pets, nature work, stories, pictures illustrating scenes familiar to the child, the family, the body, occupations of man, and, more important than these, the daily experience of a child, its home and school activities, such as rising, dressing, taking breakfast, going to school, recess, luncheon, going home, and going to bed.

The object of conversation lessons on these topics is to give the pupil the vocabulary of daily life. When the pupil is to read a connected story,

let it be composed of the foregoing material. Later on, the reading-lesson, whatever it may be, is made the basis for conversation lessons. Each of these conversation topics may be treated as a theme, or as a basis for a number of themes, in which the sentences are interrelated. Gouin says there is an objective language and a subjective language. The former translates the parts of the external world; the latter, the parts and operations of the soul. Thus: "Walk to the door," is objective language, while the teacher's comment, "That's it! That's very good! That's right!" is subjective language. These two languages progress side by side, one gearing or working into the other.

As we find children of different nationalities in the same class, the so-called natural method of teaching languages, or some modifications of it, seems best fitted to lay the foundation for future work. The principal features of this method are: The mother-tongue of the pupil is excluded from the class-room. The instruction is oral and objective. Pupils learn by imitation. The new vocabulary is associated directly with objects and actions, and impressions are therefore vivid. The method consists largely of an exchange of questions and answers between teacher and pupil. Instruction is begun with short sentences; pupils are led to reproduce what they have heard; new words are gradually and singly introduced; words already learned are used as a basis for the introduction of new ones; gestures and pantomime are necessary. The oral instruction leads up to easy reading for which the pupil is thoroly prepared; grammar is taught in installments as necessity arises, and when pupils are prepared to understand explanations in the new tongue. Altho a great many words can be illustrated concretely, there comes a time when this is impossible. F. Przibilla suggests for the teachers' consideration the following four helps in conveying the meaning of a word which cannot be illustrated objectively:

1. By means of synonyms, a new word is explained by means of one already known, as, "attempt" by "try," "commence" by "begin."
2. By analysis and synthesis—particularly useful in explaining class names, as: "Apples, pears, and plums are fruit."
3. By derivation, derivative nouns, verbs, and adjectives may be thus explained, as: "a wooden chair—a chair made of wood." Compound words may be treated in a similar manner.
4. By paraphrasing and story-telling, an abstract term may be made clear by telling a short story.

As it would become monotonous to devote the whole day to object-lessons and conversation, physical exercise, arithmetic, nature study, manual training, and music may be taken up for variety. The teacher, however, should remember that the main aim is not the content of these subjects, but the creation of a many-sided interest for the sake of the language connected with them. Hence greater emphasis must be placed on the new vocabulary than is necessary with our own children.

The first lesson in a syllabus prepared by Superintendents Shimer, Haaren, and myself is as follows:

The class is assembled in the room for the first time. Children and teachers are seated. The teacher has before her a list of the names of her pupils. The teacher calls a name—John Smith. There is no response. The teacher, looking at the class, sees an expression of self-consciousness on the face of one of the pupils, and perhaps notices that the other members of the class are looking at that child. The teacher, looking at this child, then says: "John Smith, stand." As she says "stand," she herself rises. If this child does not understand, or if he shows timidity, the teacher calls the next name on the list, and says: "Peter Wagner, stand." The teacher again rises as she says "stand."

The teacher proceeds in this way until children respond immediately; as they respond, let the teacher indicate her approval by using some such expression as "Good!" "Right!" "Yes!" "That's right!" accompanying the subjective expression with the proper look and gesture of approval. Now five or six children and the teacher herself are standing. She now says: "John Smith, sit;" and she herself sits. If John does not sit, let her pass to the next pupil; in each case, however, she should be careful to perform the action herself until there is a prompt response.

The children and the teacher are now seated. The teacher calls again upon one of the confident ones to stand: "John Smith, stand." She looks at John Smith, and, pointing to him, says: "Your *name* is John Smith." She calls upon another to stand, and says: "Your *name* is William Jones." Thus she goes on until eight or ten are standing. Then, pointing to herself, she says: "My *name* is Miss X." Now, looking at a pupil standing, she says: "What is your *name*?" Answer: "My *name* is X. M." Teacher: "Sit." This is continued until each child has told his name and all are seated. The teacher must emphasize "my" and "your."

Words in this lesson: "stand," "sit," "my," "your," "name," "is," "what,"

In the next lesson the words "I," "you," "all," "class," "walk," are taken up in the same way. Finally the teacher gets the four interrelated sentences: "I sit," "I stand," "I walk," "I sit." The pupil speaks the words while performing the actions, and the other pupils tell what John is doing. Thus, when John says, "I stand," they say "John stands." It is only a short step to "you sit, you stand," etc.

Thus the teacher proceeds to add to the speaking vocabulary of the child until its knowledge of English approximately equals that of our own children of the same age. If we give them a good speaking vocabulary at the very beginning, it will result in a great saving of time later on.

Reading, writing, and spelling are taught to reinforce the oral practice. The methods to be followed in teaching these subjects do not differ materially from those in vogue with our own children; in reading, words must be sounded; in writing, they must be spelled. As far as the course of study is concerned, it should be confined to the essentials plus such subjects as are needed to break the monotony. These children should not be kept too long in a class by themselves; as soon as possible they should be placed with English-speaking pupils.

An intelligent, enthusiastic teacher, imbued with the proper spirit and equipped with a few living principles of the art and science of language-teaching, may undertake with a clear conscience the instruction of these children, whose remarkable progress in acquiring our language has always been a source of wonder to me, even when conditions were not quite favorable. There must, however, be careful preparation; there must be no sham work, no uncertainty, no indefiniteness, no discursiveness.¹

¹ Authors read and consulted in preparation: Dr. Leopold Bahlsen, Henry Sweet, F. Gouin, F. Rzesnitzeck, F. Przibilla, Schulrath Folz, Dr. Karl Kaphahn, A. Wrege, A. Jelitto, P. Odelga, L. Witt, and Dr. Edward P. Thwing.

DISCUSSION

MISS IDA MIGHELL, principal of Bryant School, Chicago, Ill.—The trend of discussion thruout this convention shows how this subject grows in importance with our inrcreasing tide of immigration. Not the increased number only, but also the changed character of our immigrants affects the teaching of English. So long as only Teutonic peoples came here, the problem was simpler than it is now that most of our immigrants are of the Alpine and Mediterranean races, whose languages and customs are more unlike ours.

Tho the school has the advantage of dealing with the plastic minds of children, it is not the only, nor even the chief, agency in training the child in speech. At the point of language-teaching the school touches most intimately the home and community life of the child. It may prescribe what he shall know in mathematics, but the language he shall use will be determined by a contest between his school influences and his social environment, wherein the latter will have the advantage by reason of greater numbers of influences and longer contact. Also these children live chiefly in the crowded sections of great cities, where overcrowded schoolrooms and half-day sessions prevail. These restrict that freedom in expression and the individual training which are essential in teaching English, and require instead much mass work. Many of these children are physically weak or ill-fed. These are some of our limitations.

The great differences in natural power of learning language among the different nationalities require that methods of teaching English should vary accordingly. The Hebrew and Russian of our so-called "Ghetto" districts are natural linguists and are interested in language for its own sake. Their interest extends to language exercises that are essentially abstract. For these, language may be made, in part, an end. Not so the Czechs or Bohemians, for example, who come here in great numbers. They acquire English slowly and use it chiefly under necessity. Our language must be mixed with their deepest interests, or it will be cast aside. Then these interests must be paramount in English training as in all other lines of study.

In most cities the very great majority of non-English-speaking children enter school at five or six years of age. These will be considered here. First the child must learn to speak our language. To do this, he must be immersed in the sound of English, to compel him to think in the language, that he may not form the habit of translating. No agency is more helpful toward this end than the good kindergarten when adapted to this language-teaching; or, if that be unobtainable, kindergarten methods in early primary grades. The conversational method of the kindergarten, its encouragement of initiative, its freedom, its varied materials for use in occupations and games, are of value in teaching English. But special language work must be done in such kindergartens. Emphasis must be placed on the use of verbs and nouns in connection with the actions and objects of the child's experience. Children name the games they play and the acts they perform, and to carry on these occupations they must combine these words into the expression of thought. By listening, repeating the expressions of others, and using them under these natural conditions, a working vocabulary is built up.

Continuing this work in the primary grades, the child commits to memory, and frequently repeats, stories and simple poems which include the forms of language to be taught. This acquaints him with the sounds of these forms and with their values in syntax in connection with ideas that are of vital interest to him. The idioms of our language are best acquired in this natural way of hearing, repeating, and then using these expressions. In this way much of the simplest and finest literature can be given to the child. Like learning music, the acquiring of English speech comes with incessant practice. But our best music teachers give their beginners practice on compositions that are worthy of study as well as simple. The aesthetic sense must grow with the technique of an art. So we should give the child the best models from which to learn our language. In all teaching of the non-English-speaking pupils the teacher must read orally and speak with far

more deliberation than is required in teaching others, lest the child fail to hear each syllable, and so be seriously retarded in his progress.

Reading must be taught only as a means of gaining thought. Considerable training in phonetics is needed to bring out sharply the sounds of letters and to insure perfect enunciation. As pupils advance, language lessons, based on familiar literature, should bring out consciously to the child the forms and their uses which he has gained by imitation in earlier grades. From literature also should the study of grammar proceed in the highest grammar grades. Methods of developing correct speech apply, in general, to teaching composition. Much time is wasted in correcting compositions apart from their writers. Correcting in the child's presence, or, better still, leading him to correct his own work, helps to create in him a sense of correct expression which is lacking at first. For this purpose blackboard exercises in compositions are very effective.

Those who would postpone all study of literature until reading and language lessons have enabled the child to read and interpret it for himself, will probably never reach literature, simply because lessons about the language cannot take the place of the language itself, as employed by the best writers of simple literature for children. Their works, read or told by the teacher, and read or committed to memory later by the pupil, enrich the experience and set the pattern for speech. So literature must precede language lessons and form their basis. We must make the children love the English thru their love of the beauties which they find in its highest expressions; else they will not feel that they need the language, until, after years spent on hated abstractions, they enter the business world and feel keenly their lack.

Besides literature, most of the studies of the school curriculum furnish content for training in the use of English in addition to their informatory value. The English he uses in expressing his thought in the geography, history, or nature lesson is the measure of his acquired power of speech. To insure freedom of expression it is wise not to be too critical, especially of the young child's speech. The substitution of the correct form without disturbing thought, and the occasional correction by repeating phrase or sentence, help to eliminate errors by degrees.

These content studies, including the new branches, save the child from the deadening effect of formal language work. And they must be followed for their content, not merely to furnish material for language lessons; else the formalism will still inhere. When we are asked of what use to him who speaks no English are the studies, miscalled fads, it is safe to answer that they give meaning and value to the English he must use in studying them. They connect language and all school work with life. Without them, formal lessons are soon forgotten and much energy wasted. Form must ever be subject to sense or spirit.

DEPARTMENT OF SECONDARY EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 4, 1905

The Department of Secondary Education met in the First Presbyterian Church, Asbury Park, on Tuesday, July 4, 1905, at 9:30 A. M. The meeting was called to order by the president, William Schuyler, assistant principal of the William McKinley High School, St. Louis, Mo., who, after the preliminary announcements, delivered an address on "The Schoolmaster."

Dr. E. W. Lytle, Albany, N. Y., state inspector of high schools for the state of New York, read a paper on the subject, "Should the Twelve-Year Course of Study be Equally Divided Between the Elementary School and the Secondary School?" The discussion of the subject was led by Frank H. Robson, headmaster, Bancroft School, Worcester, Mass.; Christopher Gregory, principal of Chattle High School, Long Branch, N. J.; Charles L. Mosher, superintendent of schools, Canton, N. Y.; and Walter M. Kern, superintendent of schools, Columbus, Nebr.

Reuben Post Halleck, principal of Boys' High School, Louisville, Ky., read a paper on the topic, "Why Do So Many Pupils Leave the High School in the First Year? How Can They Be Induced to Remain?" The discussion was led by J. Stanley Brown, principal of Township High School, Joliet, Ill.; Clarence F. Carroll, superintendent of schools, Rochester, N. Y.; Isaac Thomas, principal of High School, Burlington, Vt.; J. W. Searson, superintendent of public schools, Wahoo, Neb.; and Charles Allen Marple, department of physics and Chemistry, South High School, Cleveland, O.

The president appointed the following

COMMITTEE ON NOMINATIONS

Reuben Post Halleck, Louisville, Ky. Charles L. Mosher, Canton, N. Y.
Ernest Clapp Noyes, Cincinnati, Ohio.

On motion of Dr. C. A. Herrick, the following was adopted:

Resolved, That a standing committee of five members of the Department of Secondary Education be appointed by the president elected in 1905 to consider the question of dividing the twelve years given to elementary and secondary education equally between elementary and secondary schools.

On motion of Dr. E. W. Lytle, the following was adopted:

Resolved, That a committee be appointed by the president elected in 1905 to consider the subject of securing proper professional preparation for high-school teachers.

The department then adjourned.

SECOND SESSION.—THURSDAY, JULY 6

The meeting was called to order by President Schuyler at 9:30 A. M.

The report of the special committee on "Secret Societies in Secondary Schools," by Gilbert B. Morrison, chairman, was read by the secretary. After an animated discussion, the report and the resolution accompanying were adopted as the expression of the department.

The Committee on Nominations reported the following:

For *President*—Eugene W. Lyttle, Albany, N. Y.

For *First Vice-President*—Wilson Farrand, Newark, N. J.

For *Second Vice-President*—Edwin Twitmyer, Bellingham, Wash.

For *Secretary*—Philo M. Buck, St. Louis, Mo.

The report of the committee was adopted, and the gentlemen named were declared elected as officers of the department for the ensuing year.

The meeting then adjourned to attend the different conferences as follows:

A. Principals Conference. Topic: "Should the Time and Energy of High-School Principals Be Taken up with Administrative Work to the Exclusion of Instruction?"

Leader, Walter B. Gunnison, principal of Erasmus Hall High School, Brooklyn, N. Y.

B. English Conference. Topic: "Aims of English Teaching: (a) Composition; (b) Rhetoric; (c) Advanced Grammar; (d) Literary Criticism and Appreciation." Leader, Philo M. Buck, department of English, William McKinley High School, St. Louis, Mo.

C. History Conference. Topic: "What Facts of History Should be Taught Pupils in Secondary Schools That They May Better Understand the World They Live In?" Leader, James Sullivan, head teacher of history, High School of Commerce, New York city.

D. Mathematics Conference. Topic: "Individual Instruction in Algebra and Geometry." Leader, Franklin T. Jones, science and mathematics, University School, Cleveland, Ohio.

E. Classics Conference. Topic: "The College Requirments and the Secondary-School Work." Leader, J. C. Kirtland, Jr., professor of Latin, Phillips Exeter Academy, Exeter, N. H.

F. Modern Languages Conference. Topic: "The 'Direct Method' of Teaching." Leader, Ernst Wolf, Yeatman High School, St. Louis, Mo.

WILSON FARRAND, *Secretary*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

THE SCHOOLMASTER

WILLIAM SCHUYLER, ASSISTANT PRINCIPAL OF WILLIAM MCKINLEY HIGH SCHOOL, ST. LOUIS, MO.

We schoolmasters meet year after year to discuss what we can do for our pupils. We have made great progress in many ways by so doing; but it is well occasionally to remember that "charity begins at home," and to turn our attention to that ancient but important question: "What can we do for ourselves?" What can we do for ourselves, not as schoolmasters, but as *men*; not as mere sources of knowledge, or as organizers or administrators of educational institutions, but as human beings who have to live in this world; in short, as men of the world—not men of the world in the lower meaning of the term, but men who know the world thoroly, and can get out of it all that is best and highest and noblest? And we should consider this, not only for our own comfort and pleasure in our personal life outside the school, but also

in its ultimate effect on us in our special work as schoolmasters. For he is the best master of his school—other things being equal—who is the most thoro man of the world.

It is a truism that every school—nay, every schoolroom—is a *little* world, and the better the schoolmaster is acquainted with the great world outside—with its heights and its depths, its lights and its shadows, its virtues and its vices, its glory and its woe—the more he can make this little world of his become like the great world, and the better will his pupils be prepared when they go forth to fight the battle of life. Especially is this true of us teachers in secondary schools, the great majority of whose pupils are just about to finish their school life, and already know more of the world than some of us imagine, and who judge us, and judge us severely, according to our knowledge or ignorance of that world they see opening before them.

For ages the schoolmaster has been the butt of satire and caricature, and the honorable name of pedagogue has become in the mouths of many a term of reproach—or, what is worse, the theme for cheap wit. And, if we will be honest, we must see that there is good cause for this.

Too great devotion to any profession always tends to narrow a man—to lead him to substitute the special aims of his own particular work for the great aims of humanity, to substitute his own special standards for those accepted by the world at large. And of all professions that of teaching is most liable to this danger. In the first place, there is the fascinating absorption in one's special subject, which only too easily degenerates into pedantry—where the means take precedence of the end to be attained; and then there is that constant association with immature minds which, if not counteracted by a broad and varied outlook, ends in making the schoolmaster narrower and pettier in mind than the children he tries to control, for they at least are growing while he is drying up—is fossilizing. The teacher who yields to these deleterious influences soon becomes the pedagogue of satire. His little world becomes to him the only world; the little peccadillos and shortcomings of his pupils become in his eyes grievous sins and crimes; he is unutterably shocked by any irregular manifestation of the exuberant vitality he is trying to control, and he does his best to stifle all free life and progress by his petty and annoying rules and requirements. To use an expressive slang phrase, he may be able by constant effort to "keep the lid on" the seething cauldron of his school or class; but his pupils soon learn that his outlook is limited and insufficient; they despise him for his ignorance of what they already know; they hate him for the petty injustice of his regulations and the narrow exactions of his requirements; and the stronger characters among them, the "bad boys" so-called, consider it a meritorious act to beat him, or even cheat him, at every opportunity.

But let the schoolmaster be a true man of the world; let him know all the temptations that not only children, but even grown people, succumb to; let him know and feel the manifold desires that move human beings to noble

and ignoble deeds; let him view the wondrous drama of life in its entirety—then he will see that in the little world of school nothing is fatal; that the little sinner of today becomes the good man of the morrow; that not by horrified repression, but by sympathetic encouragement, he can develop his young barbarians into efficient members of civilized society. He will also see that a youth will need something more than a mere mnemonic knowledge of his text-books, something more than the ability to pass his examinations in order to make his way in the world efficiently and nobly. And that something more can only be developed, not by what the schoolmaster says, but by what he *is*, by his personality. For children learn, as we all know, most thru imitation, and they can have no better preparation for the world than the unconscious imitation of a true man of the world.

It is just as easy for the schoolmaster to become a man of the world as it is for anyone. It is mainly the matter of choosing his associates. His associates should be of as many different callings as possible. The true schoolmaster should be, above all things, a social being; he should be at home in the society, of merchants, mechanics, artists, journalists, musicians, lawyers, doctors, politicians, and clergymen. And he can be at home with each of these, if he cultivate an interest in those things which constitute their life-work.

Even where the circumstances of the schoolmaster are such that he cannot associate himself directly with all forms of this varied life of the world, he can always reach them thru great literature and art, wherein the world from age to age records its experience and sets forth its ideals. Outside of the direct contact of actual life, there is nothing more broadening, more humanizing, than a close and loving acquaintance with the great masterpieces of human expression, not only those of our own time and country, but those of other lands and of bygone days. And yet many schoolmasters allow increasing absorption in their daily tasks to cut off from this source of spiritual nutriment which meant so much to them in their youth.

Of course, we cannot expect of one poor schoolmaster that he should be equally interested in every form of human activity; for instance, that, not having an ear for music, he should be the chosen comrade of musicians, or an enthusiastic admirer of Beethoven's symphonies; but that is the ideal; and the nearer one approaches it, the better man of the world will he be—yes, even the better schoolmaster. For if a man try to develop all his capabilities, he will be surprised at possibilities in himself he had never dreamed of; and if he keep a broad outlook, he will find that he can sympathize even where he cannot fully understand and appreciate.

It is this understanding, this appreciation, this sympathy, that distinguishes the true man of the world from the narrow specialist, or the provincial; and it is the same understanding, appreciation, and sympathy which will change the schoolmaster from the absurd pedant of satire and caricature into what he should be—a guide, counselor, and friend.

There is an unfortunate tendency in some quarters at the present time to consider the profession of teaching as something apart from the ordinary vocations of mankind, as endowed with a peculiar code of ethics considerably above that of the world at large. But this pharisaical, "holier-than-thou" attitude is fatal to the highest efficiency of the schoolmaster, whose business is to prepare his charges, not for another world—that belongs to the church—but for this world in which they must live and move and have their being. If he insists upon standards different from those of the world about him, his pupils, who are beginning to know the world, will judge him by those standards, and will consider him an antiquated or unpractical fellow whose admonitions have no real value; and so his influence will amount to little or nothing.

It may be said here that, in spite of the screaming headlines of the yellow journals, in spite of "Frenzied Finance" and boodle exposures, the generally accepted ethical standards are neither dishonest nor debasing, but are as good as can be expected at this time in this finite world of ours. It is also a truism that each era—each race even—has its own ethical standard, evolved by peculiar temperament and circumstances; and it is not the part of the schoolmaster to pose as an exemplar of the ancient Israelitish ethics, of the antique Greek or Roman, of the mediæval ascetic or the modern puritanical, nor of any fossilized code of morals, no matter how excellent and suitable they may have been in their own time and place; nor should he construct or admit a peculiar code applying especially to members of his vocation, as if they were of finer or more fragile clay. But he should be simply a man—a true man of the world of his time, an American gentleman in all which that term implies and his religion, what it may please God.

We all know, or should know, what are the best ethical standards of our time and country; and that, in America at least, they are not mere empty professions is shown by the universal esteem and honor accorded to every man who consistently tries to live up to them. And a man does not need to be a schoolmaster or a clergyman in order to satisfy them.

The schoolmaster then will be most efficient, both for his own and his pupils' good, who has the most knowledge of the world as it is and as it has been. But in obtaining this knowledge he must become the master, not the slave, of the world. He will be like those pilots who know every reef or rock in the channel, but whose barks have never been shipwrecked. He will then be a guide, who can point to the loftiest heights and noblest vistas in the path of life, and at the same time reveal the obstacles and abysses that are on every side. He will be a counselor, whose advice will be heeded, because his charges feel that he knows whereof he speaks. He will be a friend, whose broad charity will bear with failure and even perversity, and whose wise sympathy will draw erring hearts to him for comfort and aid. Like St. Paul, he will be "all things to all men, that he may by all means save some."

*SHOULD THE TWELVE-YEAR COURSE OF STUDY BE EQUALLY
DIVIDED BETWEEN THE ELEMENTARY SCHOOL AND
THE SECONDARY SCHOOL?*

E. W. LYTTLE, INSPECTOR, STATE OF NEW YORK, EDUCATION DEPARTMENT,
ALBANY, N. Y.

To those worthy men who believe that educators should follow, and not attempt to lead, public opinion in matters educational, it may seem absurd to say at the outset that this discussion will not concern itself with material equipment nor with material obstacles.

Certainly there are in every public-school system serious obstacles to such a change as that proposed in this discussion; but they are temporary and not insurmountable. A nation that pays its teachers \$160,000,000 annually and discards millions of tons of costly machinery each year, not because it is worn out, but because something better is on the market, will not hesitate long to drop two of the eight elementary grades, if once it can foresee a gain in efficiency.

Many here present can remember the day when few communities supported free high schools. Today in New York state there are few villages of 500 inhabitants that do not maintain a partial high-school course, and almost no villages of 1,000 inhabitants that do not support a full four-year academic school. To do this sometimes calls for a school tax rate of $1\frac{1}{2}$ to 2 per cent.

Conditions in New York state are typical of those thruout the nation. The first free public high school was established in Boston in 1821; in 1860 there were only 40 free high schools in the United States; in 1880 there were 800; and in 1900 there were 6,005, enrolling about 500,000 pupils.

Whatever the declaration, "All men are created free and equal," meant to the men of 1776, it means now to the great body of the American people equality of opportunity; translated into educational terms, it means a free high-school education for all who can avail themselves of it, and it will mean free college and free university within the coming century.

To begin to understand what should be, it is proper to inquire how things are, and how they came to be what they are.

Of fifty-two states and territories, five provide an elementary course of nine years; thirty-eight, a course of eight years; seven, a course of seven years; and two, Maryland and Georgia, a course of six years. Thus it appears that eight years for the elementary course is so widely adopted as to be considered normal. But secondary education generally begins in Europe at the age of eleven or twelve. It once began at about that age in the United States. Why is it that the years of elementary education have been prolonged in the United States?

It is not easy to procure statistics or data, but fortunately the process of evolution or devolution is still going on and may itself be studied. The eight-year grade course is the resultant of two forces working in partial opposition,

and in consequence the child has lost speed. There are yet many communities in the United States where the academy or private school supplies all the secondary education. There exist in these same communities free tax-supported grade schools. Almost never do these two kinds of schools work in harmony. Even teachers are sometimes jealous; and the ideals of the academy and of the grade school differ widely. The grade school is dominated by a board of business men who wish the school to teach nothing that is not practical, and in the narrowness of their vision they insist that the three R's, with much geography and a little United States history, are about the only practical studies. These practical studies must be pursued with a vigor and a thoroughness that totally disregard the variety and scope of adolescent interests. The arithmetic must be learned from cover to cover. Perfect spellers, good readers, and accomplished penmen, pupils who have memorized their geographies and learned much that is not true, are ideal scholars. If, in addition to these accomplishments, so greatly desired and so rarely attained, some smattering of an impossible bookkeeping is added, some facility in dealing with the mysterious x 's, y 's, and z 's of algebra, some knowledge of the various battles and sieges of the various wars in which the United States has engaged, that constitutes a practical education and is the broad foundation on which the youth may aspire to be president—of a life-insurance company at least. The teachers in these grade schools sometimes have higher ambitions. Often they half surreptitiously teach other and better things than the board knows of; but both teachers and board insist on holding back the pupil from the academy with its Latin, its Greek, its science, and its folderol, until perfection shall have been gained in the fundamentals. Thus the elementary course is lengthened to meet the needs of that imaginary quantity, the average pupil. In one school personally known to the writer this elementary course has been gradually lengthened to ten years, of which two are certainly wasted. The pupils tire of endless repetitions and treadmill reviews. The boys seek employment in the store, in the factory, or on the farm, and the girls watch out for beaux. School days are over.

At the head of the academy that exists in the same village is a college graduate; his teachers are college graduates; his board of trustees are for the most part college graduates. The teaching of practical things does not appeal to the average college graduate, who is possessed of the larger truth that the very best practical education is character-building. The academy trustees glory in the fact that theirs is a college preparatory school, and in the number of graduates that pass from their school to college. Unfortunately, they do not see that character may be built by other studies than Latin and Greek, and that their school should occupy a much broader field than that of college preparation. The teachers in this academy do not wish to teach elementary English branches, and the trustees provide no course for young pupils that appeals to the public. Nor is the public inclined to pay even moderate tuition, when schooling may be had free in the tax-supported school.

By and by the academy dies from lack of root-nourishment. The community soon recognizes the necessity for higher education and establishes a free high school. But the eight or nine or ten years of grammar-school instruction has come to be the accepted standard period for elementary education. Text-books, teachers, and machinery for the long course have been provided, and it persists as a monument of educational folly and ignorance.

The above portrayal is in part real, in part imaginary, but is true as regards what occurred quite generally during the latter half of the last century; and the process is not yet complete in some remote sections. The mistakes of the East have been copied by the pioneers of the West. The result is an eight-headed monster with nine or more lives.

Teachers should not pose as Don Quixotes charging the windmills of established institutions, but they need to have no respect for windmills if electric motors will be more efficient; for in education, even more than in business, the highest efficiency means the truest economy. In the school, more than anywhere else in the world, "time is money," and much more than money.

Is there any pedagogical point where secondary education should begin? There is. Secondary education should begin as soon as the elementary pupil has acquired the tools with which he may gain a higher education. Approximately this point in civilized countries very nearly coincides with the dawn of adolescence.

What are the tools with which a higher education may be acquired? Roughly estimated, they may be stated as follows:

1. Ability to read the news items of the ordinary newspaper intelligently.
2. Ability to express in words the thoughts gained from reading.
3. Ability to express in writing the thoughts gained from reading or from conversation.
4. Ability to express, however imperfectly, concrete images by drawings.
5. Ability to perform ordinary arithmetical computations thru long division and common fractions.

If, in addition to these abilities, there be gained some skill in the purposeful use of simple tools, like the needle and jack-knife, and a fair readiness in reading at sight simple music, the elementary school will have completed its proper work. Incidentally the pupil will have acquired more or less knowledge of geography and nature, of myth and literature. As a matter of course, he will have increased his self-control and his power of self-direction.

The elementary school may very properly confine its largest energies to sense-training and to the memorizing of those conventional forms of knowledge necessary to civilized life. Beyond this point secondary education should begin, the elementary instruction should be continued and brought to completion, not thru tiresome reviews, but thru application to fresh subject-matter. There should be no violent break in the course of study, no flinging of the child into waters beyond his depth, but a readjustment of discipline and study adapted to approaching adolescence.

We have all noted the marked mental changes that occur in boys and girls in the ages from twelve to fourteen. Among the most noticeable of these changes, and among those that concern the teacher most deeply, is the restiveness and lawlessness that mark the dawning consciousness of power, the supersensitiveness to criticism, the reticence and variability of a mind trying to find itself. The child is trying to throw off the restraints of childhood and has not yet acquired self-control. This age is well characterized as the most unlovable, and yet the most in need of love, appreciation, and sympathy. It is the age when the largest percentage of criminal careers is begun; it is also the age of the greatest number of religious conversions. At this stage of child-life parental control is most likely to break down completely. By deceit, by sheer insubordination, or by passive indifference, the parents' wishes are disregarded. Boys, particularly, resent their mothers' cautions, avoid the society of women, hate to be tied to any woman's apron-strings. This is the age that needs the most cautious and firm discipline, and the most mature judgment for guidance. It is almost safe to say that no one who has not been educated by actual parenthood is fit to deal wisely with this adolescent life; and yet this age, perhaps more commonly than any other, is intrusted to the callow young normal graduate. What bond of sympathy can possibly exist between that boy of thirteen who wants to run away from home, fight Indians, sleep out of doors, play baseball or football, hunt and fish, do "stunts" in running and swimming, and that normal girl graduate who dreams of lovers and dances and dresses? These two are mental and spiritual antipodes. She loves a cat; he, a dog.

What are some of the results of this—we will not say feminizing, but—puellizing of adolescent education? The active boy of fourteen, with his freedom of movement, often knows more of the real world than his teacher. He longs to be with men. He says: "The world, with its factories, its stores, and its farms, is a better teacher than this girl. I will left-right for her no longer. My down sitting and mine uprising shall henceforth be at the behest of men." In consequence, many high schools graduate three or four times as many girls as boys. Indeed, the boys are prone to leave school before the age of high-school entrance. Between the ages of thirteen and fifteen in St. Louis and Chicago, and between the ages of fourteen and sixteen in Boston, the withdrawals from school each year are from 20 to 40 per cent. of the total enrollment. Withdrawals are most numerous in the sixth and seventh grades in St. Louis, and 34 per cent. of those who withdraw leave not from necessity, but from lack of interest.¹

Educators are challenged to study the statistics of elementary education almost anywhere in the United States and from them establish the claim that the eight-grade system is a success. Psychologists are challenged to study the phenomena of adolescence and find, if they can, any justification for the eight-grade system of elementary education.

¹ See C. M. Woodward, "When and Why Pupils Leave School," in *Reports of the United States Commissioner of Education*, 1895-96 and 1899-1900.

It may properly be claimed that simple fault-finding is the easiest and one of the most detestable of vices. Admitting that the eight-grade system has its defects, would a six-year high-school course extended downward be a good remedy? If schoolmen can free themselves of the idea that the secondary school should be modeled on the lines of a college-preparatory school, if a curriculum of secondary education can be built that will meet the needs of the large majority that will never participate in college life, it may well be believed that the extension of the high-school course to include the sixth and seventh grades would be a great forward movement. Among the advantages that might be gained, the following seem specially worthy of mention:

More time could be secured for a well-rounded pedagogical course that would permit wide differentiation in the eleventh and twelfth grades. That differentiation would naturally be along three general lines: business, mechanical arts, and professional preparation. In the first four years, from twelve to sixteen, the pupil could be tested on many sides and his aptitudes carefully studied. Not only would the teacher be saved from giving much faulty advice, but the pupil would have opportunity to find himself, and to save himself from costly mistakes and future readjustment. Not alone over the door of the college, but over the door of the high school, should be written: "Know thyself." At present the colleges, with their extravagant linguistic requirements for entrance, have forced the high school to overcrowd its four-year curriculum with languages and literature. Science is slighted, history is slighted, manual and physical training and business interests are almost neglected. The pupil is so busy getting drilled that he has no time to be educated. About the only choice he or his teachers can make is whether it is advisable to go to college or not.

Again, by beginning high school with the seventh grade the study of a foreign language could be begun at a time when power to acquire a vocabulary is greater than at any subsequent period. Knowledge of at least one foreign language seems indispensable in any high-school course for the increased command it gives over English.

One of the weakest spots in the high-school curriculum, as generally laid down, is due to the postponement of science studies, particularly physics, to the third or fourth year of the course. Dr. G. Stanley Hall is authority for the statement that less than 88 per cent. of the boys in New England high schools study physics. Now the study of physical phenomena is the most fascinating of all studies, and one of the most beneficial to children of thirteen or fourteen. Our high schools, in order to give a course of physics acceptable for college entrance, have been obliged to postpone this study beyond the psychological moment, and to fill the mind with matters less suitable to the age. When the subject of physics is taken up two or three years later, natural interest has often disappeared never to be thoroly reawakened. There needs to be no disagreement with the present course of high-school physics, if it be given as an advanced course; but elementary physics should be taught when interest in natural phenomena is highest.

By beginning high-school studies two years earlier than at present, substantial courses in manual and physical training could be introduced at a time when books begin to be tiresome to many and the desire for physical activity is seriously felt. Many a child now lost to school influences would thus be saved for a complete course; many more would be won for college or technical training.

The seventh school year also is about the point when departmental work may be most advantageously introduced. Pupils below the adolescent age suffer distinct loss from frequent change of teachers. The young child likes teachers whom he knows, and dreads change. He is apt to like old books, old stories, and familiar faces; but the adolescent revels in change.

Civic and moral training may also be promoted by bringing children into the high school earlier than the ninth year. Social agglutinations begin to show themselves distinctly between the ages of ten and fourteen. At present few teachers know how to use these tendencies for the good of the school. High-school societies uncontrolled have shown themselves so far to be a positive evil. Properly guided, these primitive social movements have been made most powerful instruments of moral development, as the work of the George Junior Republic and other juvenile organizations proves.

Some or all of the betterments suggested have been introduced into some elementary schools. The success that has attended their introduction into the seventh and eighth grades makes it more clear than ever that the dawn of the new interests of adolescence should mark the beginning of secondary instruction, instead of breaking into the elementary course near its close.

DISCUSSION

FRANK H. ROBSON, head master, Bancroft School, Worcester, Mass.—The paper to which we have listened undoubtedly represents the present tendency of educational thought and method. The unsatisfactoriness of present conditions is evidenced (1) by the lack of agreement in time and subject-matter; (2) by the efforts toward elimination of subjects; (3) by the efforts toward enrichment; (4) by the loss of interest of pupils thru inappropriateness of work; (5) by the large number of pupils constantly lost; (6) by the unsatisfactory compromise between practical and cultural courses. The plan of division is pedagogical in the management of pupils. It recognizes the incipient psychological and physical changes. This age should be separated from those younger. Different personalities in the teaching force supplement one another, and all the pupils may be touched and inspired. The close of the first six years is the proper time to begin courses essentially different in content, giving due regard to the abilities and expectations of the pupils. Industrial training must find more logical, broader, and more technical work in order to compete with foreign-trained mechanics. Time of the scholar is saved (1) because of elimination of unrelated subject-matter; (2) because department teachers know their pupils year after year; (3) because they have a larger working knowledge and experience of teaching materials.

CHRISTOPHER GREGORY, principal of Chattle High School, Long Branch N. J.—The question before us today is: Can we in six years accomplish in a satisfactory manner the elementary course to which we are now giving eight years, and would it be wise to add the

two years thus gained to the high-school course? The suggestions as to how the length of the elementary course is to be reduced one-fourth are of so general a nature that a school superintendent would find them of no value in aiding him to prepare a course of study. Condensation, correlation, and the omission of nonessentials from the course are not new suggestions. For fifteen years or more efforts have been made to prune the elementary course and modify it as suggested. The course had to be pruned vigorously to allow of the introduction of new subjects. The course now to be cut two years is not the old course, but a course that has already been well pruned. Two years cannot be taken from it without injuring it; it is doubtful if one can be taken.

If time can be taken from the elementary course, it should be given to secondary subjects, but it will be better spent in the grammar school. The change from elementary-school methods to those of the secondary school should be gradual, and the gradual transition can be better made in the grammar school than in the high school. The results of the sudden change made at the end of the eighth year hold out no good promise for a change two years earlier. Care should be taken that the teachers of the seventh and eighth years are teachers, not only of skill and experience, but of such broad training that their familiarity with their subjects shall enable them to connect the work of the elementary school with that to be done in the high school. A college training is desirable. It should also be assigned as definite part of their work that they familiarize themselves with high-school methods, and gradually approximate their methods to those of the high school.

CHARLES L. MOSHER, superintendent of schools, Canton, N. Y.—The suggestion that six school years be devoted to elementary and six to high-school work springs from the undeniable need of more time for high-school studies, and from the belief that the pupils of the seventh and eighth school years are subjected to methods which they have outgrown.

We cannot ask pupils doing the work of these grades longer to be satisfied with the inspiration furnished by one teacher. Pupils at this stage need contact with men as well as women. They need the expert teaching which can be had only under the departmental plan; they need the "laboratory idea" in connection with such facts of science as they are to receive; they are in better condition than they will ever be again to do the ground work in foreign languages; they are physically and mentally ready to receive, and they will eagerly grasp, if offered, those ideas of personal responsibility which are the basis of good citizenship, good service, and good living everywhere. In short, they are ready to be treated as thinking beings, to be instructed and led as such.

Hence I believe it can be maintained that sixth- and seventh-year pupils are greatly helped by high-school methods intelligently applied. Are they ready for high-school work? Is it not largely the question: How long should repetition continue? How long shall we require pupils in the grades to cover the same field year after year, widening the field with the child's growth? Cannot the child with profit finish much of his elementary work in six years? We have long enough been victims of the idea that a child's preliminary training must be finished, boxed, sealed, and delivered before anything else is attempted, when, in truth, some of the ideas connected with elementary work require maturity for digestion, and some of the work of the high school would be much better done if attempted before the child grows up. We have maintained a distinction of work when in many cases none really exists. It makes little difference whether we have elementary and high-school courses of six years each, or introduce into the elementary course of eight years those elements of the high-school course which properly belong there. Surely, we must at least offer the child a readjustment that will allow him to begin any particular work at such time as he is best suited for it.

There are some indications that it would be possible to complete preliminary training in six years. "Skipping a grade" is not an unusual performance, nor, in New York state particularly, is it considered remarkable for many pupils to do the so-called eighth-year work in a half-year. From which it is seen that, even under present conditions, many pupils spend little over six years in preparatory work.

Why, if preparatory training can be gained in six years, do we devote more time to it? The answer is: On account of custom. There is a further answer, however, still found in a large number of schools, which says that eight years are needed on account of overcrowded rooms, overtaxed teachers, poorly trained teachers, lack of co-ordination between a grade and those preceding and following it, lax methods of promotion, unskillful grading, noisy and ill-ordered rooms with resulting bad habits of misbehavior and indolence, failure to note the physical condition of the pupils. These conditions must be remedied, and when they are, we shall have found a large part of the two years' time for which we are searching.

WALTER M. KERN, superintendent of city schools, Columbus, Neb.—In its general features I concur with the address of Dr. Lytle. Our chief needs for grammar pupils are more flexible courses, better teachers, and a recognition of the individuality of the child. The incorporation of the grammar grades with the high school has the weight of the following evidence:

1. The experience of private schools. These schools take the pupils at approximately the age of twelve—at the time when they would be entering the sixth grade of the public schools. They attempt to differentiate the work, to respect individuality. They employ a superior grade of teaching ability. Emerson, writing to his neice as she was about to begin her education, used this line: "It matters little what your studies are; it all lies in who your teacher is." Münsterberg bears high evidence to the influence of his teachers (see *American Traits*). He was "three years ahead of the New England boy of the same age. If I think back, I feel sure that the chief source of this success was the teachers. I had no teacher from my ninth year in any subject who had not completed three years at the graduate school. Even the first elements of history and geography and mathematics were given us by men who had reached the level of the doctorate." Such enthusiasm as these teachers would exhibit is contagious.

2. The experience of the English public school. In these schools grammar-grade pupils are under tuition of a very high order. Only honor men from England's best universities are employed, and from these schools have come England's greatest men. No doubt a large measure of this success has been due to the fact that such pupils entered upon the languages, science, and history at the period of greatest interest.

Those who defend the present course will need to show: (a) that eight years are required for a pupil to acquire the arts necessary to enable him to complete his educational superstructure; (b) that the mind begins to classify and systematize at fourteen or later rather than earlier.

It may be claimed that because of the widespread conviction that high-school subjects are ornamental rather than practical, fewer pupils, under the plan proposed, would complete the work of the seventh and eighth grades. When we consider, however, that the vast falling off in attendance of pupils in the public schools is thruout the fourth and fifth grades—in some cases as high as 55 per cent. at the close of the fifth grade and 75 per cent. at the close of the sixth grade¹ and not at the close of the eighth grade, as is so commonly supposed, this objection has little of value in it.

MISS MARION BROWN, New Orleans, La.—The pupils just referred to in private schools and the English public schools are picked pupils and of a homogeneous people; the public schools of the United States take all races and classes. A comparison is not fair. Another embarrassment is that many high-school teachers have never taught in the elementary schools, and do not know the capabilities of the pupils that come to them.

W. B. FERGUSON, Middletown, Conn.—Adolescence does not begin with boys until the age of fourteen, and this is the age at which they enter the high school. The elementary-school course has already been trimmed almost to the limit.

W. L. GRISWOLD, Youngstown, O.—Would not election in the seventh and eighth grades, under careful supervision and restriction, help the matter?

¹ Report of the *United States Commissioner of Education*, 1899-1900, p. 1367.

A. F. SMITH, Lonaconing, Md.—In Maryland we have tried the experiment of reducing the grammar school to six grades, and find that we cannot do the work. We shall have to restore the seventh and eighth grades.

S. P. HUMPHREYS, Ironton, O.—The people have not asked for and do not desire the proposed change. Our pupils fail in the high school because they cannot spell and do not know English grammar. They cannot learn Latin unless they first know English.

CHARLES S. HARTWELL, Boys' High School, Brooklyn, N. Y.—Dr. Lyttle well says: "The highest efficiency means the truest economy." If the high school has "unloaded" on the grammar school, as the last speaker said, let it take the last two years and do the work. An equal division of time will (1) improve the education of teachers, as high-school teachers must be college graduates; (2) transfer pupils from the atmosphere of the three R's to a liberal atmosphere conducive to broader lives.

Equal division is feasible, and is being made in New York city. There departmental teaching in the last two years is done in 140 of 500 schools. The board of education has just transferred many teachers to Public Schools Nos. 24 and 62 in Manhattan, devoted exclusively to seventh- and eighth-year pupils. Dr. Maxwell at the national superintendents' meeting last year favored this division, and these intermediate schools are an entering wedge.

The consequences of this movement will be great. (1) The scheme of education will change from four quadrennial to five triennial periods, for the first year of high school will connect with these two years, and the previous and succeeding six years will be equally subdivided. (2) Many pupils will get a ninth or additional year. (3) The college course will be reduced a year. At the Boston meeting in 1903 Dean West, of Princeton, advocated four years for the college course; President Butler, two; Presidents Eliot and Harper stood for three; but nothing substantial by way of change has been accomplished. The reduction will probably come about in this way. (4) There will be great economy both of time and money by this equal division of the twelve years of school education.

E. W. LYTTLE (in closing the discussion).—This is the Fourth of July, and a very proper time for pyrotechnics. However, there seems to have been a misunderstanding in regard to the question on the part of some who have discussed it. The question reads: "Should the twelve years now occupied by the grammar and high-school courses be divided equally between them?" This is not a question of subtracting two years from the school life of pupils. We would by no means recommend that. We would prolong the school life even beyond the period of twelve years for all who can avail themselves of increased educational opportunity. Neither do we, as high-school teachers, wish to disparage good grammar-school teachers anywhere they may be found; but we do claim that in far too many places the interests of fifth-, sixth-, seventh-, and eighth-grade pupils are generally confided to immature teachers.

Again, it is nowhere claimed that twelve is the age of adolescence; we admit that age to be about fourteen, as has been said; but the *dawn* of adolescence was referred to, and that period usually begins some two years earlier.

WHY DO SO MANY FIRST-YEAR PUPILS LEAVE THE HIGH SCHOOL? HOW CAN THEY BE INDUCED TO REMAIN?

REUBEN POST HALLECK, PRINCIPAL, BOYS' HIGH SCHOOL, LOUISVILLE, KY.

Teachers as a class are prone to worry, so it may calm us secondary teachers somewhat at the outset to understand that problems of survival are not peculiar to the high school. Geological strata testify to the enormous waste of life.

Sudden climatic changes have modified or killed whole species. The cataclysms occurring in the fourth and the ninth grades are not so destructive as many that happen around us in the world of nature. If all the progeny of one pair of gypsy moths survived, they might in eight years devour all the earth's vegetation. Nature has seemed to take delight in producing in enormous quantities, so that individuals would encounter a desperate competitive conflict from which only the strongest could emerge.

The high school has recently suffered overmuch blame. Doubtful statistics have been employed to cover it with odium. The high school has received as much blame for failing to graduate all the pupils who never enter its doors as for its failure to graduate all who enter its first year. I think that figures will show that secondary schools do their work as well as any other department of education. In 1894 the state superintendent of Ohio said that 50 per cent. of all enrolled pupils dropped out by the end of the fourth school year. Kansas City has excellent progressive schools, and yet in 1904 her superintendent said: "It is safe to assume that 50 per cent. of the pupils enrolled in the public schools of Kansas City never get beyond the fourth year's work." It is an appalling fact if 50 per cent. of the children of a republic whose watchword is "education" do not get beyond the fourth grade. This whole nation ought to rise and discover the reason for this condition.

Great universities have their own shortcomings. I do not believe that the high school can be charged with allowing its pupils to waste their time in as pronounced a degree as students do at some colleges. Professor Byerly, of Harvard, says in the *Harvard Graduates' Magazine* for December, 1902:

It is commonly, and I believe correctly, asserted that a student of fair ability entering college from a good preparatory school, choosing his studies with discretion, using borrowed or purchased lecture notes, and attending one of two lecture "seminars" for a couple of evenings before the mid-year and final examinations, can win our A.B. degree without spending more than half an hour a day in serious study outside of the lecture and examination rooms.

The Tower of Siloam has for some time been falling on the high school, but I hope that I have made you feel that we are not worse than some on whom that tower has not yet fallen. If I have, I am perfectly willing to admit the faults of secondary education, and to ask you to buckle on your armor to overcome them. No matter how wasteful nature is, it is our duty to try to make two blades of grass grow in the high school where one has grown before.

In any city, however healthful, some are certain to die each year. If the death-rate is too high, a good board of health will make inquiries and devise remedies. What is the percentage of that special type of high-school mortality which we are discussing? The answers are nearly as various as the schools. The assistant commissioner of education of the state of New York said in 1904 of the high schools of New York city: "Approximately 52 per cent. are enrolled in first-year classes; 26 in the second, 13 in the third, and 7 in the fourth."¹ As a result of his quite extensive studies, Professor A. C. Ellis

¹ *Educational Review*, October, 1904.

says: "Of the boys entering the high school, nearly half drop out before the second year in all sections of the country."¹

There is general agreement that the percentage of those falling by the way in the first year of the high school exceeds that for any other year. What are the causes? The statistical method has been tried to answer the question definitely, but those who have tried this way acknowledge its failure.² Secondary education is in such a transitional state, and the teachers change so frequently, that figures from the same school for different years are often worthless for purposes of comparison.

Mr. William F. Book³ adopted a more suggestive method than the statistical in finding out why high-school pupils leave school. He had 961 high-school boys and girls in fifteen different cities and towns discuss this question in writing, so as to get the pupil's point of view. Many of the replies show remarkably good sense and penetration. Many different reasons are given, but there are some points on which all the papers agree. These common points of agreement are that pupils leave the high school because their interest is not secured; because the teachers fail to give them proper help and encouragement, or are positively unsympathetic; or because, from a plain business point of view, going to high school does not pay. Three extracts from what the pupils wrote will be suggestive. One says: "Many a boy stops rather than be tormented by a teacher who fails to understand him." Another exclaims: "Nothing doing in school!" A boy of seventeen writes: "I attribute most of the interest I have taken in any subject to the teacher in that branch."

I should like to offer some suggestions based on my secondary-school experience extending thru twenty years. I remember that the mortality in a certain hospital once resulted in an investigation. The committee reported that the causes were two: young and inexperienced doctors unscientifically treating an unusual epidemic of a virulent disease. I believe that this same verdict will account for much of the excessive mortality of the first year in the high school. High-school teaching is not yet a profession, and the first year develops an unusually virulent disease in the pupil.

High-school teaching is not a profession in the same sense as the practice of law and medicine. Professor Dexter,⁴ from his study of a selected group of high schools, gives the average years' experience of high-school teachers as varying from 8.9 for men in the North Atlantic Division of states, to 4.4 for women in the Western Division. Superintendent Aiton, state inspector of high schools of Minnesota, writes: "In my judgment, the average term of service of the high-school teacher in this state is not over four years." If I am reminded that many drop out of medicine and law, I must ask: Are the best lawyers and the best doctors the ones most likely to abandon their pro-

¹ *N. E. A. Proceedings*, 1903, p. 794.

² "Report on High School Statistics," by J. M. Greenwood. *N. E. A. Proceedings*, 1900, p. 340.

³ "Why Pupils Drop Out of the High School," *Pedagogical Seminary*, June, 1904.

⁴ *Fourth Yearbook of the National Society for the Scientific Study of Education*, Part I, p. 52.

fessions? Do our most intelligent young men and women remain in teaching? In twenty years I have known but one high-school teacher, whose resignation was desired, to present it voluntarily. If the most capable young men and women do not find enough in secondary teaching to attract them permanently, it is plain that our high schools can never reach high-water mark. The high school of which I am principal pays from \$1,000 to \$1,800, but I am never satisfied with that worth of ability in my teachers. I usually get men who are worth vastly more; but, as a rule, they leave in a short time. This ceaseless change, this increasing difficulty in finding suitable men teachers to inspire adolescent boys, and of avoiding incompetents who would mar God's image in the making, causes me often to say: "Uneasy lies the head that wears a secondary crown."

Authorities tell us that less than 20 per cent. of the boys who enter high schools remain to graduate. The Boys' High School of Louisville has for some years maintained an average of nearly 38 per cent. of graduates. This would not be a large average for a girls' school, or for a mixed school, or for a school in a smaller town where the population is more homogeneous and the chance for social mingling greater; but I am sure that this percentage could not have been maintained in a commercial city of a quarter of a million, unless the remedies, which I shall now briefly outline, had been prescribed to stop withdrawals from school.

First, an endeavor is made to get the best teachers, irrespective of the state in which they were born or educated. College graduates are always chosen, largely in terms of their individuality, which must be such as to inspire and stimulate adolescents. The teacher of adolescents must have energy, enthusiasm, and sympathy. I have found that inefficient teachers allow the largest proportion of pupils to fail, irrespective of the subject. Those teachers who cause the most to drop out are either those who have little skill in the art of teaching, or those of the self-righteous, unsympathetic type, who remain on their pedestals and offer no encouragement to a stumbler. I sometimes ask such in a roundabout way: "Suppose the Messiah had been of your type?"

Second, put your best teachers in charge of first-year classes, and you will be astonished at the size of your second-year classes.

Third, even the best teachers should remember that the majority of incoming pupils are very immature. If instructors are not careful, they will find themselves teaching subjects like algebra and Latin as if the pupils were expert metaphysicians. I have often sat in the rear of the room and listened to the explanations of the teacher, and failed to comprehend them on the run, because, like the pupil, I was not an expert in that line. At such times there comes over me a feeling of thankfulness that I am no longer a child compelled to grasp at hurried explanations which have no meaning for me. Remembering how I dreaded to be in the clutches of a teacher whose explanations I could not comprehend, I sometimes wonder that more pupils do not leave.

In the fourth place, I should like to emphasize the fact that the first eight weeks in the high school are the most important in the course. The psychological moment has come to endear the pupil to the school, and to put him on such a firm foundation that the floods of discouragement and the winds of bad preparation will not shake him. Never again will he be so impressionable, never again will he slave so willingly, never again will the mere novelty of mastering things hard and dry seem like such a glorious victory. The majority of teachers begin a new subject too rapidly, and give the pupils too little time to find themselves. In many cases a third of the class is so far behind at the end of eight weeks that their doom is already sealed. A horse- or a dog-trainer who failed with such a large percentage of animals would be speedily asked to change his occupation.

Every enduring element of human progress is built on repetition. Those teachers are geniuses who can have the pupil repeat foundation facts in such a variety of settings that he never feels the mental paralysis that comes from too much sameness, but seems to be getting something new with each recitation, just as a skillful cook can make you and me think that we have a varied bill of fare, altho the essential articles of diet have been the same for a month.

In the fifth place, high-school teachers must be able to teach pupils how to study. That is one of the most important parts of our business. All teachers are too prone to forget that the study of books, however necessary, is at first unnatural. The first year in the high school suddenly presents subjects from a more difficult and abstruse point of view, and book study becomes correspondingly more unnatural. For untold ages man's chief business was with external things, with rain and shelter and fruits and animals and clothing. He cared little for the idea divorced from the thing. They went hand in hand. In the study of algebra and Latin, for instance, how could this unnatural divorce be more complete?

The complaint is universal that high-school pupils do not know how to study. How many high-school teachers really know how to break pupils into dealing with ideas apart from things? Many pupils are simply bewildered when left alone with ideas. They do not know what such study means. It is simply mockery to tell them to concentrate their minds, and not to think of the dog or the boy whistling to them to come outside. I have found out by costly experience that many pupils will never learn how to study unless their minds are steadied by some objective external aid. They need that just as much as a carpenter requires a scaffolding. For instance, a pupil who did not have the power of putting much consecutive study on his Latin forms was handed a lead pencil and a piece of paper and told to write down the forms. The movement of the pencil and the black marks appealed to his bodily eye and furnished the requisite external scaffolding to keep his mind steady. Then he was told to repeat the words aloud, and his ear afforded a different type of scaffolding. Some pupils need to represent their algebraic problems graphically before they mean anything. One beginning class,

which had done execrable work in English composition, was made to follow a rag-picker for half an hour, or to spend the same length of time watching a street fakir, or a policeman, or a dog, or a cat, or a freight depot, or a central market, or a peddling huckster, or something else that afforded scope for mental action in connection with things or movements. The pupils were then required to report what they had seen or done. The improvement was so rapid that the whole school was then given regular assignments, just the same as if all the pupils had been reporters on a daily paper. The improvement in writing was so striking that this output was exhibited at St. Louis, and was one of the factors in securing an individual gold medal for the school.

In the next place, my experience has convinced me that first-year pupils should receive special attention the moment signs of delinquency begin to appear. This attention, which can be given before or after school, or during study periods, is as absolutely necessary for delinquents as for a physically sick person to have a doctor. I know that this special attention will save many from leaving school.

Let me tell you how certain altruistic teachers carried a class of twenty-eight boys thru the first year with a loss of only two. The class was merely an average one in point of ability. One special teacher adopted that class. He told the class that he should consider them his boys, that he was responsible for them, and that he had already boasted that they would stand by him and do well. He asked them to let him know personally if any trouble developed. From the start the class was interested in keeping his good opinion; but soon there began to be copying—that almost invariable precursor of delinquency—and then some boys fell behind. He said to them:

Boys, this class is like a city or a town, and you must help each other out. If one boy fails and stays a failure, I am going to hold the entire class responsible. What would you think of a city that had no infirmary or hospital and paid no attention to its sick? You must yourselves help all your classmates who need assistance in any study, but you must help them right here in the class family with me, but not on the outside, unless I first have an understanding with you about that. You won't find it necessary to copy any more.

Then, to break the ice, he had boys begin to help each other at once. A number who had been sent to the board to work algebra problems could not solve them, and he promptly sent other boys there to help them in such a way that they could work the problem alone. Others were detailed to go around the room to find out if more needed help, and the helpers were very proud to be designated as such.

Their patron teacher regularly visited all their other instructors to ascertain if there were delinquencies in other subjects, and to see that the needed attention was at once given. That class became patriotic to a fault. It was proud of itself, its teachers, and the entire school. About a month before the end of the year, I was detained an hour after closing time. As I left, I was surprised to see two boys from that class coming from a room. "Sam," I said, "you and Will must have been very naughty to be kept so long after

school." "No," replied Will; "Sam didn't understand his German very well, and I just stayed to help him."

We saved all but two of that class of twenty-eight. And every one of those twenty-six boys would have behaved like a Tartar at home, if anyone had suggested his stopping at the end of the year.

We never have such success with those classes whose teachers we change in the middle of the year. It takes both pupils and teachers some months to adapt themselves to each other. To make a change when they really begin to understand each other results in much wasted force. If mid-year promotions necessitate tearing up the school in the middle of the year, then I doubt their wisdom. I have seen classes that had done good work the first half of the year go completely to pieces under a change of teachers the second half.

We have found out thru experience that the work of the first year should not be so severe as that of the other years. We make it 20 per cent. less in amount. But whatever is taught should be thoroly taught. A pupil will never amount to much unless he learns how to face hard work. Mr. Book's investigations show that no teacher who was lenient or easy in her requirements was mentioned by the pupils as a favorite instructor. His comment is: "All said that they did as much work for their favorite teacher as for all the other teachers combined, and that it was always a pleasure to do it."

Now I shall try to epitomize as briefly as I can the points which seem most important in discussing withdrawals from the high school. I believe that for lasting, orderly improvement, high-school teaching must become a profession; that teachers of adolescents must be chosen largely in terms of their personality, with the chief emphasis on sympathy and the power to stimulate and inspire; that these teachers should understand that the break between the eighth and ninth grades is due more to an emphatic difference in the kind and amount of mental activity required in the high school than to mere difference in the subject-matter; that they should realize how unnatural is the study of abstract ideas and relations; that they must learn the absolutely necessary art of teaching pupils how to study; that first-year classes should be put in charge of the very best teachers; that the first eight weeks are the most important; that the start in new studies must not be made too rapid; that delinquents must immediately receive special attention; that some one teacher should watch a special class like a parent, and that he should receive special credit for having as few delinquents as possible, as should every teacher for keeping down the number of delinquents in his special branch; that a spirit of co-operation should be developed so that the members of each class will be willing to help their own delinquents under the direction of the teacher; that classes should change their teachers as little as possible during the year; that the work of the first year should be very thoro, but about 20 per cent. less in amount than for the other years; that good teaching and the spirit of the

school are more important to prevent withdrawals than the addition of many so-called popular subjects; that the enrichment of the course may not result in the enrichment of the pupils; that to a certain extent different causes are operative in leading the two sexes to stop school, the boys seldom mentioning ill-health or overwork; that more attention should be paid to differentiation in secondary instruction for the two sexes, the reason for this belief not being based on introspection, but on the concurring testimony of experienced secondary teachers coming to my school from schools where the female sex preponderated, that, in spite of much previous successful experience, it took them at least a year to learn how to handle boys properly; that a scientific study should be made of the psychology of adolescence of both sexes; that the school should foster some branches of social activity appealing to the play or recreation side of the most varied personalities; and, finally and chiefly, that teachers should aim to develop moral stamina, since more pupils drop out from lack of moral vigor than from deficient intellectual ability.

DISCUSSION

J. STANLEY BROWN, principal, Township High School, Joliet, Ill.—The natural instinct for money-getting in many cases outweighs the desire for further school training. The high school does not provide enough phases of education to fit the natural aptitudes of the children. The elementary course of study fails to meet the needs of the youth and the youth stage of life. The close of the elementary stage ought not to be marked by diploma and formal graduation, because this gives a wrong impression of what has been accomplished. The elementary course is too long by about two years. If we could get the student well settled in the high-school course of study before he reaches the adolescent period, we should take a long step toward the settlement of the trouble.

ISAAC THOMAS, principal of high school, Burlington, Vt.—Statistics on this question are almost wholly valueless, because they touch upon only the superficial, local, and temporary elements in the problem. The real causes of the defection from the high school lie deeper, are more fundamental. I shall name only these, all applying to the teacher or the teaching, and all, therefore, fundamental.

First, the predominance of women among high-school teachers. *Ceteris paribus* this predominance is harmful simply and solely on the ground of sex—harmful to the girls and absolutely disastrous to the boys.

Second, as a corollary of the first, the general character, professionally speaking, of the teachers in the high schools. I do not attach much importance to the fact that these teachers, as a body, are untrained in pedagogy and psychology; for in a properly sized high school, under the care of a good principal, an inexperienced teacher will gain more in one year's actual teaching than any agency for the training of teachers we now possess in this country could give her in all the years of its course. But that the high schools should be at the mercy of makeshift and stepping-stone teachers is, indeed, a serious thing.

Third, the uneducated specialist. A certain amount of specializing among teachers in the high schools is necessary, but the extent to which that is being carried is working evil every day. Under the care of this specialist two things happen: (a) his subject is viewed without regard to its relation with other subjects, of which he knows little or nothing; (b) he cares only for the development of his subject and loses sight of the pupil, his motto becoming, "the pupil for the subject," and not "the subject for the pupil."

Remedies: first, the employment of fewer women as teachers in the high school; second, a competence secure enough to induce men to enter the profession of teaching as a calling; and third, the education and humanization of all specialists.

J. W. SEARSON, superintendent of public schools, Wahoo, Neb.—In our civilization, as organized today, there are certain forces which tend to draw a child from our secondary schools. One of the strongest forces is the spirit of commercialism, which leads a child to place a higher value upon a dollar than upon ability to enjoy life and to make dollars. The child's innate desire for possession, to own something, makes this spirit appeal to him very strongly. In all industrial communities where there are packing-houses, factories, or other fields where child labor can be utilized, this spirit of commercialism operates most strongly.

Another force which, in a negative way, permits pupils to drop out of school in the first year of the high school, is the lack of parental appreciation of the value of an education to a child. Lack of firmness on the part of parents, lack of home discipline, and over-indulgence tend to give to a child the idea that he can do as he pleases, and he soon realizes that he can quit school if he likes. Low ideals in a community have operated to prevent many children from completing their secondary-school course. The efficient teacher can do much to remedy this condition, if her personality is so strong and her character so true that her ideal of life and work may be felt in the community in which she lives.

There are certain forces within the school which should be made to operate more strongly to keep a child anxious to pursue the full course. Under-appreciation of child-nature from the child's standpoint has done much to keep children from school. The child who is misunderstood hates school; the child who is appreciated loves it. Happy is that teacher who can touch the hidden springs in the heart of the child, and who can encourage the child to be his true, best self, as he strives to work out his ideals. In the matter of men and women teachers in the secondary school, I believe it is conservative to say that the ratio of men teachers to women teachers should be at least as great as the ratio of male pupils to female pupils in the high school. Any conditions, or series of conditions, which permit pupils to drop out of the high school, may be summed up in the question, "The Under-Appeal." If a child does not feel that the branches offered contribute to his growth, he resents the requirements of the school. It does not make so much difference what a child studies in the secondary school, as the spirit with which he studies it. He must be brought into the right attitude to his work. He must be led to appreciate his powers by being made to feel that he can do things well. There is no higher inspiration that can be brought to the life of a child than the inspiration that is born of the consciousness of mastery. The child is appealed to strongly by the spirit of organization at this period. He is one of a "gang." The teacher who utilizes this "gang" spirit in promoting safe and sane school organizations develops the best in her boys at this stage. Literary societies, debating contests, athletics, and charitable or economic organizations enlist the keenest and best enthusiasm of the child. When a teacher, by reason of strong insight into, and an abiding sympathy with, child-nature can appeal to the very heart of a child, no force, either out of the school or in the school, can cause the child to stop short of the attainment of his ideal.

ERNEST C. NOYES, Franklin School, Cincinnati, O.—One consideration seems to have been entirely overlooked by the preceding speakers; namely, that it is only proper and natural that a certain proportion of pupils should not complete the high-school course.

If our courses amount to anything, not every pupil is capable of assimilating high-school studies. By encouraging incompetent boys and girls to take work for which they have not the capacity, we produce that most abnormal and useless object, the top-heavy student. Moreover, in the world of nature and in the men of world of men the law of life is the survival of the fittest. Why should we seek to impose an artificial law upon

the school world? As Professor Wendell has well said: "Tho education is a cure for many evils, the panacea for the evils of education is not, as Americans are prone to think, more education."

I. FRANKLIN PATTERSON, South High School, Cleveland, O.—One reason why pupils fail in the high school is because in the lower schools they have been entirely under women, and are not ready for the sterner treatment from men.

WILLIAM ALBERT CRANE, Curtis High School, New York city.—Not all pupils are fitted to go thru the high school, and it is cruel to try to force such thru. We must recognize the limitations that God has imposed on his creatures.

C. I. WEBSTER, East Orange, N. J.—In East Orange we are trying to meet the difficulty by providing an intermediate class for pupils not fully ready for the high school, and it is hoped in this way to reduce the percentage of those who fail.

REPORT OF THE COMMITTEE ON SECRET FRATERNITIES

GILBERT B. MORRISON, PRINCIPAL OF WILLIAM MCKINLEY HIGH SCHOOL,
ST. LOUIS, MO., CHAIRMAN

At the last meeting of this department at St. Louis, a paper was read by the chairman of the committee now reporting, setting forth the conditions and nature of secret fraternities in high schools. At the close of that meeting a committee was appointed by the department to investigate the matter further and report at this meeting. In submitting this report, the committee has thought best to review somewhat in detail what has been thought and done by those who have undertaken to subject the fraternity question to thoughtful analysis.

On March 15, 1901, Mr. Edwin Twitmyer, of Seattle, Wash., sent out the following circular letter to a number of city school superintendents, high-school principals, and others who had had more or less experience with these organizations in the schools:

DEAR SIR:

The boys of the Seattle High School are anxious to establish Greek-letter fraternities in connection with my school. It is a problem with which I have had no experience, and before giving the movement my sanction or encouragement, I desire to inform myself as fully as possible regarding the value or advantage of such organizations, if they have any, to our high-school boys. . . .

I trust I may be pardoned for asking the benefit of your experience and observation as to the advantages—moral, physical, and intellectual—of these fraternities in connection with the public high schools. What, in your opinion, is their influence on the boys belonging to them? What on the school as a whole? Are they a thing to be encouraged?

Sixteen of these letters were sent out, and fourteen replies received. They came from principals, college professors, and superintendents, at that time located in Buffalo Central High School; University of Michigan; Kansas City Central High School; Ypsilanti (Mich.) High School; Hyde Park (Chicago) High School; San Francisco High School; Lake View (Chicago) High School; superintendent, Ann Arbor, Mich.; Detroit (Mich.) High School; Oakland (Calif.) High School; professor in University of California; Saginaw (Mich.) High School; Los Angeles High School; Ann Arbor (Mich.) High School. The following extracts are representative, and show the opposition to be not merely unanimous, but decidedly pronounced:

Central High School, Buffalo: "I am unalterably opposed to them, and have yet to see any good resulting from them in schools where they exist."

Professor in University of Michigan: "I have had considerable experience with high-school fraternities, and, in consequence, have no hesitancy in condemning them as undemocratic, immoral, and from every point of view deleterious to the highest welfare

of the school. They are clannish, interfere with class elections and class policies, and have no hesitancy in placing the good of the order above that of the school. I say this, in spite of the fact that I am myself a member of a prominent college fraternity. High-school boys are not old enough to discriminate."

Ypsilanti (Mich.) High School: "You people will greatly err if you allow any society to start in your school that is secret or dark lantern. Allow no society that has ramifications in, or any connection with, other high schools; if you do, the society will get away from you."

San Francisco High School: "From my experience, running over a period of fifteen years, I am compelled to advise strongly against such fraternities in high schools. They tend to jealousy and clannishness to a degree that is detrimental to the interests of the school."

Lake View High School, Chicago: "It is difficult to prevent class distinctions from arising where fraternities exist. This is, to my mind, the most baneful result of these societies in the high school. The public high school should stand for democratic thought. I should not encourage fraternities, or anything which would tend to produce caste in our schools."

Principal of High School, Ann Arbor, Mich.: "In my opinion, based on many years of experience and observation in public-school work, there can be no benefits, either moral, physical, or intellectual, derived from Greek-letter fraternities in connection with public schools that would not be greatly outweighed by the disadvantages, some of which are these: the engendering and fostering an un-American spirit of caste; the formation of cliques; the tendency to make school work a secondary matter; the doing of unmanly deeds as a body in secret, that no one would think of doing openly; the formation of questionable habits; the constant tendency to pull down rather than aid in building up and maintaining discipline. As you do not have the 'elephant' on hand, I certainly would not encourage it to come."

Los Angeles (Calif.) High School: "I do not think the pupils are benefited by belonging to secret societies. There are occasionally reports that their actions at some of their meetings are reprehensible. The exclusiveness of the societies is opposed to the true democracy that should rule the public schools. They tend to divide the school into classes socially."

Shortly after the organization of the Manual Training High School of Kansas City, Mo., a few boys, *sub rosa*, formed a chapter of a secret fraternity. Before taking decided action for or against them, the principal, Mr. G. B. Morrison, sent out the following questionnaire to high-school principals in two hundred of the largest cities in the United States as ascertained from the census report. Three questions were sent as follows:

1. Have you secret Greek-letter fraternities in your school?
2. If so, do you regard them as beneficial or harmful to the best interests of the school, and why?
3. If not, have you had any experience in keeping them out?

Answers to 185 of these letters were received. Of these, eighty-seven reported experience with fraternities, and ninety-eight reported no experience. Fifty-three principals expressed no positive opinion, but were inclined to look upon fraternities with disfavor. Three spoke for them. One thought they might do no harm, if properly managed. One hundred and twenty-eight spoke against them in unqualified terms. Five had tried to keep them out and failed. Four had succeeded in getting them out. Of these answers, the few given below are fairly representative:

I regard any society or organization which exerts an influence in the school over which the principal has no authority as wrong in principle. The principal is the head of the school, or ought to be. He is responsible for the school in all its activities, and should, therefore, be clothed with an authority commensurate with his responsibilities. In all societies of the school the principal should have a guiding and a controlling hand. He should allow the largest measure of freedom consistent with good work.

—ARTHUR BURCH, Principal of East Division High School, Milwaukee, Wis.

I was a member of a fraternity in college and know something of such organizations. . . . I think such organizations in high schools are positively *harmful* and ought *never* to be established.

—STANLEY BROWN, Principal of Joliet Township High School, Illinois.

The next letter is from one who has had experience in getting them out:

"We have no chartered fraternities. We have school debating societies with Greek-letter names. They are harmful, and only harmful, to the best interests of the schools. They introduce school politics of the most demoralizing nature, create school dissensions, and offer constant temptations to which schoolboys should not be subjected. I have had experience in getting them out. Two such societies were organized a few years ago in our school, and were so thoroughly pernicious in their influences that I took effective measures to get rid of them. I was unable to discover one redeeming feature connected with them, while their demoralizing influence was constant and thoroly evident.

—O. D. ROBINSON, Principal of High School, Albany, N. Y.

All but one of the letters defending fraternities showed plainly that the defense was based more on a desire to compromise than upon any belief in their virtues. The next letter is representative of this class:

We have two boys' and two girls' fraternities. So far they have done no harm. On general principles I distrust them, but there are from two to five teachers in each of ours. They are managed almost entirely in accordance with the suggestions of the teacher members. One maintains a chapter-house near the school. Ours are so dominated by the teachers and the better element among the pupils that so far they have been a help rather than a hindrance; yet, *I should welcome the knowledge that all were comfortably dead and buried.*

—CHARLES D. LARKINS, Manual Training High School, Brooklyn, N. Y.

The next two letters are characteristic of the 128 which condemned fraternities in unqualified terms:

They are harmful. (1) They ultimately injure school spirit. (2) They tend to set examples of social extravagance. (3) Some boys and girls are withdrawn from public schools by thoughtful parents because the home does not like to see children made unhappy. (4) Some of the members can not, without hardship, pay the fees. (5) Secondary-school pupils are too young to manage such societies wisely. They are liable to degenerate into smoking and gambling clubs on the part of the boys, and into frivolous, gossip, idling places on the part of girls. (6) The boys cannot help using their organizations for political machines to place their members in such positions as may be open to election.

—W. H. SMILEY, Principal of High School, Denver, Colo.

Yes. Three for boys and three for girls. I wish with all my heart they did not exist. They kill absolutely all true school spirit. We issue two school papers each month, published by the two oldest fraternities, and while it is generally conceded that one good school paper could be produced if all would work together for that purpose, such result cannot be obtained because of fraternity jealousy. Athletics have been cursed by them. The spirit of toadyism is manifest for the purpose of admission. Debating societies cannot flourish because of the immediate attempts, upon information, of fraternity boys to run them. I have succeeded in getting them out of my building for meeting purposes, but the spirit is still there, and will be until the board of education takes action contrary to that which permitted their entrance into our school.

—H. D. SIMONDS, Principal of High School, Bridgeport, Conn.

One strong objection to fraternities is found in the fear they inspire in many high-school principals, thus showing them to be factious, intimidating, and dominating forces. The next letter, from Massachusetts, is a type of many received illustrating this fact:

Yes. I have two small societies, which are as good as they will average. I give the following answers with the distinct understanding that they shall be confidential, and under no circumstances be printed or used so as to identify my connection with the answers. (1) I regard secret fraternities as harmful in a public school. (2) A secret society organized for the purpose of distinguishing a particular class of students from others and entered upon by an oath of fidelity to secret principles is inconsistent with the democratic idea of a public school. (3) Such organizations quickly become social clubs where are cultivated the worst tastes and practices between young people. They are not maintained for the purpose of cultivating the noble side of young men or developing in them pure thoughts. (4) High-school pupils are too young to maintain social clubs without some older and wiser guarding power.

Henry L. Boltwood, principal of Evanston (Ill.) Township High School, has given much thoughtful attention to fraternities, and in a recent article he says:

Within ten years there have sprung up in the public high schools at least a dozen Greek-letter societies which are cheap imitations of college fraternities, especially in the

things wherein the college societies are most at fault. From personal experience, I find much harm and little good in these school societies. They encourage clannishness and self-conceit, and are subversive of school and class spirit. Loyalty to the society takes the place of loyalty to the school. Each new society affords pretexts for additional social functions and extra expenses. . . . Mothers with tears in their eyes tell me of the heartless and cruel ways in which their daughters are slighted and snubbed by society girls.

In 1903, a committee was appointed by President William R. Harper of the University of Chicago, to report upon the influence of fraternities and sororities in secondary schools to the Conference of Academies and High Schools in relations with the University of Chicago. In 1904 the committee reported progress and called for further time. In November last this committee, after an investigation of two years, made a report. Extracts by the chairman, Principal Spencer R. Smith, were published in the January number of the *School Review*. They had received answers to an exhaustive questionnaire sent to principals thruout the United States. The investigation was conducted with fairness and deliberation, and we take the liberty of quoting its main conclusions, which follow:

Summing up the argument for and against the secondary-school secret society, it is found that there are some schools which thoroly believe in and strongly favor the presence of the secret society in the school. Prominent among these are Lewis Institute, Chicago, and Colgate Academy, Hamilton, N. Y. But these two schools are closer in spirit to the college than is the average secondary school.

The arguments made in favor of fraternities are: (1) they can be made very useful to the individual student as well as, to the school at large; (2) they aid school discipline; (3) they foster friendships; (4) they increase school spirit and loyalty.

The arguments against secondary-school fraternities and sororities were numerous and various, but those recognized by the committee were mainly these:

1. *Their influence is detrimental to the school.*—They have been found an evil and a curse. Their tendency is to break up all literary societies and divide the school into cliques, and bring into the school the worst kind of politics and morals.

2. *They are detrimental to the student himself.*—(a) Positively, in that they hurt his mind and character. The greatest injury has resulted to the members themselves. It causes a decline in school interest and in the preparation of school work. A spirit of indifference to consequences and an air of superiority seem to follow. Many never complete the course. In their fraternity rooms rumor has it that there is little evil that boys can indulge in that is not carried on. (b) Negatively, they are of injury to the student in that they keep him from doing things that he might otherwise do if he were a loyal member of a united, single-spirited school. The elect owe all that they have of excellence in force, character, and manners to lift the level of the mass. The school as a social organization ought to be unified by the generous spirit of those able to give, not broken into suspicious cliques. They split the school on every project in which unity is desirable.

3. *They are unnecessary.*—They fill no real need, as the college fraternities do. The students are at home and are too young to choose any life outside of the home life, and supposed to fill some of its needs. They ape the college, with no other reason than to be "colleegy."

4. *They are undemocratic.*—They cause much jealousy and heart-burning, especially among the girls. They are a source of grievance to many who are not "called."

5. *The standards they set up are different* from, if not opposed to, the standards ideally set up by the school authorities. "All are organized on a social basis; the faithful students, that neither dance, smoke, or dress well are not wanted." They "are filled with sons and daughters of the wealthy to whom life seems only an idle dream."

6. *They are often an element of danger in the government* of the school, when they have grown old and strong, and are a source of much annoyance to the authorities.

7. The committee, finding the final argument against fraternities and sororities very well voiced by a gentleman from Massachusetts, quotes him fully:

"Any system that makes paramount the decisions of immature minds on questions of social and other school distinctions is, in my opinion, radically vicious. Any plan that tends to break up the solidarity of the school in the interest of imaginary class distinctions cannot be too sedulously avoided. Any scheme that weakens the influence of the master and his teachers, and exalts the power of pupils without regard to masters or teachers, strikes at the very foundation of the American school.

"The absolutely insane antics of initiation among these secret societies are enough to condemn them in the minds of intelligent people. To my certain knowledge, the

usefulness of more than one headmaster has been destroyed in the community by friction arising from the prevalence of the secret-society evil. . . ."

At the close of this report, President Harper asked whether the committee had any recommendations to make. The chairman stated that the committee would like to present its report as a report of progress, and to be continued with a view to report further at the next session. It was accordingly moved that the committee be continued.

After further discussion of the question involved in the report, it was voted that, in view of the evidence submitted, in the opinion of those in attendance at this meeting, the presence of secret societies in schools of secondary grade is harmful to the best interests of these schools, and of the individuals concerned.

Until recently, the apprehension that fraternities would, if not discouraged, ultimately become a menace to the welfare of the public schools has been confined to the principals of the high school, who are in a position best to see the inner working of the schools. But superintendents are now taking up the matter in a vigorous way. Superintendent E. G. Cooley, of Chicago, has, after a careful investigation of the conditions in that city, denounced fraternities in unqualified terms. We feel that the value of Superintendent Cooley's investigation justifies liberal quotations from his report. He says:

"In one Chicago high school having 1,330 pupils there are twenty-five elective positions filled by the students from their ranks. The fraternity members in the school number 130, as against 1,200 pupils not members of any secret order. At the time the investigation was made, it was found that twenty of the twenty-five elective positions in the school organization were held by fraternity or sorority members, and that the representative government of the school was as firmly in the clutches of the 'frat ring' as the municipal politics of New York are controlled by Tammany. If high schools are operated for the training of political bosses, then the 'frat' is an indispensable adjunct of high-school life; if government by clique is a desirable ideal with which to impress the mind of the young American, as a part of his high-school training, then the fraternity is accomplishing an excellent mission and should be encouraged in the secondary schools.

"Next let us consider the question of scholarship in this connection. When this problem reached a critical stage in Chicago, the principals and teachers were instructed to report upon the scholarship records of pupils belonging to fraternities and sororities, and to indicate what kind of a record might reasonably be expected from the pupils, if they were unconnected with any secret organization. The consensus of these reports was that, as a general thing, these orders contained much of the best elements in the schools in point of capacity and of favorable home environment, while the scholarship records were far below par.

"Feeling that the principals and the teachers coming into close contact with pupils were the best judges of the influence exerted upon school life by these secret orders, I sought an individual expression from fifteen principals and 375 teachers in the high schools of Chicago. Without an exception or a dissenting voice, they characterized the influence of the fraternities and sororities as harmful to scholarship and to discipline, as un-American and undemocratic. That the attitude of these principals and teachers may be clearly understood, I give below the round-robin to which all of them affixed their names:

"DEAR SIR: We, the principals and teachers of the Chicago high schools, desire to express to you, and through you to the patrons of the schools, our disapproval of high-school fraternities and sororities. We believe these organizations are undemocratic in their nature, demoralizing in their tendencies, and subversive of good citizenship; that they tend to divert their members from scholarly pursuits and to put the so-called interests of the organization above those of the school.

"The effect of secret societies is to divide the school into cliques, to destroy unity and harmony of action and sentiment, and to render it more difficult to sustain the helpful relations which should exist between pupils and teachers. . . .

"In addition to this, our experience shows that the scholarly attainments of the majority of students belonging to these secret societies are far below the average, and we have reason to believe that this is due to the influence of such organizations.

"In view of these facts, we feel that secret societies in the high schools ought to be discouraged by all reasonable means."

"This communication covers the situation admirably and accurately, but the reports from individual teachers bring certain features of the matter into clearer relief. One principal writes: 'The general influence upon the school is harmful. Time and effort is given to these organizations which should be given to school work. Boys sit up late smoking and chatting, and have little enthusiasm for study next day. Cliques are formed, and any question of discipline or scholarship, small in itself, is resented by the whole club.'

"Another principal calls attention to the fact that a 'frat house' located near the school is especially harmful because the boys secure permission, on legitimate pleas, to absent themselves from the room, and then abuse the privilege by sneaking to the 'frat house.' Both the fraternities and the sororities assume to represent the 'swell' element of the school membership; it is apparent that pupils of certain races are tabooed, and in other instances there is reason to believe that the business or profession of the father and the social standing of the family are taken into consideration in passing upon the qualifications of a candidate. That the religious associations of pupils enter into their acceptability as members of these organizations is firmly believed by some principals who are in position to make very close observations.

"What kind of a training is this for a young American, at the most impressionable period of his life? Childhood and youth should be the period of democratic association, the time when the purely artificial and conventional lines of social and class distinctions are most obscure. Caste should not be permitted to enter the mind of the American school-boy or school-girl. Anything which fosters the idea of clique and caste in the mind of the boy or girl of high-school age will help in making of that hateful thing, a young American snob.

"In the handling of this problem in Chicago, it has been found that some parents have been foolish enough to encourage their children in 'standing up for their rights.' To all parents inclined to take this attitude I would point out the fact that such a point of view endangers the high-school system in any large city. Most of the children of parents of small means are compelled to drop out of school and take up the fight for a living before they reach the high school; in a sense, those who reach the high school and enjoy its costly benefits are 'the favored few.'"

At the last meeting of the Connecticut State Teachers' Association, fraternities in secondary schools were discussed and unanimously condemned. Your committee has been unable to find any defense of these societies by any competent person who has given the subject thoughtful attention.

From an able paper published in Cleveland, Ohio, January 12, 1905, it plainly appears that the two private schools mentioned above as favoring fraternities cannot be taken as representing the position of private schools in general. Mr. George D. Pettee, principal of the University School (a private institution), Cleveland, Ohio, in a very able paper prepared for his patrons and students preparatory to abolishing fraternities, reached the conclusion that they are detrimental to the best interests of the school.

The legal aspect of the question.—In a number of cities, boards of education have discountenanced fraternities, and have passed resolutions barring them from participating in students' societies, athletics, and other privileges outside the class room.

In Kansas City, where such a resolution was passed, a parent served an injunction on a high-school principal to restrain him from enforcing the resolution. The board of education employed its attorneys for the defense, which resulted in quashing the injunction on a technicality. In dismissing the case, Judge Slover gave advice to the boys that caused the matter to be dropped. After closing his official discussion throwing the case

out of court, he said: "The principal's resolution is reasonable on its face, and was intended for the good of the school, and would readily be obeyed by any boy having proper respect for the faculty and the school."

The following from Superintendent Cooley's article states the situation in Chicago:

"Urged by their children, some misguided parents appealed to the courts for an injunction prohibiting the school authorities from enforcing the rules embodied in the resolution. The injunction was granted on the ground that the enforcement of the rules would deny to pupils belonging to fraternities and sororities certain rights and privileges enjoyed by other pupils.

"Here the matter now rests, but there is no doubt that it will be appealed to a higher court. Meantime there has been a notable falling away of 'frat sentiment' on the part of pupils, and an equally significant awakening on the part of parents to the fact that these secret societies have no legitimate place in high-school life—whatever may be said for or against them in connection with the college and the university.

"Parents should clearly understand that the high-school 'frat' means an early and a liberal education in snobbishness, in loafing, in mischief, and in the manipulation of school politics."

There is no legal precedent for the guidance of the courts in these cases, and the final outcome will, we believe, be determined largely by public sentiment. This sentiment seems at present to be setting strongly against fraternities in the secondary schools. The importance to the schools of the first court decision is so great that it seems to us that nothing should be left undone in propagating the sentiment so strongly prevalent among educators.

Therefore your committee submits that,

WHEREAS, The sentiment of superintendents, principals, and teachers against secret fraternities is almost universal, and their testimony, as disclosed in the foregoing report, coincides with the observation and experience of the members of the committee individually, be it therefore

Resolved, That we condemn these secret organizations, because they are subversive of the principles of democracy which should prevail in the public schools; because they are selfish, and tend to narrow the minds and sympathies of the pupils; because they stir up strife and contention; because they are snobbish; because they dissipate energy and proper ambition; because they set wrong standards; because rewards are not based on merit, but on fraternity vows; because they inculcate a feeling of self-sufficiency among the members; because secondary-school boys are too young for club life; because they are expensive and foster habits of extravagance; because they bring politics into the legitimate organizations of the school; because they detract interest from study; and because all legitimate elements for good—social, moral, and intellectual—which these societies claim to possess can be better supplied to the pupils thru the school at large in the form of literary societies and clubs under the sanction and supervision of the faculties of the schools.

Respectfully submitted,

GILBERT B. MORRISON,
EUGENE W. LYTTLE,
B. F. BUCK,
EDWIN TWITMYER,
JOHN M. DOWNEN.

Committee.

ROUND TABLE CONFERENCES

A. PRINCIPALS' CONFERENCE

TOPIC: SHOULD THE ENTIRE ENERGY OF A HIGH-SCHOOL PRINCIPAL BE GIVEN TO MATTERS OF ADMINISTRATION?

WALTER B. GUNNISON, PRINCIPAL OF ERASMUS HALL HIGH SCHOOL, BROOKLYN, N. Y.

There is no doubt that the tendency at present in all the large cities of our country is to centralize, especially along the line of supervision. The superintendents are constantly taking the ablest teachers and principals, and giving them the supervision and direction of special branches. With the unparalleled growth of the high schools this tendency seems unavoidable, and many of our best teachers and strongest men are practically abandoning the field of teaching, and taking up the better-paid but entirely different work of administration. A good teacher is too rare a person in the economy of an educational institution to warrant his entire withdrawal from the work of teaching.

By teaching I do not mean that the principal should occasionally direct the classroom work for the instruction of the teacher, but I mean that he should take the entire responsibility for the term's work of some entire class; that he should submit himself to the same rules and perform the same duties as any regular teacher of a subject; that he should give and correct examinations; demand and examine home work; goad the sluggard and restrain the overconscientious; apply the same tests to himself that are applied to other teachers; take the classes as they come, good, bad, and indifferent; and cheerfully abide the results.

Parents must be met in regard to what is the wise treatment of their sons and daughters, and no time given to this should be treated as unwisely spent; one's experience and special knowledge should be given freely to the many seeking it.

1. The art of teaching involves many things, and one of these is the necessity of keeping alive one's interest in the imparting of knowledge. Nothing is lost more easily by disuse than this. To feel this daily contact with the young is absolutely essential.

2. A man in charge of a high school must direct and adjust the working of specialists in many branches. There still remains the fact, however, that a principal should represent sound and accurate scholarship in some line.

3. The most valuable duty of a principal is to know his pupils, not by name or number, but to know them so that there is established, however imperfectly, the kindly and friendly relation that exists between the parent and child. He should be the one into whose ears the little and great troubles can be poured with the assurance of a sympathetic hearing.

4. Again, closer than the intimacy between pupil and principal should be the intimacy between teacher and principal. The real success of an institution depends, not on one, but on all. The educational czar should understand that he is an anomaly in these days, and is beset with the same dangers in the educational world as his prototype in the political world. He may succeed for the time, but his crown is the target for every missile, and will remain in place only because of a Cossack cordon of official red-tape and bureaucratic inefficiency.

5. Again, the assumption of simple direction and supervision is a dangerous one in that it too often leads to a feeling of superiority and dogmatic infallibility which is humorous to the one who knows the facts. It is wise, however, for us all to be humble in our work.

That we may, therefore, be in position to do our fullest service to our charges, and to

advance our usefulness in the honorable and commanding places we occupy, I would urge your careful consideration of this matter, and earnestly give it as my humble opinion that each principal can do no greater service than to demand that conditions shall be so changed—or, better and truer, that he should so change conditions—that his time shall not be used in the less essential matters of a clerical assistant, but that his training and ability shall be felt in the noblest part of school work, so that, when he lays aside his work, he may be entitled to that greatest of all titles—"teacher."

DISCUSSION

A. H. WATERHOUSE, principal of High School, Omaha, Nebr.—The paper of Mr. Gunnison eliminates from consideration the high schools in cities with a population below 70,000. This was no doubt done for the purpose of disposing of those schools about which there could be but very little difference of opinion. It is admitted, I think, where the work of administration is insufficient in amount fully to occupy the time of the principal, that he should do some regular instruction work. The question is determined not so much by the size of the city as by the size of the high schools in the city.

Could I dissociate the theory advanced by the writer of the paper from the conditions actually existing in large western high schools, I should find myself agreeing most heartily with it. This theory to me, however, like many other theories, must encounter the inertia of condition. It may so commend itself by apparent gain as to justify its acceptance. Yet in measuring gain in one direction it would be well to determine whether the law of compensation does not apply, and whether the apparent gain is not more than offset by real loss elsewhere.

Whether there is substantial accord with this recommendation of the writer depends very largely upon the definition of the word "administration." In the paper the word is measured in this sentence:

In nearly half of the cities the most capable and ablest men had been, therefore, withdrawn from the real work of the school, and had allowed themselves to become registrars of attendance, janitor inspectors, and watchers of teachers, petty judges of petty infractions of petty rules—a wicked and needless waste of valuable capacity for teaching service.

With this apparent understanding of administration I cannot bring myself into sympathy. Were this real administration, then I should agree with Mr. Gunnison; aye, I think I should contend with him for a maximum limit of teaching. However, with no part of that statement of administrative duties do I find myself in accord, except in the highest sense of the suggestion "watchers of teachers," and in a modified statement of the next phrase. Were that phrase to read "sympathetic advisers against willful or thoughtless infractions of needed rules," I would accept it. The other duties seemingly classed under administration no doubt are properly classed, but their performance belongs to moderately paid clerks, or to the superintendent of buildings, and not to the principal.

There are two essential lines of effort in high-school work leading to satisfactory results. The first is the getting and keeping of the school in a teachable condition; and the other is that degree of intelligent teaching which will, with a school in that condition, lead surely to those results.

With the working out of the first of these problems, and with the constant application of the results to the ever-varying conditions of the school, the principal finds his best and his full time-occupying work. To do this best demands so much of time, so much of observation, so much of thought, and so much of essential planning, that there is neither time nor energy left for the teaching of classes.

The first essential in getting a school in a teachable condition is to cause a feeling of confidence in the efficiency of the management. This condition is contributed to largely by the plans for just classification of pupils; for means of keeping pupils informed as to

their classification, their progress, and their deficiencies; for the organization of school at the beginning of the year without waste of valuable time; and for the expeditious assignment of pupils to their various classes. The results of these plans need not be heralded. Soon the efficiency begins to be recognized, and pupils unconsciously get into the swing of doing things and going ahead with their work. Enough of this work has to be done by the principal to give him such a knowledge of conditions as the better to enable him to direct the work of the school.

When the school is in session, in my judgment, the very ends sought by Mr. Gunnison can best be brought about by the freedom of the principal from teaching regular classes. The efficient principal can do farther-reaching teaching in another way. He could visit the various classes in his school, and could easily determine whether the teaching there being done rang true.

In order that he may become so general a leader, there must be time for him to go into classes and to remain for a sufficient period to determine wisely whether what he might see in hurried visits as errors are errors when measured by results. With regular classes in charge, the value of this direct contact with numerous classes and with teachers is apt to be limited; for then the principal hopes to gain by illustration of class work what he otherwise might the better get by consultation with teachers. There would be much personal gratification in using a class-room as a private laboratory in which to make pedagogical experiments, but the benefits of those experiments are hardly commensurate with the loss in other directions occasioned by taking time for their successful making.

There is much gain to the school if the principal can hold himself ready at all times for service, but free from the exact time demands of classes. That gain comes in the interviews with pupils, parents, and teachers. Scholastic ends may be reached successfully in organized classes, but true character results come from contact with the individual. There are many in a large high school who need the personal contact with a wise principal in the privacy of his office. Their standards of deportment may be deficient, and need elevation. This can be done in personal interviews. They may have become discouraged in work. A word of sympathy from the principal may hearten the pupil. The high-school age and the little or not at all self-understood period of physical growth quite closely coincide. There are many times when words of explanation here may help.

Busy parents call for interviews. They are impatient if required to wait. They are somewhat to be considered. The fact that a principal is in class, and will be for forty-five minutes, does not seem a sufficient reason for keeping them away from business.

Admitting the strength of the excellent arguments of the writer of the paper, and weighing both the loss and the gain from following his suggestion, I am unable to agree with him that principals of large schools should spend part of their time in teaching. Full time should be given to wise administration.

B. ENGLISH CONFERENCE

THE AIMS OF ENGLISH TEACHING

PHILO M. BUCK, DEPARTMENT OF ENGLISH, WILLIAM MCKINLEY HIGH SCHOOL,
ST. LOUIS, MO.

[AN ABSTRACT]

It is well for teachers, as well as other professional men, to pause often and ask themselves: "What are we trying to do?" Especially should this be so for teachers of English—a study that presents a field as wide as the universe itself, and as complex as the human soul.

What is this study of English? Is it, as its name indicates, the study of our mother-tongue—its paleontology, its comparative grammar, its flexibility of form for every mood and emotion? Is it a study to gain an understanding of certain classics recommended for perusal by certain learned bodies of educators? Is it an attempt to gain a mastery of the means of self-expression? No, not any or all of these alone, worthy as they may be; tho each *has* been made the sole aim. It combines all these and many more. It is too broad a study to be summed up in a single sentence.

English is primarily a culture study. Now, we can agree with a prominent educator who says that "*in esse* there is no real distinction between studies for culture and studies for technical skill." We recognize that manual training can, by a teacher who possesses it himself, be made a means of gaining culture, as well as of acquiring the power to see with the eye and do with the hand. We can well conceive of a teacher of wood-turning as inspiring in his class a love for the beautiful. Burns wrote his most exquisite lyrics at the tail of a plow.

But the aim of English is not to train the eye or the hand; it is to train the soul. Hands, eyes, and ears are but the means in the process. It is a harmonious activity of the various faculties that we desire—a finely adjusted balance of understanding, emotion, and will. Any distortion shows a corresponding lack of culture—a lack of what one of our greatest critics, Matthew Arnold, called "sweetness and light," power to see things in proper relations, and power to put ourselves into proper relation with them. Sweetness and light—how much is there abroad in the land today, this day of material welfare and unwelfare?

Nor is it difficult to see the part English plays in the pursuit of this ideal. For what are rhetoric and composition but teachers of good manners in expression, the exterior of culture? More fundamental is literary appreciation, for it brings us into harmony with the ideal world of the poet and the romanticist, or the real world of the novelist. When was there greater need of broad sympathy and high ideals, this spirit of culture, than in this age of materialism, of social and industrial aloofness, of faith in the superficial, of weakness of faith in humanity?

The weakness of us as teachers is the weakness of the whole world—we read too little or too much. Reading is as much a fine art as painting or sculpture, but almost a lost art today. Never were our manners more polished, but never was the soul of culture more neglected.

This brings us to our subject: If culture is the aim of English teaching, how shall it be obtained?

I. First, as teachers, we must look to ourselves. A child is moved more by one person with whom he comes into frequent close contact, than by a hundred apart from him. We are entirely too prone to forget this. Here it is the man behind the book, and not the book, that works for inspiration. He who stands for most with the child is the man who is to influence him most.

The teacher, then, is the first means whereby this ideal aim of English instruction may be accomplished. His importance cannot be exaggerated. There is no teacher on the faculty who should be selected with more care.

It is not necessary that the teacher of English be an adept in comparative philology, nor eminent in minute critical analysis. But he must be one whose taste for the best in literature has been sharpened, whose sympathies are wide, and whose powers of self-expression have been cultivated.

We hear it frequently asserted that the drudgery of correcting themes dulls the artistic instinct, and renders the teacher less a creative artist. We must deny this most emphatically. There is such a thing as wearing oneself out in mere matters of petty detail, and thus smothering all desire of expression. But this should not be. There are ways by which most of this drudgery may be eliminated

II. In the next place, we must look to our course of study. This is receiving consider-

able attention these days. The number of text-books has multiplied almost miraculously. Hardly a journal of education appears without some discussion of this subject. And all this diversity is excellent for our purpose. But we still at times hear a desire for uniformity in teaching expressed in this way: "Let us have something definite, something fixed, something which we can all do in the same way." This, I grant, would save all of us considerable trouble and thinking. If we only were told exactly what to do from day to day, it would save many hours of careful planning.

But grant that fixedness would be a good thing, upon what shall we fix? Immediately there are as many answers as there are teachers of English.

Yet we may not go so far as to throw open the English course to the individual caprice of every teacher of English. Theoretically this may not be a bad solution, but it is hardly practicable. There would unavoidably follow a great deal of confusion. The maxim that "in the ideal state there is no law" may be true; but English teachers have not yet arrived at that happy millennium. Harmony of action demands that we follow, some well-outlined course, but that within this course there be absolute freedom of action.

Nor is it so difficult to select a course that will appeal to most teachers. Keeping before us the general idea of culture as the aim of English teaching, we may divide the English course into the following departments:

1. Grammar, or the mere mechanics of language.
2. Rhetoric and composition, or the art of self-expression.
3. Literary appreciation, or the æsthetic study of what others have expressed.

Before we take up each of these in detail, let us glance at one fact which is of considerable importance in the present-day history of education; that is, the general apathy of boys toward English; not of the exceptional, but of the ordinary boys. This must be avoidable, for all of us have found by actual experience that the ordinary boy is as fond of reading as the ordinary girl, and that he can be made just as fond of writing. But as things now are in many places, he is not drawn to the course in English. We need not go into the psychology of adolescence to inquire for reasons, but we must so arrange the course that it will appeal as strongly to him as to his sister.

Let us briefly take up each department of the English course:

I. Grammar. In the first place, can we not say, once and for all, the secondary school does not appear to be the place for any study of formal grammar? Mr. Chubb, in his book on the teaching of English, gives an excellent reason why in the first year, at least, of the high school the pupil should be *invited to enjoy* work very different from that which has occupied him during his years in the grammar school. Can we not go one step farther—the pupil in the high school should find himself on his entrance thoroly grounded in formal grammar?

We must teach grammar, but only through composition, oral or written, and that by accustoming the pupils to make use of the principles they have already learned.

II. More difficult to answer is the question: What shall we attempt in rhetoric and composition?

Here, as in grammar, individual instruction must predominate. Differences in power of expression early make themselves manifest, and each pupil will present an individual problem that calls for solution.

By individual instruction is meant making such an atmosphere in the class-room that each individual will write or speak as his nature moves him to write or speak. Of course, we must constantly apply the proper cultivation to each individual nature, so that it may bring forth all of which it is capable. Certainly there must needs be frequent drills to which the whole class is subjected, like squad drills in the army; but these should be only on mere matters of technique, like the many exercises in music. No music teacher would dream of setting a child at five-finger exercises alone for a year or two, before he allowed him to play simple melodies. It seems that much of the same spirit should hold sway in the class-room as moves writers in the world of letters.

The real difficulty in class composition lies in the fact that too often it is made a perfunctory work, a mere drill. Now, if any good is to come of it, the pupil must be led to write with pleasure. It is at this point that we remember that famous quotation from Schiller's *Æsthetical Letters*: "Man only plays when in the full meaning of the word he is a man, and he is completely a man only when he plays." This is equally true of the child. If we are to get the best out of him, we must approach him in the spirit of play. How different is the attitude of the child at play from the attitude we too frequently see in the class-room! It is because he feels his play so intensely, because it is the natural outgrowth of his being, that he plays so well, so easily. The same should be true of a child's school life, and especially should this be true in composition which involves the art side of human nature; for, as Schiller also says: "All art work is conceived and executed in the spirit of play." It is done with the whole soul for the pure delight in doing it.

But we hear the objection that this is "soft education," that children should be trained to do unpleasant things so as to be fitted for the struggle for existence. True they must learn to do hard things, but how much better will they do them if they are approached in the spirit of play!

Every teacher can learn how he can best appeal to this play-instinct in his class. There need be no upheaval of class discipline in play, for it is at this stage that boys are learning to subject themselves to system in their athletics.

Then get the children to write or speak on subjects in which they are interested. As for rhetorical theory, let that be illustrated by what they are reading. Not much is gained by the study of abstract rhetoric in the secondary school.

III. Again, there exists in every soul the germ of art appreciation. This art feeling may remain at the low level of the bargain-counter souvenir, the ephemeral song, and the trashy novel; or it may be raised by skillful suggestion to the lofty heights of Michael Angelo's frescoes, Beethoven's symphonies, and the dramas of Shakespeare. It should be the aim of the teacher of English to take this taste when he finds it and raise it to the masters of literary expression. As Taine has said: "Art manifests whatever is most exalted, and it manifests it to *all*." Experience has proved that children may be included in this "all," if only they are approached properly, that is, in the spirit of play.

For this reason there should be, at first at least, little careful critical work. Let the class read for the sheer pleasure of discovering new objects of interest. The pupils as well as the teacher should be allowed considerable choice in what they shall read at home and in school. There is a suggestive article in a late number of the *School Review*, by Samuel Thurber, Jr., which all of us ought to read. We must bridge the chasm between books read at home voluntarily for pleasure and books prescribed by the teacher. One of the greatest compliments a teacher ever received was given when several boys asked him to make a list of books for their summer reading. This showed, at least, that they had not found uninteresting the books which had been placed in their hands during the school year.

The school classics which now form an important part of our English courses are admirably adapted for the development of literary appreciation. There is, however, great danger that a misuse of them in the class-room may kill the very spirit which should be so carefully cherished and developed. But if the pupils, instead of being forced to toil over uninteresting details, are led to laugh at Rip Van Winkle and Ichabod Crane, to behold the exquisite pictures in *Evangeline* and the *Lady of the Lake*, to feel the chivalry of *Ivanhoe*, to suffer and to be redeemed with the *Ancient Mariner*, new worlds will open before them in which they will love to move and play.

Besides, this artistic study of the works of the masters, if properly carried out, will have a great effect on the actual work of original composition. Unconsciously the perfect phrases will sink into the memory of the children; they will long to imitate them; and not only will their writing be improved, but their conversation and even their actions.

It makes little difference if we teach our class not one date or fact in the history of any one writer; it makes little difference if we fail to explain to our class the meaning or syntax of every sentence they read; if we do succeed in gaining their love and respect for the author, and thus succeed in widening their horizon, and in giving them a means whereby they may take their places in the world of true culture.

THE TEACHING OF COMPOSITION

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[AN ABSTRACT]

Composition may be defined as the interpretation of life thru words arranged in structural units. The teacher of composition in the secondary school has to deal with adolescent pupils in large groups. Theirs is a life rich in content, rich in modes of interpretation, but comparatively weak in constructive tendency and constructive power. Some of these pupils will take the full high-school course; the large number will leave early. The problem before the teacher is that of developing in each of the largest possible number of pupils, and within a limited time, the ability to give in words a many-sided structural interpretation to manifold aspects of life, singly and in combination; to equip them to meet their current and future needs. Hence the teacher must make himself conversant with the mental equipment, tendencies, and tone of his classes. He must then build upon what he finds, not upon what he expected to find. He must set before his pupils tasks demanding real constructive interpretation of life; must so vary these problems as to touch life from many sides and in many combinations; must see to it that the length, complexity, and intensity of these tasks so keep pace with the broadening experience and maturing powers of his pupils as to demand of them always their best effort; and must make these problems fit, not only current needs, but a future in an industrial democracy.

As there is available an abundant literature upon this subject, it is not the purpose of this abstract to review the many special forms and methods that such instruction should take, but rather to indicate some faulty methods now widely prevailing. In some instruction more attention is paid to style than to structure; emphasis is laid upon isolated units rather than upon a constructive unit. Again, certain hyper-idealistic teachers develop much sweetness, but little light; they fail to give their pupils a fundamental equipment in essentials. In contrast with these, others afford no adequate opportunity for constructive interpretation of the beautiful in life. Still others adhere so rigidly to the plan of some text-book, or syllabus, or school program, as to rob pupils of healthy interest in their work. Courses in some schools become traditional, lacking in original constructive content for all pupils alike. In some institutions composition is confined almost entirely to writing done in connection with the literature read. Here the emphasis is upon words, symbols of life, rather than upon life as lived. This is a reversion to the standards of scholasticism. It is largely traceable to a tendency to make success in passing examinations the criterion of fitness to graduate from the school. In some institutions the work done in composition demands of the older pupils no real constructive effort; it is the work of the earlier terms writ large. Conspicuously lacking is sound, original, mature work in exposition and argumentation—the most vital needs of the future citizens of an industrial democracy.

The methods and tendencies mentioned above are in largest measure the outgrowth of the conditions under which teachers of English now labor. A combination of circumstances makes their duties the most irksome of the secondary-school curriculum. Only by an amelioration of these conditions can we hope for the betterment of instruction in composition. This amelioration will, I believe, come in the wake of four lines of endeavor made unitedly by teachers of English. The first of these is the demand that English shall be regarded as a laboratory subject, with all that this implies in the way of properly

appointed rooms for instruction, opportunity for frequent conferences with individual pupils, and, most important of all, an assignment of work to each teacher on a basis of the number of pupils taught, instead of on the prevailing basis of the number of assigned periods of instruction. A second demand should be that for such real co-ordination between the instruction given by teachers of English and that given in other departments as shall, in particular, forbid these latter to regard as outside their domain of instruction the linguistic form of recitations, oral and written. In the third place, teachers of secondary English should themselves prepare for instruction in composition with large classes text-books emphasizing the vital phases of a well-rounded training in English—flexible enough for use by students of various tastes and equipment, and so organized and written as to enable the individual pupil to derive strength from the ideas therein contained, with but little assistance from his teacher. Lastly, as a material incentive for a richer and more mature preparation in composition, local, state, and national boards of examiners should be urged to frame, in addition to the ordinary minimum requirement in English, an advanced requirement paralleling those now set in mathematics, the sciences, and the foreign languages—this same requirement to involve, side by side with a written test, the presentation of an exercise book containing certified original work of such scope, complexity, and intensity as it is impossible to examine upon.

With the amelioration thus afforded, we shall be in a fair way to realize adequately the true aim of instruction in composition.

DISCUSSION

REPORTED BY ERNEST G. HOFFMAN, WILLIAM MCKINLEY HIGH SCHOOL, ST. LOUIS, MO.

ERNEST C. NOYES, Franklin School, Cincinnati, O.—Class criticism is a failure unless the foundation for it has been laid by the teacher's criticism. It cannot supersede the teacher's correction, but it supplements and lightens his labors.

The following are suggestions based upon experience: (1) The papers should be read at least twice by the critics; the first time for criticism of the thought and structure of the whole; the second time for the correction of mechanical errors, sentences, and paragraphs. (2) Definite questions should be given the class so as to draw out specific, helpful criticisms. Thus even the lazy are forced to think. Questions, to be answered in writing, may be such as: "Is the theme interesting?" "Does the writer stick to his subject?" "Point out any digressions." "Can the essay be improved anywhere by expansion or condensation, and, if so, where?" "Rewrite any sentence that you can improve;" and so forth. (3) Questions should be varied, and should be graded to correspond with the progress of the class. They should also be used to apply the principles of form and structure taught in connection with rhetoric and literature. Thus, for a story appropriate questions are: "Does the introduction give the time, the place, and the persons?" "Does it arouse interest at once?" "Does the interest increase up to the climax?" "Is the climax strong, yet natural?" "Does the ending come soon enough?" "Are there any inconsistencies or impossibilities?" "Are the conversations natural?" "Does the writer make you *see* the persons and places described?" (4) Of course, pupils should feel that this exercise is a serious one, upon which they may be marked for their thought and discrimination. For this reason, they should sign their criticisms. (5) The teacher should actively assist the critics while at work by passing about the class, to talk with individuals both answering questions and offering suggestions.

The benefits of this exercise are: the judgment of their peers makes a deeper impression upon pupils than that of the teacher; the poorer students are not only spurred by the criticism of their classmates, but are also inspired to emulation; more writing may be given; pupils do this work with enthusiasm; the class learns by doing, while the teacher discovers how much of his instruction has been assimilated; the dissection of student's

papers is substituted for the dissection of literature; and by the practise gained in criticising one another's papers, students acquire self-reliance and independence.

PERCIVAL CHUBB, director of English, Ethical Culture School, New York city.—I cannot say with too much humility how modest have become my expectations of developing a deep and abiding interest in literature. I have had to revise many times the things that count and that do not. I believe less and less in the attempt to take things of beauty by violence; and I live more and more by the pedagogical fossil that is not over-anxious about results—that what is sown well will in some way come to fruition.

What counts is what comes out of one's own heart and personality. What comes from nerves reaches only nerves. You will not get a boy into a mood of tender appreciation of anything by bumping his head against it. He balks at your efforts to make him admire any beautiful thing. He takes his cue from your behavior toward it. One's own attitude must be so contagiously sincere, so simple, so unofficial, so assured, that it carries no impression of strain, or of perfunctory assuming, no touch of schoolroom pose or nervous anxiety. We should not expect too much either; as is shown when thanks come from our pupils, not generally expressed in appreciative terms. It is the human values that are of greatest concern to us.

The best means of developing appreciation is reading aloud, on the part of both teacher and pupils; further, in a discussion of their likes and impressions, and their difficulties. Debates should be developed from the larger features of the work read, such as its pattern, and the development of character and plot. Furthermore, in creation work lies much of the power of appreciation. We should imitate the greatest writers, for from this process comes the insight into the basic qualities of the original production. There is more to be derived from an attempt to imitate ten lines of *L'Allegro* than by spending two hours in the study of them. In this we are using nothing more than the methods of the shops, where the love of creating artistic products prevails. This was Aristotle's principle: to learn music for the sake of appreciating it.

And, so from pattern-making in the shops we receive the inspiration that prompts us to verse-making. The things we make are their own excuse. The artistic motive must rule; but reinforced by the natural desire to have them count.

The teacher himself must be a craftsman. He must have worked in the school of productive effort; he must have made sketches. "I, little thing that I am, weave my laborious songs," as earnestly as the bee among the bells of thyme on the matin mountains. (*Operosa parvus carmina fingo*, p. 75.)

The schoolroom should be indeed a laboratory, or, as I should prefer to call it, a studio, and the teacher as well as the pupil must be productive and creative.

C. HISTORY CONFERENCE

TOPIC: WHAT FACTS OF HISTORY SHOULD BE TAUGHT PUPILS IN SECONDARY SCHOOLS THAT THEY MAY BETTER UNDERSTAND THE WORLD THEY LIVE IN?

LEADER: JAMES SULLIVAN, HEAD TEACHER, HIGH SCHOOL OF COMMERCE, NEW YORK CITY

Mr Sullivan opened the meeting by calling attention to the difficulty of answering the question before the conference without making a complete syllabus. As to what that syllabus should contain no two men would be agreed in every detail. There would, however, be certain topics on which there would be unanimity of opinion. He pointed out that it was unfortunate that the Committee of Seven had not done more in the way of

specifying more particularly those subjects in the fields laid down by it which should be taught in a secondary school.

If possible, it would be highly desirable to teach everything which had ever happened between creation and the present day. That being impossible, it is necessary to exercise judgment in selecting the important and eliminating the unimportant. In carrying out such processes, attention is to be constantly centered on the aim that those facts which help a pupil to understand the world in which he lives should be retained. The elimination of the details of military campaigns of great wars was advocated by the Committee of Seven, and its advocacy should continue to receive our support. Unfortunately, there has been a tendency to turn from wars to the details of constitutions easily forgotten by both pupil and teacher, and making very little for getting the former to realize the progress of the race.

The theory that only interesting stories should be told has been given up, but teachers are sometimes at a loss to know what to put in the place of many of these old favorites. The leader called attention to examples of the teaching of trade in the market-places of Greece and Rome, of the mediæval theory of interest and a just price, and the processes of manufacture which in his own experience had proved exceedingly interesting to pupils of high-school grade.

In laying down certain canons of selection, three groups of facts were mentioned as of great importance: (1) those things of the past which were the same today; (2) those things of the present derived directly from the past; (3) those things which show progress.

In closing his introductory remarks, the leader called attention to the fact that the world about us can be largely made clear by not going farther back in the past than 1750, except in cases affecting our religious life, our art and architecture, and certain constitutional matters. Above all things, then, it is necessary to study the history of the last two or three centuries with the greatest of thoroughness, because it is in them, and not in the remote past, that the student of today is to find an explanation and thoro understanding of the world in which he is living.

WHAT FACTS OF ANCIENT HISTORY SHOULD BE TAUGHT TO PUPILS OF THE SECONDARY SCHOOLS, IN ORDER THAT THEY MAY BETTER UNDERSTAND THE WORLD THEY LIVE IN?

DAVID SAVILLE MUZZEY, DIRECTOR OF HISTORY, ETHICAL HIGH SCHOOL, NEW YORK CITY

The history situation in the secondary schools has been pretty thoroly discussed within the last few years, and the great improvement in our recent text-books in history is at once a proof of the effectiveness of the discussion and a promise of the still further rationalization of the treatment of history in our secondary schools. But I feel for all that (especially in view of the discussion held by the Association of Teachers of History of the Middle States and Maryland at New York University last March) that there is by no means as yet a clear understanding of what the advocates of retrenchment in the course of ancient history have in mind. It is not, as one gentleman said in the discussion last March, to have "all of ancient history taught in a half-year." It is not to have all of ancient history taught at all. It is rather that a good many of us teachers are beginning to think that half a year is sufficient for the teaching of the things in ancient history that need to be taught to the young student in the high school. The discussion has been about the wrong thing, it seems to me. It has been about the rather secondary question of *how long* ancient history should be taught—two years, one year, or half a year. The real question is: What needs to be taught in ancient history? What aspects of the life of the Egyptians, the Babylonians, the Persians, the Hebrews, the Greeks, and the Romans are worth bringing to the attention of the boys and girls who are living in this age so rich in opportunity for study

in science, literature, the manual arts and crafts, and the fine arts? The main problem is not the division of time, but the selection of material.

The matter has formulated itself in my own mind in four very simple propositions, which seem to me to underlie our choice of material to be presented to the students of history in the secondary schools—a psychological proposition and three general pedagogical propositions.

1. Attention—without which any “study” is vain—to any fact of past history can be secured only when there is the understanding of a corresponding present fact to appeal to. The intricacies of the Athenian law courts or prytanies are ridiculous matter to teach a child who does not know what juries or legislative committees are. The young student may learn the page by heart, but he has nothing to relate the matter to, so that when he is cut off from the book the thing may remain in experience.

2. A pedagogical proposition. Every fact of the unlimited number of facts of history is taught at the sacrifice of some other fact of history, and also to the exclusion of instruction in some other of the numerous branches that are clamoring for the pupil's time. And altho we teachers of history have no call to apologize for appropriating an undue share of the school periods (having, according to Dr. Paul Munroe's figures, only $4\frac{1}{2}$ per cent. of the time allotment in New York city—less than that given to opening exercises, penmanship, or physical training; and in other cities as low as 3 per cent. of the time allotment; nowhere more than 6.7 per cent.), we should feel all the more pressing the necessity of choosing well the facts of history that shall fill that little time. The text-books do not even yet choose resolutely and unsparingly enough. They hate to part with old favorites; they shrink from leaving unsaid anything that a former text-book has said, tho they are getting some of the minor points into diamond type—and occasionally some of the major points too. We must remember that the text-book is inspired scripture to the boy of fifteen—equally inspired in all its parts; and it is dangerous to put anything into it merely for the vindication of our own scholarship. Even a difference in the size and heaviness of type is not, I fear, going to have nearly so much the effect of distributing the attention of the student wisely as of disturbing the continuity of the narrative.

3. A common-sense proposition. Here we are a group of teachers of history, some of us have been teaching five years; some, perhaps, fifty years. What does ancient history mean to us? What is Greece? How much intellectual nourishment or stimulus do we get from the redivision of Athenian political rights under Cleisthenes, or the various kaleidoscopic alliances of the Greek states of the fourth century B. C.? What does Rome mean to us? Anything that gains an iota in clearness or in the thrill of enthusiasm from the fact that there were three Samnite wars instead of one, or that the most eminent authorities are still divided on the questions of the origin of the plebeians and the number of the Roman assemblies! In other words, what is the residuum of Greek and Roman history, the part that stays with us, deep-seated in memory? What are the facts which, after years of acquaintance with Greek and Roman history, have laid hold upon us; the facts which we have in mind in October as well as in February, and do not need to look up annually when the class reaches the point where it is expected to recite upon them? For nothing is worth giving fresh to a student that is not worth keeping fresh in our own minds! And what is a teacher for if not, out of his richer experience of the values of the myriad facts of history, to help the student choose wisely?

4. And finally, an evolutionary proposition. The question of the teaching of history is all a part of a larger question, which today is a burning question, perhaps the question of the educational world, namely: What is culture? Is it the the ability to read Thucydides in the original tongue, and annotate the same with marginal comments in a fine hand? Is it the possession of an esoteric knowledge which grows in value in inverse ratio to the number of those with whom we may share it? Is it something to be preserved under a glass case? Or is that museum idea of culture yielding to a conception of culture based on the criterion of use?

There are then, it seems to me, these four considerations on which the selection of the facts to be taught in history must be based. Those facts must be such as can be related to the experience of the child; they must be of sufficient value to justify their excluding the many facts that might have had their place; they must be valuable enough to fill a permanent place in the teacher's mind; they must be of organic value, capable of assimilation, that is, into a larger scheme of culture—culture, as I apprehend the word, meaning the understanding of the world as it is, thru a sympathetic knowledge of the world as it has become, or came to be, what it is.

Against a resolute and radical revision of the teaching of ancient history there are two stubborn obstacles to be reckoned with: the college-entrance examination, and the orthodox history syllabus—the first a terror to teachers who would lead their pupils in the delightful paths of history, the second a terror to publishers who would like to issue a readable narrative of ancient history as a text-book. But against both these obstacles it seems to me the argument is very simple. As to the first: When the schools begin to teach the *essentials* of ancient history, the colleges will begin to examine in them. The secondary schools with their 650,000 pupils are the prime factor in determining what boys and girls from fourteen to eighteen ought to know about ancient history, and the tide of their conviction will sweep enthroned examining boards with it as surely as the waters drove King Canute off the beach. And as to the second obstacle, it is enough to say that to pattern new text-books on syllabi compiled from old ones is to renounce progress from the very start, and fall into what the logicians call the "vicious circle."

As to the actual facts to be selected in ancient history, I could not, of course, pretend to catalog them this morning. But I may suggest what seems to me a feasible plan to follow in choosing them. The subject for our discussion is: "What facts should be taught . . . *in order that the pupils may better understand the world they live in?*" Well, then, why not begin with the world they live in, and see what is to be understood? The boy is in the midst of a certain material civilization, in the first place. The most obvious thing about him (so obvious, in fact, that they do not seem to have or need any historical explanation) are the tools and tokens of this material civilization: buildings, streets, vehicles of trade and transportation, speech, money, produce, factory, and mart. He sees the great majority of men going to business, to be absorbed in this material civilization—making a living, as we say (so largely is life occupied with these pursuits). The part which ancient history has contributed to this civilization in its types of architecture, its trade routes, its principal industries, its improving methods of barter, all can be made clear to a boy of fifteen, and will help explain his world to him, while dynasties of Pharaohs and consular fasti will be only so much disordered material to lumber his memory.

Again, the boy is in the midst of a social civilization. He sees men grouped together in villages, towns, cities, states, countries, with certain rights to respect in each other, certain duties to perform toward each other. He knows that there are many thousands of men, from the president of the United States down to the policeman or letter-carrier of his own town, who are spending their days serving town, city, state, or nation—running the machinery, that is, which is necessary to a social civilization. This aspect of our life is not so obvious to the boy of fifteen as the material aspect, and much of it—especially the intricacies of courts, the details of party platforms and parliamentary procedure—would be unintelligible to him. But the main types of government under which societies have lived in the past may be pointed out in simple language, and such slight contributions to our modern democracy as the ancient world made may be dwelt upon. For example, the fact that at a certain point in the development of both Athens and Rome wealth supplanted birth as a basis for political privilege is of the utmost importance in the development of society, and a matter very easy to make clear, whereas speculation as to the old classes of Eupatrids or the exact number of centuries in the Tullian Comitia are a tedious, unrelated, useless exercise. So I would boldly omit from a

high-school course all details of ancient legislation except the very few needed to explain its nature and purport. For the high-school student it is enough to know something of the structure of ancient society as illustrated by selected epochs—the Homeric age; the Greece of the Tyrants; the Spartan military camp; the Periclean democracy; the monarchy of Philip; the empire of Alexander; the federal leagues of the second century; the semi-federal, semi-monarchical polity of early republican Rome; the senatorial oligarchy; the veiled monarchy of Sulla, Cæsar, and Augustus; the military despotism of the empire. What a flood of light even a very slight appreciation of these types of government would throw on the accounts the young student reads and the discussions he overhears relating to Russia and Japan, Norway and Sweden, the United States and the Philippines, Germany and Morocco! The aim of many teachers of ancient history apparently is to fit the youth for citizenship in Athens, Sparta, Rome, or Constantinople. And I remember with shame that I knew quite familiarly the details of the Roman consular election of 60 B. C., when I did not know even the names of the candidates, much less the machinery of the election, for the president of the United States in the year 1860 A. D. I see now plainly enough why that was—that it was due to certain requirements of Latin literature. But we shall come to that in a moment.

A third aspect of the civilization in which our students are to live their lives is what I may call its psychical aspect. I shun the word "spiritual" because of its religious connotation. Besides the men who are going to earn their living by work in factory, shop, or office; besides the men who are debating bills in Congress, or deciding cases in courts of law, or emptying the contents of letter-boxes into leather pouches, there is an army of men and women devoted to the cultivation of the higher faculties of man, in the creation or mediation of works of art and letters, the interpretation of the works of nature, the elaboration or elucidation of systems of thought, the administration of forms of worship, the presentation of ideals of duty. This vast and important aspect of civilization is hardly touched upon by our current text-books of ancient history. As tho the ethics of Socrates were not infinitely more important for the student to know, and infinitely more interesting and teachable, than the campaigns of Agis and Agesilaus! A few pages, deeply indented or truncated by illustrations, are all that the author can spare for men like Pheidias and Socrates, and those few pages are often accompanied by an apologetic footnote to the effect that they may be omitted if the teacher does not wish to interrupt the narrative of the political history. Political history, indeed! Why, the *Apology* of Socrates—clear, simple, full of life—is ten times as much value to the boy as pages of description of the Athenian law courts. It is the concrete example the child wants. He should get his history without realizing that he is studying history at all. It should be the appreciation of the atmosphere of an age that distills in his mind from the contemplation of the men, the events, the inventions, the monuments of art, the flights of thought, the wit and satire of the age.

But you will think that with all this discussion of the principles on which the selection of the facts of ancient history should be based, I have not got down to the topic of *what* facts should be selected. Take the history of Greece. I almost think the whole of Greek history could be taught as an illustration of the single word "motion," as contrasted with the fundamental inertia of the Orient—activity revealing itself in the extreme individualism of every phase of Greek life, even beginning with the interminable, inextricable legends of migration, crossing and recrossing each other like a huge spider's web across the little land; activity manifesting itself in the immense field of colonization from the Straits of Gibraltar to the Caucasus, in the intense passion for liberty and self-development on which the flood of Persian invasion broke as on a rock; activity showing itself in the rapid vicissitudes of monarchy, aristocracy, tyranny, democracy; activity gloriously fruitful in the imperishable monuments of art and letters in the Periclean age; and activity running to pernicious individualism in the petty factions which weakened Greece in the face of dangers from Macedon and Rome. Would not the topics here sug-

gested form a sufficient outline for the study of Greek history in the secondary schools: the Homeric society, the Greek colonies, the rise and fall of the tyrants, the Persian war, the Periclean age, the conquest of Macedon, the Hellenistic culture, the absorption by Rome? These large topics could be connected by the most meager thread of narrative needed to explain their sequence and location. Such a course could be fairly covered, I believe, in a term of eight weeks of four periods each. The student would come thru it with a coherent idea of what Greece stands for in the world, even if he never heard the names of Draco, Cylon, Isagoras, Ephialtes, Niceas, Chalcias, and Phæbidas. Likewise in Roman history an adequate course could be laid out in amplification of the great absorbing mission of Rome—the equilibration of the political and social forces of the world. To that end her consolidation, first of Italy, then of the Mediterranean basin, then of the farther lands of Europe and Asia under the sway of the central city; to that end her millennial strife between patricians and plebeians, nobles and commons, within the body politic; to that end the splendid reaches of Roman road and the majestic span of Roman bridge; to that end the marvelous work of her legislators thru a thousand years from the Decemvirs to Justinian; to that end the unconquerable legions, and the machinery of her provincial government. Is not the whole of Roman history in this expansion of the text of *Pax Romana*? Is there a single great man in her history whose significance cannot be held in the grasp of this great mission of the nation, or a single great event that cannot find its place as a contribution to the realization of that mission? If so, why not study Roman history in these few great topics that hold the meaning of Rome for civilization—the story of an empire grown stable where others were ephemeral, because of a slow, assimilative, co-operative, elastic, tolerant, rational development toward the supreme end of social and political equilibration? Ten or twelve weeks would be enough, I believe, to bring this lesson to high-school students. Here again the student would come thru the course without having heard even the name perhaps of many men and measures which fill a large place in our text-books.

I am aware that I have but hinted at the plan of teaching ancient history which I should like to see put into practice, in place of the present encyclopædic method. It leaves the student with fewer facts and names floating more or less hazily in his memory. It deliberately postpones even the mention of many things which it is desirable that the maturer student of history should know. But why can we not be willing to postpone some of these things—the constitutional details, for example? The trouble is that in the past we have not considered that ancient history has been studied unless the student could repeat glibly the comparison between Aristides and Themistocles as statesmen, and tell just when each curule office was opened to the plebeians.

It seems to me that we have a fruitful hint (or rather example) for the treatment of Greek and Roman history in the sections of the history of the oriental nations which are now generally prefixed to the treatment of Greece and Rome. Here are excellent summaries in a few pages of the permanent contributions of Egypt, the Tigris-Euphrates states, Palestine, and Persia to the world's history. Why is not the same principle carried thru Greek and Roman history? Simply because we are taking a fresh view of oriental history, but perpetuating an old, old view of classical history.

Here is the crux of the whole matter. Our study of classical history is in bondage to the traditional demands of classical philology. In fine, we are in bondage to the Greek and Roman historian and orator. We have been studying ancient history in order to elucidate their text, not to explain our civilization. The concise period of Tacitus, the majestic diction of Livy, the charm of Herodotus, the acumen of Thucydides, have led enraptured scholars to dwell on the details of their story as on the details of their syntax. What we need is a change of perspective. We need to look back on a total Greece and Rome as we do on a total Egypt and Assyria, where we are practically unincumbered by a sanctified literature. We need to get away from the Greek and Roman historian, and bring in the philosopher, the comedian, the satirist, the epic, and the lyric poet. And we

need above all the courage to leave unsaid, even at the risk of appearing not to know, the tedious details of political and military history which have been repeated from generation to generation to disgust the normal, healthy child with the history of classic Greece and Rome.

D. CONFERENCE ON MATHEMATICS

TOPIC: INDIVIDUAL INSTRUCTION IN ALGEBRA AND GEOMETRY

FRANKLIN TURNER JONES, UNIVERSITY SCHOOL, CLEVELAND, OHIO

Nowadays the mathematics teacher has to become an experimenter. His laboratory is his class-room, and his apparatus improved methods of teaching. Confidence in present ways of teaching mathematics, and even in its subject-matter, is seriously shaken. Among the plans now in process of evolution is the so-called individual or laboratory method.

The success of laboratory work in enlivening the natural sciences has for some years directed the attention of mathematics teachers toward a similar solution for the mathematics situation. Correlation of physics and geometry has been seriously undertaken in a number of schools, notably Bradley Polytechnic Institute and the high school at Lincoln, Nebr. In both of these places results have been satisfactory. Following the outline used at the former place, I tried similar work at University School in 1903-4. Contrary to my expectation, the introduction of physics laboratory experiments in plane geometry did not yield the results desired, and so they were abandoned for exercises on construction, curve-plotting, use of cross-section paper, and experimental determination of areas. These worked successfully, and have been continued in a modified form.

Experience has led me to believe, however, that the essential feature of success is not the method, but the spirit in which the subject is presented by the teacher, and the zeal with which the pupils follow the teacher's lead. In other words, if a class will work, there is no question but that the results will be satisfactory. The crucial test for any teaching plan is then whether it brings out the full working power of the student. The repetition of mechanical processes is not the kind of work desired, but an intelligent understanding of what is being done. I believe it is possible to attain these results in mathematics teaching without bringing in experiments from other subjects.

It has been assumed, and I think unnecessarily, that physics apparatus and a special laboratory are requisites of an experimental presentation of mathematics. For experimental algebra or geometry cross-section paper, a hard lead pencil, and a compass are enough. No change in room or text-book is necessary.

Anyone who looks thru an elementary physics text-book will be greatly surprised to find how little mathematics is involved. In geometry, the solution of the parallelogram and triangle with two sides and included angle given, the rectangle and square, similar triangles, Pythagorean theorem, perpendiculars, and equal angles include the whole list. In algebra numerous uses of the equation $x=zy+k$ and solution for x , y , or z ; one affected quadratic ($x=Sc\ell+\frac{1}{2}at^2$); several pure quadratics of extreme simplicity, as $S^2=2ax$; one or two equations involving radicals, comprise the total. Certainly every pupil, after two years study on algebra and geometry, ought to solve such simple problems with ease. The mathematical difficulties of physics do not lie in the mathematical content, but in the translation of physical ideas into mathematical form. It is in this translation that our mathematical training is weak. Forms are solved thruout algebra without interpretation of their meaning. Some algebras have ventured to call equations of the first degree linear, but none, to my knowledge, have thereupon explained

how to plot such an equation. Any such explanation is tucked away in a separate chapter. Almost, if not quite, every elementary algebra has long lists of exercises on simple equations in its early chapters. With only two exceptions, as far as I have observed (Schultze's *Elementary Algebra*, and Fisher and Schwatt's *Algebra*), each author neglects to emphasize the fact that these are exercises in translating from ordinary language into the symbol language of mathematics, and that the explanation of the formal processes is all for the purpose of solving these symbol translations. Failure to learn to look for the idea back of the equation is the cause of our mathematical difficulties in physics. Lack of facility in translation makes equally hard the solution of problems where no equations are given. We know how much more difficult are the equations for formal solution than the equations produced by the problems. Is it not possible that we are making our tools unduly sharp for their proper uses, and are like the carpenter who spent all day filing his saw, when he had been called in to fix a leak in the roof? It seems to me that too little emphasis is being placed where too much cannot be, *i. e.*, on the formation of practical equations and the interpretation of both equations and geometric figures. I have found that the vividness of both algebraic and geometric expressions has been sharpened by calling frequent attention to the fact that $xy=30$ means the area of a rectangle; that $2(x+y)$ means its perimeter; that $(a+b+c)$ is the perimeter of a triangle; that 16π means the area of a circle with radius 4 or the circumference of a circle of radius 8; that $\frac{1}{2}ab$ means the area of a triangle with base b and altitude a . When I am doing such work, I regard it as an essential part of an experimental method. Another experimental device of great value is the interpretation of geometric figures. Pettee's *Plane Geometry* is, to my knowledge, the only text-book which introduces geometric interpretation in a systematic manner. It is the only book which has the experimental spirit and still retains all the force of the older geometries.

Sufficient encouragement has not yet been given to the accurate construction of geometrical figures. Most of us know that our pupils can usually solve an original exercise, if they can only "get the figure." They disregard the correct proportions and are led into most ridiculous errors. I think that a course in geometry should be preceded by a course in accurate geometric construction. This year I have had a class of boys who were thus equipped when they entered the geometry class, and their work has been a conclusive indorsement for such a course. Where the manual-training school does not provide for this, I believe it a month well spent to take that much time at the beginning of the geometry course, for the double purpose of teaching how to construct figures for originals accurately, and of giving some practical information on the properties of the figures which must be dealt with. We must remember that geometry is a system of logic, and that we are trying to base that system on a subject in which our pupils are only slightly informed. This is in itself a very illogical process. The best preparation for demonstrative geometry is observational geometry in the grades followed by a course in geometrical construction just before the formal study begins.

It is a well-recognized fact that our mathematics courses do not support one another as they should. There have always been "water-tight compartments for arithmetic, algebra, and geometry." At University School this is not the case. We have a different arrangement, of which the advantages are obvious. Below the eighth grade nature study, drawing, and manual training are very closely related. In the fifth and sixth grades a considerable amount of geometrical drawing is done. In the eighth grade mensurational arithmetic, simple algebra, and concrete geometry are given. In the ninth grade (first-year high-school) five periods a week are divided between algebra to quadratics and the first book of geometry. At present there is no systematic attempt to do more than carry on the two side by side. In the tenth grade a similar arrangement exists. Plane geometry is completed and algebra continued thru the elementary college requirement. It was with this grade that my experiments have been conducted.

At the beginning of the tenth grade these boys get a course in mechanical drawing

in connection with their shop-work. In the eleventh grade college algebra is taught and plane geometry reviewed. At the close of this year the boys come up for their college preliminaries with both algebra and geometry fresh in mind, the two having been studied continuously for almost four years. I have been repeatedly surprised by having boys in my physics and chemistry classes ask for logarithm tables with which to work problems. I do not know of a better testimonial to the success of the arrangement. In the twelfth grade (senior year) solid geometry and trigonometry are studied by those who require them.

The success of the above-mentioned arrangement has led me to modify my views as to the desirability of correlating algebra, physics, and geometry, and has compelled me to believe that algebra and geometry, side by side with assistance from mechanical drawing, and possibly a few illustrative experiments from physics, give us the kind of a mathematics course we want. As such a course operates year after year, the subjects will be brought closer and closer together.

Now, as to the bearing of these remarks on individual or laboratory methods of instruction, we are all ready to grant that our present system of grades holds back the bright and discourages the slow boy. While objections to the individual method may be raised, none can carry much weight as long as satisfactory results can be obtained. The difficulties of applying it to geometry teaching are much greater than to algebra. The laboratory method as outlined for Bradley Polytechnic Institute does not from my experience justify the introduction of physics laboratory experiments into a course in geometry, not because the experiments themselves are not interesting and useful, but because the geometrical results can be arrived at more expeditiously in other ways. My experience does commend the introduction of graphic solutions of equations in algebra and the experimental verification of rules for areas, etc., by the use of cross-section paper, on the ground that they give meaning to the algebraic forms, and help to establish and to fix more firmly in mind the reasons for the rules in mensuration. Translation from ordinary and geometric language to algebraic symbols is a most important aspect of algebra, since algebraic translation is used continually in both geometry and physics. The experimental spirit of cut and try is a more important attainment than any special experimental knowledge. Observational geometry and mechanical drawing assist in cultivating this scientific spirit. The most important item, however, is such an arrangement of courses in arithmetic, algebra, and geometry as to form a consecutive mathematical whole, so that algebra and geometry are kept continuously before the pupil for a period of years, compelling, as in strictly laboratory courses, the mind to dwell for a considerable time on a particular topic, and thus giving the ideas involved a chance to "soak in."

DISCUSSION

JOSEPH V. COLLINS, State Normal School, Stevens Point, Wis. --In this country we have what Professor James calls the "American recitation method" used in all studies. According to the law of evolution, most teachers will do better to improve this method, rather than make a radical change. The question presents itself: Are there plans which possess the merits of both class and individual instruction? To save time, several such expedients are stated formally, viz.:

1. The setting apart of regular consultation periods to be used to assign extra outside work to strong members of the class and to aid weaker ones over difficulties.
2. Brief conferences at the end of recitations for the same purpose.
3. Individual instruction during the first part of the hour, followed by class work covering the same ground.
4. The discontinuance of the class form of instruction before the end of the hour, followed by individual study of the work on the blackboard.

5. The "chalk and talk" method in which all members work with pencils on the same problem, one student talking, teacher supervising.

6. The "chalk and talk" method in which one student works and talks at the black-board, and the others give attention, the teacher supervising.

The first three of these plans are doubtless already in wide use. I fancy the fourth is more or less novel. I have found it to work well. The fifth, a compromise between class and individual instruction, is much used in German schools. Personally I have got the best results from the sixth. Usually in class instruction, as Professor Jones points out, the difference in ability and attainment between members causes waste, the weaker members being too slow to understand the recitations of the brighter ones, and the brighter ones being bored by the dullness of the others. This, I should say, is the bane of the class form of instruction. The sixth plan rightly used obviates to a certain extent these difficulties.

In conclusion I may say that this question of the form of the recitation has interested me much during the past four or five years. Thru such correspondence as I have had I am led to believe that our progressive teachers are rapidly breaking away from old customs, and are introducing all sorts of methods and expedients adapted to their own conditions. Evidently this is a most hopeful sign.

C. E. COMSTOCK, Bradley Polytechnic Institute, Peoria, Ill.—A word in regard to the trial of the Bradley Polytechnic Institute outlines made by Mr Jones. He used the second-year work only. The work he substituted is done by us in the first year, and is presupposed in the work of the second year. The justification for the use of physical experiments in classes in geometry and the results we have obtained I have discussed in a paper before the Science Department on Tuesday. The individual method tends to produce mechanical rather than thoughtful algebraists. There is a waste of time in repeated explanations. The student who is not serious does not receive the proper incentive to work when he works alone. The class system incites to work. It enables a student to learn other ways than the one he has hit upon. In open class discussion he gains inspiration and breadth of view. He learns from his fellows as well as from his teacher. There should always be the greatest possible degree of personal contact between teacher and pupil. A judicious combination of individual instruction and class instruction will, in my mind, yield the best results.

H. CLAY HARVEY, State Normal School, Kirksville, Mo.—We are hearing a great deal just now concerning individual instruction in secondary mathematics, some teachers reporting results of their experiments with such enthusiasm as to compel investigation and comparison by those of us who still believe there are many more advantages with fewer defects in collective teaching.

In the time at my disposal, I can only speak briefly of what appear to me to be the most prominent objections to the individual treatment of a boy or girl studying mathematics.

We believe that the teacher's aim should be so to direct the child as to arouse interest and enthusiasm for the subject under consideration, so as to lead him to investigate, and thus to broaden his intellectual horizon; to lead him to discover his own misconceptions, and overcome his own difficulties—to teach him how to study, to acquire mental power and habits of quick, accurate, and logical thinking. Can this be accomplished by the individual method? We think not. The inspiration of numbers is second only in importance to a skillful teacher in accomplishing this work. The clash of thought between student and teacher, and between student and student, so necessary in securing the desired end, is impossible without numbers. In a class many questions asked publicly by the students will be of great value to the entire class, and would likely be overlooked by both teacher and student in the individual method.

In problem-solving six questions should be kept constantly before the student:

(1) "What have you given?" (2) "What do you wish to obtain?" (3) "How can this

be obtained?" When these three questions are satisfactorily answered, the problem is solved. Then three other questions arise: (1) "How did you obtain the result?" (2) "Why did you take each step that was taken in the solution?" (3) "What authority is there for each step that was taken?"

Can you accomplish all of these things by the method of individual instruction, where there are twenty-five or thirty students in your class? Most certainly not. The best that you can hope to do, in the time at your disposal, is to make clear the how. Can all of these things be accomplished by the method of class recitation directed by a skillful teacher? I answer most emphatically "yes." I have seen it done over and over again. These intellectual bouts indulged in by the different members of the class are of great value to the entire class, and often to the teacher as well. The weak student grows strong because of his association with, and because of what he learns from, the strong one; and the strong grows stronger because of what he learns from the teacher, and often from the weak student as well. The best teacher works his students under some pressure in the recitation. You can never develop that speed and accuracy necessary to the great scholar without working him with a running mate and under pressure. By this method you are arousing an interest which could never be aroused by individual instruction. You are solving problems and developing power as well, while in individual instruction you are solving problems and developing but little power.

To sum up what has been said, the advantages of class instruction over the individual instruction are these: The student has a chance to learn from others; it teaches how to study; questions by the class are valuable; it offers a better opportunity to develop mind; the teacher has a better opportunity to discover the student's difficulties.

There should be a specific aim in class instruction. There can be none in individual instruction. Individual instruction is poor economy of both time and energy. A thoro test in Kansas City Manual Training High School proved individual instruction a failure.

Let us, then, use a method that is up to date—a method which will enable us to concentrate our time and energy so as to accomplish the greatest good to the greatest number.

E. CLASSICS CONFERENCE

THE COLLEGE REQUIREMENTS AND THE SECONDARY-SCHOOL WORK

JOHN C. KIRTLAND, JR., PROFESSOR OF LATIN, PHILLIPS EXETER ACADEMY, EXETER, N. H.

[ABRIDGED BY THE AUTHOR]

The vexatious question of the college-entrance requirements in Latin and Greek cannot be accepted as settled, and it is of the greatest importance that the present movement toward uniformity should not be allowed to fix finally upon the schools a fundamentally wrong and unfair standard, one that must inevitably contract their ideals to the narrowest utilitarianism and wholly vitiate their work. At the present time the attitude of many colleges is one of arrogance, tempered by the desire for students; the attitude of most schools, servile. I do not mean that either attitude is conscious, and I realize that both are natural. But arrogance is no less arrogance when it seems to the arrogant a mere assertion of superior wisdom for the guidance of the erring or the maintenance of rights; and servility is no less servility when it seems to the servile the counsel of expediency for the attainment of a desirable end. The college feels that it is the sole arbiter of the preparation of the candidate for admission, and that it is its duty to impose upon the school a correct standard of work. The school knows that it is judged largely by its success or

failure in getting boys and girls into college. Both need a clearer understanding of the situation, a higher sense of their duty to each other, a better criterion of judgment.

What, then, do the colleges wish? I take it that they desire evidence that the applicant for admission has the power and has had the training that will enable him to do their work effectively. The entrance examination has both a general and a particular aspect. It determines whether the applicant is prepared to do the freshman work in the given subject; it may also be used, together with the examinations in other subjects, to determine whether the applicant has sufficient ability, and has had adequate training for such work as is required of freshmen in the various courses open to them. The latter is the more important in the case of colleges allowing to the student from the outset a wide choice of studies; the former, where the course of study requires the continuance during the freshman year of the subjects in which the applicant is examined. In neither case is it feasible to demand accurate knowledge of large fields. Power, not organized knowledge, is the end of school training. Even if this were not so, the demands upon the secondary schools are so great and so various that it would be impossible for them, in the present state of American education, to equip their students to meet severe tests of their knowledge of the many subjects which it is necessary that they should study.

We must train the mind to be a good instrument for the work of the college. That is the demand that we are facing in this view of the college-entrance requirements. I purpose to turn to the classics, and to endeavor to make it clear that the college and the school may unite to their mutual advantage upon a true test of the preparatory work which shall not impose upon the school an alien and tyrannical authority. I shall confine myself in the treatment of details to Latin, for the sake of the gain in definiteness. At what should the teacher of Latin aim? It seems to me that the Latin course of the secondary school may be divided into two periods. In the first of these the language should be taught with reference to the training of the mind in logical and methodical habits, to the mastery of the elements of grammar and rhetoric of universal application, and to the cultivation of the power of attention and concentration. I believe that so much Latin as will accomplish these things may profitably be required of all students in our secondary schools. Two years' study of the language should suffice for this. I would have the work of these two years planned and carried out without the slightest reference to college-entrance requirements or examinations. Only those should go on who are likely to get an adequate return for the time spent, either in the way of literary training or in helpful knowledge of ancient life and thought. The work will center in the study of formal grammar, the memorizing of forms, and the application of rules of syntax to discover the exact meaning of the text read.

During the later years of the course the chief object should be the cultivation of literary taste, and the second place should be given to the Romans themselves, their institutions, and the influence they exerted upon European civilization. There should be large and varied reading of the best authors, the study of the science of translation, and the closest possible approximation to the art of translation; and so much consideration of men and events and institutions mentioned as is necessary to make the writer's meaning plain. The choice of authors and the choice between different parts of the works of each, together with the order in which they are to be read, should be left largely or wholly to the schools. I know by experience that the course of reading which proves good for one school may not meet the needs or the tastes or the abilities of another. Much, indeed, depends upon the teacher. His class will surely enjoy most the authors which he enjoys most and reads with greatest enthusiasm. Moreover, the teacher is more likely to grow, less likely to petrify into an automaton, if his teaching ranges over a large field of literature. The same vivifying influence is felt directly in the school, as well as indirectly by reflection from the interest of the teacher. Every year, after the first, some poetry should be read, and the study of an author should not continue so long at a time that teacher and student alike are utterly tired of him.

The certificate system of admission to college has this advantage, in the case of Latin and Greek, that the colleges admitting on certificate are generally willing to accept any reading of the required amount and the right sort, and without regard to the time when the particular author was read; whereas the examination system requires that the authors set for examination be read in the year of the examination. This, at any rate, most teachers feel to be necessary, if their students are to make a creditable showing on the examination. Could not the colleges which are unwilling to rely entirely upon certificates of the candidate's preparation safely and properly accept the statement of the schools as to the amount of Latin and Greek read? I hope to show that they might still reserve to themselves an adequate test of the candidate's fitness to continue the study of the language in college, and of his training. Indeed, I believe that the weakness of the certificate system might be remedied by such a test.

I think it will be agreed that, granting our premises, the test that will most surely discover the candidate's preparedness or unpreparedness for college, and at the same time do least violence to the ideals of the schools, the one that will bring school and college into the closest harmony, is the sight-examination. The ability to translate into idiomatic English a new piece of Latin gives evidence of an adequate preparation for the freshman Latin courses of the colleges, and of mental power and mental discipline. Such an examination can be made, moreover, to serve practically all the purposes of any examination in Latin. It will show the state of the candidate's knowledge of forms and of syntax, the extent of his vocabulary, his command of his own tongue, and even, if the passages are carefully chosen, his acquaintance with classical antiquity.

It is my belief that it is entirely possible to set passages in infinite number and variety, previously unknown to the candidate, and so simple that the examiner may confidently say that those who cannot read them either are not of the caliber desired by the college or have not had the necessary training in the subject. The passage should be clear and complete in its meaning, and that meaning should be simple (for this reason description and narrative are the best material), and the words should be those of commonest occurrence, or, in case they are likely to be strange, their meaning should be given. But I should not make the sight-examination the sole test, lest the blindness that sometimes falls upon the boy and girl on examination cause injustice to be done in occasional cases, and lest the school and the student lose sight of the fact that the ability to translate at sight comes only by mastering the language and thoughtful reading. The preliminary examination should include a test in grammar, and both the preliminary and the final examination might well include a searching test of the candidate's study of a small portion of the literature. The portion should be very small, so small that the study of it will not form a large part of the year's work or hamper the teacher in the choice of reading. I am of the opinion that a single oration of Cicero or a single book of Vergil is enough. If there is not to be both prose and poetry at sight, as I think there should be on both examinations, the preliminary as well as the final examination should have these set portions of both styles. This I urge from the conviction, already expressed, that no one of the later years of the course should be given exclusively to either prose or poetry. The prose, especially if only one author is read, palls, and the long-continued reading of poetry by young students leads to neglect of the grammar. The requirements now generally in force bring about the division of the last two years of the course into one of undiluted Vergil and one of undiluted Cicero.

To sum up, the best and fairest college-entrance examination is sight-translation; the results of the sight-examination might be corrected by the addition of tests of the work done on a very small amount of prescribed reading, and by grammatical questions; if a larger amount of prescribed reading must be made sure of, the certificate of the school should be accepted for this; the questions on the subject-matter should be limited to such as may be answered by one who understands the meaning of the passage. The preliminary examination would consist, then, of sight-translation of easy narrative or descrip-

tive prose (Cæsar, Nepos, Livy, Quintus Curtius, and the like); passages from the prescribed prose and poetry (let us say Cicero's oration for the Manilian Law and the second book of the *Æneid*, tho the choice is a large one, and might range over a wide field if the amount is to be small), with such questions on the subject-matter as will bring out the meaning; and grammatical questions, with simple sentences for composition, based on the passage of prescribed prose. The advanced examination would contain sight-translation of prose and poetry, not necessarily limited to Cicero and Vergil; passages from the prescribed prose and poetry (say the oration for Archias and the sixth book of the *Æneid*), with questions on the subject-matter; and a piece of connected prose to be turned into Latin, based upon the prescribed prose.

What are we to do if we do not succeed in getting the sort of examination we desire? I hope we may have the clearness of vision to see our duty and the strength to do it. Let us teach Latin and Greek, not the method of passing an entrance examination in Latin or Greek. Let us strive to make the study of these languages do all it is capable of doing for our boys and girls, and for the cause of American education. We shall then read what seems to us most helpful, when it seems best, and as we have time and strength and inspiration. The entrance requirements will, after all, take care of themselves, if we will remember that they are not for us, but for the college. If we are teaching as we ought, we should have little reason to fear the entrance examinations; but in case they are unreasonable and our students do not succeed in passing them, let us first examine ourselves, and then, if we are assured that we are doing our higher duty, be content to fail. To such an attitude as this the colleges must soon adapt themselves, and the result, I am persuaded, would be a distinct gain to all concerned.

DISCUSSION

MAYNARD M. HART, William McKinley High School, St. Louis, Mo.—For some time past the requirements in classics for entrance to college have been criticised as being excessive and mechanical. Many desire a change, but are not practical enough to suggest anything better. A number feel—and rightly, too—that for the general good the relations existing between the college professors and the teachers in the secondary schools ought to be much closer than they are at present. I am thankful to say that all concerned are beginning to realize that it is best to come into more sympathetic touch with one another. My experience in both college and secondary work has taught me that there is something for the college instructor to learn from the teacher in the preparatory institution, and that the opinion of the latter, if he be at all competent as a scholar and as a practical student of pedagogy, ought to carry, at least, as much weight as that of the former in outlining the scope and nature of the requirements for college entrance; for this means, practically, the work of the secondary school.

The attempts to satisfy the college requirements have produced many ills. In our thought on this matter we must not lose sight of the high school, as by far the greater number of pupils doing preparatory work are to be found in our public schools. Mark, I say, *doing*. Since so many subjects are now claiming the attention of the high-school pupils, it seems that the proper time cannot very well be given to the classics, and the teacher finds it difficult enough to read over hurriedly the minimum amount of author work. Under ordinary circumstances, with many pupils in the class who do not think of a college course, or who have no particular aptitude for language study, it is not possible for the instructor to accomplish all that is required without sacrificing quality for quantity—one of the fatal mistakes in our education, and nowhere more noticeable than in the teaching of Latin and Greek.

We are to consider not merely the college requirements, but the work of the secondary school in its relation thereto. Can this work be made more effective? Our course is

too stereotyped, and the division of labor is too artificial. A mistake is made in expecting the average pupil, after a rapid survey of some first-year book, to enter upon the serious study of an author like Cæsar. A great part of the period must be spent by the teacher in trying to explain the grammatical structure of the sentence to the loss of any appreciative grasp of the *Commentaries* as a piece of literature or of history. Sentiment and tradition seem to dictate this course, and so it is followed from year to year. Since it has been decreed that Cæsar must be taken up in the second year, Cicero in the third, and Vergil in the fourth, who can think of modifying or changing the course?

For some time I have contended, and experience has confirmed my contention, that some introductory reader ought to be used before Cæsar is read. Such a reader as *Fabulae Faciles* (ably revised for American students by our leader) can be taken up in the beginning of the second half of the first year, and continued along with the "first-year Latin" for a whole year; or, it may be used during the first half of the second year. Many may say that by giving only two years and a half to the three important authors we shall not be able to cover the prescribed work. However, I maintain that, even as things are, with the requirements too exacting, and having only four years in which to complete the course, the pupil would understand his Latin much better than is the case at present, due to the extra time spent on the introductory work and the probable enthusiasm created by a thoro foundation.

I believe that there should be prescribed some limited and definite work. For instance, at least a book from each of the works of Cæsar, Cicero, and Vergil in Latin, and of Xenophon and Homer in Greek, ought to be thoroly prepared to give the pupil an opportunity to show that he can master, and has mastered, what may be expected of him in the way of forms, syntax, prose, and such general information as may be required. Naturally there is necessity for definiteness, and this would be a guide, not only for instructors in the secondary schools, but also for tutors and those who may get up their work in private. From time to time the prescribed books could be changed. Then, in addition to this, wide scope should be given for sight-translation and other reading indicated by the college requirements or, in some cases, selected by the teacher. Upon this work very great stress ought to be laid, and for several reasons. So far as the student is concerned, it will give him a wider range of classical literature; and the mere fact that the reading is not specified ought to result in the absence of cramming. There will be no great likelihood of the use of translations, the bane to classical study, and there will be greater interest. I have always been pleased to note how much satisfaction it gives a boy or girl to be able to make out and master some piece of translation that is not prescribed. Very often this is the only method by which a dull or lazy pupil may be awakened and interested. For the teacher greater freedom in the translation means much. It will give him an impetus, and he will find it necessary to continue to be a student. He will be compelled to use judgment and care in the selection of suitable portions of literature. By hints and suggestions that the reading may demand he will get into closer touch with his pupils. And we need more of this co-operation in our school work.

As for admittance to college by certificate, I must state that not much time has been given by me to this matter. However, I have always been inclined to believe that the more satisfactory method is by examination. Professor Kirtland has pointed out the effectiveness of the examination in sight translation, and I agree with him; for if I desired to gain an idea of the ability of any student in classics, I should be satisfied with the results of a paper on sight-work, and I, of course, should not object to giving him something to do in prose, which, also, shows the pupil's grasp of his subject.

In conclusion, let me state that by doing thoroly less work than is at present required, and by giving more attention to additional work in the way of reading selections, merely indicated, and in sight, and by emphatically giving the pupil in his examination an opportunity to show ability to do contemplated work, the efficiency of the secondary school will certainly be marked, and the standard of the classics in the college will be raised.

F. THE MODERN LANGUAGES CONFERENCE

THE DIRECT METHOD OF TEACHING A MODERN LANGUAGE

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[ABRIDGED BY THE AUTHOR]

The mode of procedure employed by the old dictionary method could not fail to result in disaster. The pupil was required to commit a list of disconnected words to memory, a grammatical recipe was given him, and then he was expected to "create" the very language which he was to "learn." This "cook-book method" could not but produce results which were both unpalatable and indigestible. Instead of the living language we gave our pupils the disconnected words of the dictionary and the dead rules of grammar.

It is one of the fundamental principles of pedagogy, and one of those very few which are generally accepted, that "the secret of success depends upon the intensity of the impressions." Can the impressions made by sounds of foreign words be intense, if they are immediately preceded or followed by the sounds of English words? The "direct" method boldly assumes that results in pronunciation must be more satisfactory if the pupil hears, reads, speaks, even sings in the foreign language alone. Nor have we any right to expect that the foreign word will linger any great length of time in the memories of our students, if we replace it immediately after it is read by its English equivalent. By its overwhelming weight, the English must smother, as it were, the foreign word before the latter has had an opportunity to take root in the mind of the student.

From what has been said it is clear that the habit of translating is held chiefly responsible for the meager results attained by the "grammar," "translation," and often haughtily called "scientific method."

In learning our own language we associate words and sentences with objects, events, actions, and thoughts. A certain group of sounds enters the mind thru the sense of hearing. At the same time the corresponding image enters the mind thru the eye. When a foreign language is first taken up, the student will unconsciously, and often against his will, associate the word of his mother-tongue with the corresponding object, action, or event. I cherish no illusions concerning the difficulties of overcoming this habit; but conceding that it may not be overcome is equivalent to conceding that foreign languages cannot be learned. The old "translation" method persists in confirming the learner in the very habit which it should try to destroy. The "direct" method is based upon the fundamental principle that the association formed by word and image is more intense than that between the foreign word and its English equivalent. To form this habit of thinking in the foreign language is its aim. Theoretically, this standpoint, it seems to me, is unassailable. Experience shows that it has stood the test of practical schoolroom work. Even the advocates of the translation method admit that the student should, in the end, acquire the habit of reading the foreign text without first translating it.

Everybody will admit that it is more difficult to form the habit of thinking in the foreign language after the translation habit has once been formed. If it is possible to avoid translations in the reading of the classics, it certainly must be possible to do so in reading elementary texts. By the use of objects, pictures, exercises such as Gouin recommends, a vocabulary of one thousand words may be acquired, sufficiently large to read, with the assistance of a well-prepared and skillful teacher, almost any foreign text.

Nothing, in my opinion, retards the progress of a class more than the indiscriminate use of the dictionary. Someone has called it "a positive curse." Disconnected words have no meaning. A word receives its meaning thru the associations in which it is used. The use of the dictionary leads to mental inertia. Nothing is gained by looking up the

word, the process is entirely mechanical. How much greater is this activity, if the student is required to make out the meaning of a word from the context! I am prepared to hear someone raise the objection: "This method leads to mere guessing." It cannot be denied that, when practiced under a teacher without skill and experience, it may deteriorate into such. But when done in the proper way and at the right time, it means a mental activity of the highest educational value; it implies an alertness of mind, due to the capacity for readily forming mental associations; it is real logical reasoning; it is in no way inferior to the mental activity required in the solving of an algebraic equation with an unknown quantity.

A few words remain to be said in regard to the application of the principles advocated in the work of the schoolroom. A few months ago, when I was discussing the relative merits of the direct and the translation methods with one of my St. Louis colleagues, the latter remarked: "Even conceded you get to your question a perfectly correct answer from your pupil, how do you know that he understands the words which he uses. Take, for example, the question: 'Wohin fiel das Bienchen?' The answer is: 'Das Bienchen fiel in das Wasser.' How can you tell that the pupil knows what the words *Bienchen* and *fiel* mean?" I willingly grant that a superficial teacher, or one without experience, will be satisfied by the answer as given. A thoro teacher, one of experience, however, will continue to ask questions such as these: "Was ist ein Bienchen?" Answer: "Das Bienchen ist ein Insekt." "Was gibt uns das Bienchen?" Answer: "Es gibt uns Honig." As there is only one insect in the universe which gives us honey, I may feel reasonably sure in assuming that the pupil knows what *Bienchen* signifies.

On the other hand, I might raise this objection to the translation method: "How do you know the student knows the meaning of the English word which he found in the dictionary?" Are there no teachers in this audience who have had experiences of this character? In the case of *fiel*, I should drop a pencil on the desk and ask: "Wohin fiel der Bleistift?" To make me absolutely sure that the words are understood, I should ask the class to use them in new combinations. And should there still remain any doubt in my mind, nothing would be left but to ask for the English meaning; such cases, however, are of very rare occurrence. Nor would it mean that the student had learned the meaning of the German word thru the English—he cannot give the English without understanding the German, no more than he can give the English synonym of an English word which he has not understood; but it would be merely for the convenience of the teacher, so he may feel sure he is on the safe side. I never hesitate to translate in such a case, wishing to have it distinctly understood, in making this statement, that nevertheless I consider every word of translation a step backward.

A room in which German is taught by the direct method should be well supplied with maps, charts, and pictures. There are hundreds of large wall pictures, some of real artistic value, in the market which may be had at very reasonable prices. They will not only render valuable services in the study of texts, but also impart interesting information concerning the foreign people, land, customs, and habits. But these alone will not suffice, and for explaining unfamiliar words we must look for other means. In some cases we shall readily find familiar synonyms; viz., for *erblicken*, *schen*; for *kluge*, *weise*; the word *Obst* we may explain by a process of analysis: "*Obst sind Aepfel, Birnen, Beeren*;" other words by one of synthesis. In the case of derivatives we shall have to look for the root; in the case of compounds, for the different components. A word like *die Waise* is explained by a definition: "Eine Waise ist ein Kind, das keinen Vater und keine Mutter hat."

Abstract words offer greater difficulties; if they do not become clear thru the context, as in most cases they will, they may become so thru a short story; for example "Furcht": "Ein Knabe was auf der Strasse; ein grosser Hund kam; der Knabe schrie, denn er hatte Furcht."

Often the teacher may, thru the expression of his face, or thru gestures explain the meaning of a sentence. From the face of the teacher the pupil readily reads joy and

anger, happiness and sadness, satisfaction and the reverse. In many cases, the student will half understand a lesson at the first reading by the teacher, provided the teacher knows how to read and has some histrionic talent.

But, after all, this is very hard work for the teacher—immeasurably harder than the translation method; it requires more patience, more careful preparation, some natural skill, and a good deal of experience. The transition period from the object-teaching to the reading of texts is almost always slow and discouraging. But the patient teacher will find his efforts rewarded. The progress made later on will be the more rapid, since the task of translating—a most difficult, indeed too difficult task, with its tiresome and often fruitless, and therefore discouraging, looking up of words, the memorizing of word-lists, learned *in futuram oblivionem*—is no longer required of the student.

DISCUSSION

O. S. WESTCOTT, principal of Robert Waller High School, Chicago, Ill.—Twenty-eight years ago last February, I wrote in a western educational journal as follows:

The remark is frequently made that nothing but a critical study of the dead languages will fit a person for the proper understanding of our English vernacular. This sweeping claim has too little foundation in either fact or reason, and the undue amount of time usually given to the pursuit of Greek and Latin should be curtailed to more reasonable proportions, that the time now allotted to German, French, and other modern languages may be correspondingly increased.

Further, it is believed that a large measure of responsibility for the standard belief in almost unlimited amounts of Latin and Greek, as compared with the limited amount of time devoted to French or German, is fairly attributable to the unphilosophical modes of presenting living languages as if they were dead, and thus unnecessarily creating in the mind of the student a distaste which only years can eradicate. By the standard mode, to be sure, such a knowledge of a language may be acquired as will enable one by strenuous efforts, and with the constant aid of both grammar and dictionary, to pick out something which remotely resembles the meaning of a foreign author; but such a knowledge as really puts one *en rapport* with the language itself, or with those accustomed to its use, the student by this process acquires never.

But there is a rational method of presenting modern languages to the learner—a method which not only accomplishes the object aimed at, but never attained by the common school, viz., a thoughtful familiarity with the real genius of the language and those who employ it as a means of communication; but also brings about a result rarely or never contemplated by the old plan, viz., that the student shall be able to express himself fluently, vigorously, and intelligibly in the language of his adoption.

The unanimous opinion of the most competent judges of the matter appears to be that the study of the ancient languages accomplishes for the student:

1. A familiarity with the exalted type of Greek and Roman civilization and high art.
2. The acquisition of such a discipline of mind as fits the student always afterward more readily to grasp and more easily to retain anything in the vast range of human research to which he may be inclined to turn his attention.
3. A familiarity with the significance of the roots of the vast number of words in our vernacular which have been, wisely or unwisely, called from the storehouse of the ancients. The first of these somewhat specious pleas may be answered with a word; viz., that the ancient art and civilization are for the consideration of the English or American student now well presented in an English dress, and the toilsome and rugged road which alone has heretofore led to the accomplishment of this design need surely be no longer trodden. The second consideration demands thoughtful attention. Indeed, everything is willingly admitted which the strongest adherents to our classical courses can possibly

say in their behalf, so long as they refrain from invidious comparisons. But why is it assumed without investigation that the German does not have within it just such germs of disciplinary power as are at once admitted for Latin? May it not be that the instructor himself fails properly to appreciate or deftly to handle the modern language by reason of his neglect of the same for the undue cultivation of the other? Why should there be so much hidden virtue in the variations of the Latin third declension of nouns, or in the ramifications of the conjugations of the Greek verbs, while in the inflections of the corresponding parts of speech in German no such subtle force is found?

But, further, what shall be said of the familiarity with the numerous roots in our multiform language which plainly point to a Greek or a Latin origin? Granted that a knowledge of their significance is essential to a proper appreciation of our numerous English derivatives therefrom, and will it be said that other derivatives are of less importance? When our best authorities assert without contradiction that three-fifths of our English roots are from *Plattddeutsch*, surely there is no reason in the eternal fitness of things, or from pure democratic principles, why the three-fifths should yield to a fraction of the two-fifths. Altho Greek in the secondary schools has now been largely superseded by modern language or by science, and altho the influence of Latin has been noticeably diminished and the time devoted to it curtailed, it is lamentably true that the methods prevailing with the teachers of Latin and Greek have unfortunately not been abandoned, but have in many schools been retained to the great disadvantage of pupils wrestling with modern languages.

Such a position a quarter of a century ago was reckoned extremely heterodox, and I was not at all surprised to be taken severely to task for the presumptuous promulgation of such views. An opponent was willing to admit that by the colloquial method which I advocated more confidence was required, but he assumed that correctness could not thus be obtained. This very admission appeared to me the strongest recommendation for the method I was advocating. I did not hesitate to assert that it was substantiated by the most abundant and undoubted proofs, that by the new method both confidence and correctness may be acquired in the same time as by the old method the partial correctness may have been acquired with no confidence, and consequently with no further practical advantage than what accrues from a passable reading knowledge of the language studied. My critic prefers correctness to confidence. I prefer confidence with correctness. To acquire confidence with correctness, the confidence must be acquired first. This is surely so in all instruction. Too often does the teacher fail in obtaining results precisely because he is too rigidly exact in the matter of form, creating thereby dislike for the underlying and more important thought without which the *word* is lifeless, useless. Hence, our too numerous mechanical and thoughtless alleged educational experts. The new method does not by any means look to the continued exclusion of grammatical information, but requires that it shall be left until the pupil is so far advanced as to be able to appreciate the etymological and syntactical peculiarities of the language.

Why should the teacher incessantly ring the changes on the German article, until the forms and proper use of the same are both perfectly familiar to the pupil, before tolerating his attempts to employ them in sentences? Would he not *ipso facto* condemn the language of many reputed German scholars both native and foreign? Well-educated Germans themselves admit their frequent conversational obliquities in so elementary a grammatical matter as the proper form of the article in various circumstances. Indeed, who of us invariably uses correct English, whether it be in our off-hand conversation or in our more studied efforts? Shall we then cease to talk or write because we are aware of not attaining perfect accuracy?

The point may be raised whether talking a language is the main object in its acquisition. With the ancient languages most teachers believe that a reading familiarity is all that is desirable. I say *most* teachers, since there are some who believe that even Latin and Greek should be taught colloquially. I know of one teacher, who is a past master

in theology and entitled to write S. T. D. after his name, who recited all his theology in Latin, and who writes epistles in Latin with the same freedom that he exercises in English or in his own vernacular, which is French. Before his linguistic accomplishments I bow with great respect, and yet this man failed to pass an examination to entitle him to teach Latin in a secondary school, because the examiner thought it more important to know the quantities of Latin vowels than to be able to speak and write Latin with facility. Tell it not in Gath, publish it not in the streets of Ashkelon.

But with the living language of the moderns the case seems to present itself thus: Shall we, on the one hand, study the grammar and the dictionary, and with the assistance of the vernacular obtain a passably good knowledge of the new language in four years' study; or shall we, on the other hand, learn to speak the new language with such fluency as to transact business by its use, and have at the same time an excellent reading knowledge of the language by having put the same number of hours per week upon the matter for two years? I say an excellent reading knowledge, for the reason that by the new plan double and triple the amount of reading material may be gone over in one-half the time.

All who heard our beloved Dr. Harris Tuesday morning before the National Council will recognize him as indorsing our contention. We have all revered him for years as our psychological expert, and you remember that in his brief discussion of the cultivation of the heart he showed us conclusively that, antecedent to the intellectual appreciation of the moral position, the will must be called into strenuous action. First the habit of resisting no evil, insisted upon by the instructor, and, after the habit is formed, then the information tending to the intellectual appreciation of the ethics of the case. Just so do we argue in the matter of linguistic instruction. First, the habit of conversation; afterward the intellectual appreciation of the reasons for certain forms of expression. Psychology and pedagogy, here as elsewhere, go hand in hand.

The man who wishes to learn German may easily discover that *in dem Wasser* and *in das Wasser* are constantly and uniformly used in peculiar places, and he may be infallibly correct without having been instructed, perhaps tormented, by a discussion of rest and motion, place and direction, or the dative and the accusative cases.

Indeed, the greatest advantage of excluding the vernacular from the class-room consists in the fact that the student is accustomed soon to think in the new language. While he is pondering over the comparative grammars and the varied idioms, translating from the old language to the new, he is creeping when he might walk, run, fly. Tho his gait may be staggering, his flight unsteady, his progress is surely more rapid, and the style of progress will improve by practice and by practice alone. Speech is habit; grammar, an art. After the habit is acquired, then let the art be called upon to make the habit a more graceful one.

DEPARTMENT OF HIGHER EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY AFTERNOON, JULY 5, 1905

The Department of Higher Education met in the First Presbyterian Church at Asbury Park at 2:30 P. M., July 5.

In the absence of President Richard H. Jesse, Vice-President William L. Bryan, of the University of Indiana, presided.

In the absence of Secretary Joseph Swain, of Swarthmore College, President G. E. Fellows, of the University of Maine, was elected secretary *pro tem*.

President William L. Bryan presented the introductory paper on the subject "The Excessive Expansion of the Course of Study."

The second paper was presented by Charles Alphonso Smith, professor of English, University of North Carolina, on the subject "Honor in Student Life in Colleges and Universities."

This paper was discussed by Professor McCloskey, of Princeton University; Dr. Amy E. Tanner, professor of philosophy, Wilson College, Chambersburg, Pa.; President Oscar J. Craig, of the University of Montana; and President E. G. Lancaster, of Olivet College.

President J. H. Canfield, of Columbia University, next presented a series of letters from various college and university presidents which had been collected by President James H. Baker, of the University of Colorado, on the subject: "Does wide election, permitting narrow reading, especially in literatures; and do minute courses, prohibiting views of whole subjects, weaken undergraduate courses in the universities? Are colleges more fortunate in these things?"

After appointment of a Committee on Nominations by the president, the department adjourned.

(Signed) G. E. FELLOWS, *Secretary pro tempore*.

SECOND SESSION.—FRIDAY MORNING, JULY 7

Acting President William L. Bryan called the department to order at 9:30 A. M.

The first paper was by President George E. MacLean, of the Iowa State University, on the subject: "Which is better: the western plan of admitting students to colleges and universities by certificates from duly inspected secondary schools, or the eastern method of admitting only by examinations conducted by representative boards or otherwise?"

The discussion of this paper was led by Edward J. Goodwin, second assistant commissioner of education, Albany, N. Y.; Delos Fall, ex-superintendent of public instruction of Michigan; J. A. Foshay, superintendent of schools, Los Angeles, Cal.; H. M. Slauson, superintendent of schools, Ann Arbor, Mich.; Oscar J. Craig, president of the University of Montana.

The second paper was presented by Professor Albert Ross Hill, dean of Teachers College, University of Missouri, on the subject: "Should chairs of pedagogy attached to college departments of universities be developed into professional colleges for the training of teachers, co-ordinate with those of law, medicine, and engineering, or should they be abolished? Should such chairs be in colleges at all?"

A general discussion followed, led by Professor William M. Aber, of the University of Montana.

The Committee on Nominations reported the following nominations:

For *President*—William L. Bryan, of the University of Indiana.

For *Vice-President*—Charles Alphonso Smith, of the University of North Carolina.

For *Secretary*—Oscar J. Craig, of the University of Montana.

On motion, the report was accepted and adopted, and the nominees declared elected as officers for the ensuing year.

The department then adjourned.

(Signed) OSCAR J. CRAIG, *Secretary pro tempore*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

THE EXCESSIVE EXPANSION OF THE COURSE OF STUDY

WILLIAM L. BRYAN, PRESIDENT, UNIVERSITY OF INDIANA, BLOOMINGTON, IND.

I wish to consider briefly what I believe to be a certain evil condition of the courses of study in American universities. I believe that we offer too wide a range of undergraduate courses, and that this is done at the expense, on the one hand, of the quality of our collegiate work, and, on the other hand, at the expense of graduate and research work. I believe that, without violent change, the evil may be in a considerable measure remedied.

I. The chief factor in determining from decade to decade the actual course of study in American universities has been, as I think, the pressure of new subjects for recognition. This pressure changed the curriculum of seventy-five years ago, with its slender list of subjects, into the curriculum of forty and twenty-five years ago, whose aim was to compress a bit of each sort of learning into a four-year course. When this became impossible, two courses of study were made, and then three. The ground must be covered. No one student could cover the ground, but the catalog must do so.

The same pressure, growing always greater, caused the so-called all-round course of study to blow up from within, leaving its debris in many new and strange forms of educational practice. It has happened more than once that the old course of study has blown up in the hands of a faculty whose members believed in its ideal, and who were simply trying to rearrange the details.

Finally, the same pressure which has caused the multiplication of departments has caused the multiplication of specialties within departments. Science has developed such and such new fields of learning. They demand recognition. They are recognized as such and such institutions. We must recognize them here. We must cover the ground. No student can cover the ground, but the university must do so.

If a university were rich enough to cover the whole ground of learning with first-rate introductory courses on the freshmen-sophomore level, and then to cover the whole ground again on the junior-senior level with a vast array of electives, and finally to support research in a correspondingly adequate measure, we might say: "Let it be so; let this limitlessly rich university do by itself what it is really the business of all the universities and learned societies combined to do." It is fine to imagine an institution where every science and every art might be studied upon every level, with no lack of money or of men, or of leisure for the men who do productive work. It is not surprising that this splendid conception, which must be the ideal of the university world as a whole, should be more or less consciously the ideal of particular universities. But, in point of fact, the whole university world is not at present rich enough for the full realization of this ideal. And when a single university, even the richest, attempts to do everything on every level, the inevitable failure of the undertaking is sure to appear in some way. The failure does appear very generally in two well-known ways: first, in the cheapening of the elementary collegiate work; and, second, in the restriction of productive research work. It is said that in the American university there is a necessary internal conflict between the collegiate interests and the university interests. My judgment is that in the larger American universities generally the greatest enemy of both these interests is the excessive expansion of the course of study.

II. There are obviously two ways of cutting down the amount of work which the university shall offer: we may cut down the number of departments, or we may cut down the number of courses offered by the several departments.

The first of these methods is radical. It is a grave matter to abolish a university department; not really more grave, I think, than the establishment of a new department whose justification may be doubtful, but, for many and obvious reasons, a procedure which university authorities must hesitate to adopt. Nevertheless, even such radical pruning may be justified. It can become a question between cutting off some large limbs or allowing the whole tree to languish. I shall not be surprised if within the next generation the pressure of circumstances should force the universities to the adoption, in a considerable degree, of this extreme form of selection.

Meanwhile, we have at hand a much gentler, and yet scarcely less efficient, method of selection, if the departments will cut down the amount and range of work offered by them. Let me put this method of reorganizing and concentrating the course of study in the form of definite proposals.

Let there be in each principal university department:

1. A fundamental elementary course.
2. A very strictly limited amount of undergraduate work beyond the introductory course.
3. All the rest of the work offered by the department strictly graduate or research work.

I shall discuss each of these in turn.

1. *The fundamental course.*—It should be a problem of maximum importance to make this course as good as college work can be made. There is the problem of determining what to do—what things out of the whole field to select which shall represent typically the present state of learning in the field, and that on a level appropriate for the younger college students. There is the problem of finding men whose training, whose personal good temper, and whose pedagogical tact fit them to introduce young people to a great department of learning. Wherever possible, the head of the department should take part in this work.

It is here, as we know, that the small colleges have the chief advantage of their smallness, and it is here that they have the best chance of excelling the great universities. I believe, however, that the university has great countervailing advantages. Above all things, it must have, on the average, professors who are stronger and in closer touch with the most recent learning. I believe, therefore, that, in spite of the great numbers and the many sections, it is possible for the university to develop elementary courses which shall be better than are ordinarily possible in the small colleges. I wish to remark that to plan and achieve such a course is of itself productive original work of a high order, as truly as the writing of a monograph.

2. *The advanced undergraduate courses.*—Most of our universities have either the major-subject system or the group system. The object of both these systems, as we know, is to furnish, in lieu of the old-time college curriculum, a number of curricula each of which has a substantial center. The essential requirement which we must make of every group and of every major is that a competent social consensus shall judge it to have the real internal unity, together with the progressive grades of difficulty which fit it to be the center of a college curriculum. Both systems exclude a college course made up of scraps. Both may, and I think should, admit a major or a group whose internal unity is assured by the fact that it leads to one of the learned occupations.

What I wish now to urge is that, without affecting the number of majors or of groups or of departments, we may very decidedly reduce the number of undergraduate courses offered. Here, as I think, is the place for the pruning-knife. The universities can cover the whole field of learning in typical introductory courses on the freshman-sophomore level. We cannot each of us by any possibility cover the ground on all higher levels. We must select. We must reject right and left subjects which have every argument in their favor, except that we cannot do them all. We must weed out the suckers as a condition of having cornstalks.

There would result apparent hardships for the undergraduates and for some members of the faculty. The undergraduate would not be able, on the one hand, to take a large proportion of his college course within one narrow field, thus becoming a specialist without becoming an educated man; and he would not be able, on the other hand, to browse far and wide over any and

every field which modern learning has developed. He would find instead an abundantly wide choice of majors or of groups, each offering an austere chosen list of representative courses so arranged as to make a substantial center for a college course. And this, whether or not he is to become a specialist, is, I believe, the best thing which the university of today can offer him.

I have considered in this connection also the possible hardship to the younger professors who want to have each at least a small amount of advanced work to do. I do not wish to slight this consideration, for it is an essential feature of the university life that the younger men should have the door of hope open. I have not solved this problem to my own satisfaction, but I say this: If an instructor can do important productive work, the university should try to offer him as much leisure as the value of his work appears to warrant, whether he is doing the work with students or alone. What the university cannot afford to do is to pay so dearly for elementary non-productive junior and senior work. These courses are the suckers.¹

3. *Productive work.*—The freshman-sophomore fundamental courses should be the first gainers from the resources of money and leisure saved by cutting off excessive expansion. The second gainers should be the graduate and research courses. I wish to consider this second gain as it might affect the larger universities and then as it might affect the smaller ones.

a) Our greatest universities are very rich. They have great graduate schools. They have scholars who have proved to be productive men. And yet, when the total output of scholarly work done in them is compared with that done in Germany, for example, the result is generally conceded to be discouraging. In many cases, little is accomplished beyond the comparatively elementary research work which has its terminus in the doctor's degree. No explanation of this result seems so probable as the fact that the German professor has, as a rule, the leisure which the American professor secures by exception only. It is doubtful whether the German rule can or should become the American one, while we have the college and the university united in one institution. We wish our greatest scholar to surrender a little of his time to the freshmen. But, having asked this of him as a duty of religion, we should spare his leisure as the most precious asset of the university. We should count it a sin to require such a man to "cover the ground." We should sacrifice the catalog, make it thin and full of holes, confine the students to a narrow range of typically good choices, and by these inconsequential sacrifices preserve for the great man his chance to do the work which he alone can do.

b) There is an evil suggestion in the air that a university should not attempt to do advanced graduate and research work unless it is very rich. I

¹ It should, of course, be remembered that conditions vary widely in the different departments. For example, first-year work in a foreign language is not really collegiate work at all, and if it must be done in college, the amount of possible collegiate work in the subject is lessened. On the other hand, such a subject as astronomy or geology presupposes collegiate work in other sciences. Good sense requires that such differences should be recognized at whatever expense of superficial consistency in the treatment of departments.

know of nothing to justify such a counsel of discouragement. The history of learning, the history of the little universities of Europe, the current history of scholarly work in America, all show that the conditions which permit a man to do productive work may be created anywhere. At the worst, some men in the smaller universities, in the little colleges, and in whatever places may seem more unlikely, will continue to prove that creative work is free for all and is the one thing which can never be controlled by a monopoly. Wherever these men are they prove also, directly thru their pupils or indirectly thru their colleagues, the vitalizing effect of research upon teaching, and so demonstrate the true bond of unity between the university and the college. No institutional conditions can wholly suppress these masters of the guild of scholars. It is, however, our main business to organize conditions which shall not tend to repress them, but which shall enable them to give their whole service to society.

In conclusion I will say that the problem of selecting from all the things which might be done the things which shall be done is the most difficult and the most imperative problem confronting the entire school system. It is not an artificial problem. The school must represent civilization. When we have detected and dismissed the fads and frills, there remains the great circle of science and arts which will not suffer dismissal, and yet for which our long and expensive school system has not yet found enough money nor enough time. This means simply that the school has forced upon it as never before the problem of selecting its course of study.

HONOR IN STUDENT LIFE IN COLLEGES AND UNIVERSITIES

CHARLES ALPHONSO SMITH, PROFESSOR OF ENGLISH, AND DEAN OF THE
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CHAPEL HILL, N. C.

In the fourth book of his work on *The German Universities*, Dr. Friedrich Paulsen analyzes student honor into three constituent elements: courage, independence, and truth-telling.¹ This analysis, however, besides being purely abstract, looks more to the foundation of student honor than to the superstructure. The analysis given by Le Baron Russell Briggs, dean of the faculty of arts and sciences in Harvard University, is more concrete, because it is based on the actual working out of honor ideals in college life. Says he:

Want of a fine sense of honor appears chiefly in athletic contests, in the authorship of written work, in excuses for neglect of study, in the relation of students to the rights of persons who are not students, and in questions of duty to all who are, or who are to be, nearest and dearest.²

* "Drei Stücke scheinen mir in erster Linie zu stehen: Mut, Unabhängigkeit und Wahrhaftigkeit." See Paulsen's *Die deutschen Universitäten* (1902), p. 346.

² See the excellent chapter on "College Honor" in *School, College and Character* (1901).

These defects Mr. Briggs considers "a part of that lopsided immaturity which characterizes privileged youth."

Without attempting an adequate analysis of student honor, either of its excellences or of its defects, it may be said that the most popular error in regard to the subject is to view it wholly as a phase of ethics. Student honor is only partly a thing of the conscience. One of the most effective appeals that I ever heard made to a band of college hazers was based not so much on the view that hazing is wrong as that it is puerile and common. The students were told that society is coming more and more to regard hazing as belonging with slovenly speech, loud neckties, and even eating with the knife. The appeal was made with tact and sympathy, the students seeming to feel that their honor had been invoked because nothing was said about the Ten Commandments or the Golden Rule. Student honor, as it exists in our colleges and universities today, is only in part, therefore, an ethical dictate; it is rather a curious blend of conscience and convention, of individualism, on the one hand, and compliance with the canons of good form, on the other. Being essentially a communal sentiment, a *faculté d'ensemble*, it is peculiarly susceptible to the consensus of opinion prevailing in its own college and in the colleges that form its social or athletic environment. A college president writes:

I am almost coming to the conclusion that student honor is based entirely upon campus sentiment, and refuses to receive any other standard. . . . Convince one team that all the other college teams sign certain pledges as a matter of form, and they will consider themselves justified in doing the same.

Another misconception is to regard student honor as instinctive or intuitive, as having the simplicity of the great emotions, and but little affinity with the analytic distinctions and reasoned processes of the intellect. Shakespeare's unanswered question of fancy may be asked with equal pertinency of student honor:

Tell me where is fancy bred,
Or in the heart or in the head?

Undoubtedly the impulses of student honor come chiefly from the feelings, but the code of student honor frequently finds place for more subtle distinctions than ever vexed the brain of rabbi or scholiast. It recalls at times the phrase with which Charles Lamb characterized the comedy of the Restoration; he called it "the sanctuary and quiet Alsatia of hunted casuistry."

But when all is said, student honor remains an asset of incalculable moral, social, and civic worth. You may smile at it now and then; you will more often be thrilled by it. Its inconsistencies are apparent, but student life would be gross and sordid without it. No college discipline would be tolerable that did not strive with sympathy and patience to identify itself with the honor ideals of its students. No teacher would deserve the name that did not seek in the class-room and out of it to invest these ideals with ever-increasing worth and dignity. Student honor needs above all else neither praise nor blame, but recognition, enlightenment, and co-operation.

That it has not received the consideration that its importance merits is evidenced by the dearth of literature bearing on the subject. It is true that more attention is now given to the ethical aspects of education than ever before; the ethical note is more often and more clearly sounded; but student honor, tho it is unquestionably the strategic point in student character, has received but scant notice from writers on educational themes. No thoro treatment of the subject has yet been attempted, and no concerted action has been taken. If we believe in the primacy of character rather than in the primacy of mere intellect, we cannot afford to ignore the standards of honor and dishonor that students impose upon themselves and that affect more or less permanently their character in after-years. If this paper, therefore, does nothing else than call attention to an oversight and a need, it will at least justify its niche in the program.

While it is true that student honor is measured today chiefly by the student's deportment on examinations and on the athletic field, there was a time when the phrase connoted primarily the student's bearing toward the faculty and toward the property-owners in the neighborhood of the college or university. In both these respects, however, there has been a significant change for the better. Organized rebellions against college authority are comparatively rare. They occur at times, and perhaps will occur thruout the century; but they are exceptional and marked by less violence and rowdysim than in earlier years. They arose out of conditions which are now obsolescent, if not obsolete. Foremost among these were the petty restrictions imposed by faculties, and enforced by a system of espionage and inquisitorial investigation that rarely failed to beget an insurrectionary feeling on the part of the students. Dr. Charles F. Thwing,¹ declares that "down even to the middle of the present century, a system of pecuniary fines represented the most popular method of securing good order among college students." So far as my information goes, this was not true of southern colleges. In many cases students were not only not trusted, but their very presence at a college or university seemed the warrant of suspicion. They were expressly forbidden to do what only the most versatile ingenuity would ever have thought of doing. In the inhibitions launched against them no attempt was made to discriminate between the *malum prohibitum* and the *malum in se*.² This is a distinction, however, that students never fail to make, and, be it said to their credit, their insistence on their natural rights, together with their consistent opposition to artificial and unnecessary restrictions, has had its share in bringing about the era of better things. "The history of the government of the students in American colleges," says Dr. Thwing,³ "is a history of increasing liberality and orderliness;" of increasing orderliness because of increasing liberality.

There has been also a corresponding change in the attitude of college

¹ *College Administration* (1900), p. 115.

² In Quincy's *History of Harvard University*, Vol. II, pp. 499, 500, "absence from recitation" and "lying" are fined the same: "not exceeding 1 s. 6d."

³ *College Administration*, p. 113.

students toward those living in the college environment. Conflicts between gownsmen and townsmen are no longer a settled feature of college life. This consummation is to be ascribed in part to the growth of college towns, and to the attendant blending of student life with a larger social and civic life.¹

It has been brought about also by the greater attention now paid to the physical comfort of students in dormitories and lecture-rooms, by the modernization of the curriculum, and by the wider introduction of the elective system. The adaptation of student to study, which it is the aim of the elective system to effect, leaves little room for the restless leisure that used to vent itself on sign-boards and hen-roosts. Congenial work and plenty of it will do more to harmonize a student to his surroundings than all the formal regulations or systems of espionage that the mind of man could devise.

But while there has been improvement in the respects noted, student standards have still their inconsistencies. The two nerve centers of student honor are now athletics and examinations. It would be hard to overrate the significance of athletics in modern college life. Time was when the commencement exercises furnished the chief point of contact between the collective life of the student body and the outside public. The point of intersection is now the intercollegiate game of football or baseball. Both games are characteristically American, and have proved effective agencies for the discipline of manliness and the development of college spirit. The popularity of these games, however, and especially the unprecedented interest in football, have grown faster than the means devised to meet and control the abuses connected with them. Methods of safeguarding intercollegiate athletics are yet in an experimental stage. While I have perfect faith in the ultimate competency of student honor, reinforced by the American love of a square deal, to meet the exigencies presented, the duty of the hour is to educate public sentiment in and outside of our colleges so that it will despise the doctrine of victory at any price. This is the slogan that is responsible more than anything else for the lie signed to the examination paper as well as for the lying evasion of the aspiring athlete.

In intercollegiate athletics, as practiced in nearly all of our American colleges and universities, a student becomes ineligible who has received or is receiving compensation, "direct or indirect," for his athletic services. This inhibition, it is true, strikes at the root of athletic commercialism; but there has grown up a code of casuistry in the interpretation of this clause that threatens to undermine the integrity of athletic ideals. The faculties of our colleges have here a rare duty and opportunity. It is a duty requiring tact, insight, courage, and unfailing fidelity to truth and honor. The slightest

¹ Postmaster-General Cortelyou, in his recent address, June 7, before the students of the University of Illinois, touched happily upon this general phase of education as follows:

"Our modern educational system is becoming more rational. It takes account of actual needs; it deals less with the theoretical and more with the practical. It looks to the development of character as well as to the acquisition of knowledge. It makes the experience of the past serve the purposes of the present. It aims to educate the student not alone as an individual, but as an integral part of the body politic. It anticipates his responsibilities to the state and prepares him to meet them."

inconsistency or evasion on their part, the slightest concession to the lust of victory without merit, the slightest relaxation of vigilance or interest, even the complacent smile that sometimes accompanies the formal rebuke of victorious trickery, may lower the whole standard of athletic honor. It must be remembered, too, that no institution can long maintain one standard of honor for the athletic field and another for the recitation room. Both student and public are quick to make their inferences, and these inferences, even if unfair, become in turn almost as prejudicial to the maintenance of student honor as are overt acts of dishonor.

I am convinced, however, that in many instances of supposed underhandedness in college athletics the case is one of perverted vision rather than of moral obliquity. We need constantly to remember that many things, which to the faculty and to outsiders appear palpably dishonorable, are not so regarded by the student, because he is in the grip of a collective athletic sentiment of which others know but little. He is in need of enlightenment rather than of censure. He is a reminder that athletic tactics have not been adequately interpreted to college students in simple terms of right and wrong. The strategy, for example, by which a pitcher leads a runner on the bases to overestimate his chances "to get away," is perfectly legitimate; but the strategy employed by the catcher who habitually pulls the ball down as he catches it, and thus leads the umpire to call a strike, is dishonest. The principle is perfectly clear: to practice deception on the umpire is to practice imposition on the opposing team. But how many students ever pause to make the distinction, and how often has it ever been made to them?

Mr. Briggs¹ narrates the following case:

A whole-souled and straightforward young athlete told me once, with smiling good humor, that a football player in his own college (who had everybody's respect) owed his success in the game to a knack of holding his opponent in such a manner as made his opponent seem to hold him.

Does not the very frankness of the young man in making this disclosure to the dean show that he saw nothing dishonorable in it? His sense of honor was not involved, because his intelligence had not been appealed to. So far from purposely affronting faculty sentiment, he was ignorant of it.

Another case in point is found in the most important declaration made by the well-known Conference on Intercollegiate Athletics held at Brown University, February 18, 1898. The declaration reads: "The practice of assisting young men through college in order that they may strengthen the athletic teams is degrading to amateur sport." This declaration, I repeat, is all-important; but it needs explanation to the prospective matriculate. It does not commend itself to his sense of fairness or of consistency. He is more likely to see in the offense inhibited, so far as it regards himself, not a *malum in se*, but only a *malum prohibitum*. He knows that the practice of assisting worthy young men thru college in order that they may strengthen

¹ *School, College and Character*, p. 75.

some musical organization, or serve as typesetters in the office of the college paper, is perfectly legitimate. "Why may not I," he asks, "pay in part for my education by my physical prowess, if my brother pays in part for his education by his musical talent?" The question is a natural one, and should be answered before it is asked. Left unanswered, it tempts the student to evasion and duplicity.

One other illustration of the obscurity that should not exist in matters affecting student conduct relates, not to athletics, but to examinations—an illustration that may serve also to introduce the subject of the honor system. In an article entitled "Student Honor: A Study in Cheating,"¹ Earl Barnes writes as follows:

Not long since there was a flagrant case of cheating discovered in one of our large universities. An examination paper had been stolen from a printing-office, and several students had used it to secure superior standing. An attempt was made to arouse public sentiment in the institution; and the student body appointed a committee from its numbers which was to receive reports and try future offenders.

While the matter was under discussion, three professors in different and representative departments asked their students to state in writing whether they would themselves, had they become cognizant of the theft, have reported it to the student committee, it being taken for granted that they would not report to the faculty. The majority of the students, men and women, said "No." The author concludes: "And so we must be patient with children, and university students, and with ourselves until we grow up to social manhood and womanhood."

The position of the author seems to me not well taken. Something ought to have been done, but all the world despises a tattler. Some of the students wrote: "I despise the spirit that actuates a tale-bearer. How can a person respect himself and be a tale-bearer?" Others said that "even the faculty professors would secretly despise them, and the public would consider them contemptible informers." Was there no other exit except thru tattling? My own feeling is that a student who had witnessed the theft would under the circumstances have done his full duty had he gone to the ringleaders and expressed to them his own sense of indignation and wrong, adding no threat of possible exposure. But if the student committee had been an established agency of the institution, and not called into being solely by this emergency; in other words, if the honor system had prevailed in the institution, reporting to the committee would not have been tattling, nor would it have been so regarded by the students themselves. If an institution uniformly ignores the student's sense of honor on examinations, is it to be expected that this same sense of honor can be confidently appealed to when an emergency arises—an emergency due to the almost inexcusable carelessness of a member of the faculty?

The honor system as it prevails in southern colleges and universities today

is itself an evolution. Inaugurated by Thomas Jefferson¹ in the founding of the University of Virginia in 1825, it was not until 1842 that the system may be said to have culminated at the University of Virginia in the following resolution:

Resolved, That in all future written examinations for distinction or other honors of the University, each candidate shall attach to the written answers presented by him on such examination a certificate in the following words: I, A. B., do hereby certify on honor that I have derived no assistance during the time of this examination from any source whatever, whether oral or written, or in print, in giving the above answers.²

The pledge is now simplified into: "I certify upon my honor that I have neither given nor received aid on this examination," and is used in this form, or with unimportant modifications, in all southern colleges and universities. The professor remains in the room during the examination to preserve quiet and to answer necessary questions, but there is no suggestion of espionage. The student is presumed to be a gentleman, and this trust in his honor is a powerful influence in making him honorable. It at least shields him against the subtle temptation to act on the principle that where there is no confidence, deceit is no crime. Violations of the written pledge are rare and are usually dealt with by the students themselves, sometimes by the faculty alone, not infrequently by both.

That the honor system prevails only to a limited extent outside of the South is no indication that student nature is essentially different in different sections. I have yet to hear of any college or university where the honor system, if faithfully tried, has proved a failure. "I have yet to meet a single man," says Mr. Briggs,³ "who has lived under the honor system (as I have not) who does not give it, in spite, perhaps, of a *priori* skepticism, his absolute faith."

Mr. Briggs is not, however, a believer in the honor system for two reasons: "Theoretically," says he,⁴

tho in a doubtful case I should always accept the word of a suspected student, I object to the honor system as nursing a false kind of sensitiveness that resents a kind of supervision which everybody must sooner or later accept, and as taking from the degree some part of its sanction.

The same objections reappear in a letter recently received (June 3) from Jerome N. Greene, of Harvard University, secretary to President Eliot:

The honor system, so called, does not obtain at Harvard. With us all examinations are held under the supervision of a college officer, either an instructor in the course, or a

¹ It is possible that the honor system may have been in vogue in a few southern colleges before 1825. The claim of precedence is often made for the South Carolina College. President Benjamin Sloan writes, however, as follows (May 27, 1905): "I am very sorry that I can find no record of the origin of the honor system in South Carolina College. It seems, though, that this principle was adopted at the birth of the college, for one of the by-laws published in 1804 states that 'rewards and punishments shall be addressed to a sense of duty, and the principle of honor and shame.' I can find no further documentary evidence of the adoption of the honor system by the board of trustees."

² See *The Genesis of the Honour System*, by Professor William M. Thornton, an address (1904) privately printed.

³ *School, College and Character*, p. 83.

⁴ *Ibid.*, p. 82.

proctor appointed and paid for such service. Such supervision is valued by honorable students as a guarantee of the good faith of an examination—a guarantee which is absent from a diploma based on examinations which are not supervised. An honest student has no more objection to this method of vouching for the honesty of his examination than a bank official has to having his accounts audited.

It is not my purpose to take up the cudgels for the honor system, but to remove what seem to be the two prevalent misconceptions of the system as compared with the so-called system of supervision. In the first place, Mr. Greene's contention that the honest student has no objection to this method of vouching for the honesty of his examination may be conceded at once. No one would maintain that the students of an institution accustomed to no other system would resent the system of supervision. But how do the two systems prepare for life? If the one system prepares the student for "a kind of supervision which everybody must sooner or later accept," does not the other system prepare the student for a kind of personal accountability which, unfortunately, everybody does not sooner or later accept?

In the second place, is it true that a diploma based on examinations conducted under the honor system is less trustworthy than one based on supervised examinations? Granting that there is undetected cheating under both systems, is there more under the honor system? Having known only the honor system myself, let me cite, out of much available material, the testimony of three teachers who have tried both systems. Says Professor William H. Hulme,^{*} of the College for Women, Western Reserve University:

If any instructor, even with the help of two or three assistant "proctors," supposes he can prevent cheating or cribbing in a room of fifty or more college boys by seating them in any possible order, he certainly does not understand human nature, and he is entirely mistaken. An inquiry among a half-dozen of his best students will convince him that cheating goes on regularly right under his eyes. It is, in fact, the boast of many students in colleges where they are watched on examinations that they cheat and crib at every opportunity, and they feel that they have a perfect right to do so, because they are being watched and are, therefore, suspected.

Dr. G. Carl Huber, of the University of Michigan, writes as follows (May 18, 1905):

In view of the fact that the so-called honor system has been tried only in the department of medicine and surgery of the University of Michigan, President Angell has forwarded your communication to him, of recent date, to me for answer. I may state that some four years ago, largely through the instigation of our present graduating class, a set of resolutions were adopted by the class and approved by the faculty, according to which the class, and especially an appointed committee of the class, which also was approved by the faculty, were to have charge of all examinations, written quizzes, and all written exercises in which this class would participate during its stay in the university. The class adopted a very good set of resolutions, and has been enthusiastic in carrying out the spirit and the letter of these resolutions. As concerns this one class, the honor system has proved very satisfactory. It has elevated the tone of the class, and its conduct has been much more loyal through its entire stay at the university.

Professor H. B. Fine, of Princeton University, writes (May 25, 1905):

^{*} See *The Western Reserve University Bulletin*, Vol. VII, No. 3 (May, 1904), p. 123.

The honor system, I may say, has proved an unqualified success here in Princeton. It has banished cheating from our examinations, and before the system was introduced there was a great deal of cheating in the Princeton examinations. Once in a while, to be sure, a student so far forgets himself and his honor as to cheat, but he is pretty certain to be detected, and, if so, his dismissal from college on the recommendation of the student honor committee follows almost as a matter of course.

In conclusion, there is no room for pessimism, for there was never a time when the relations existing between college faculties and college students were more frank and cordial than they are today. There was never a time when the personal influence of college professors was more potential for the direction and ennoblement of student life. If the honor ideals of the students find in their instructors prompt recognition, kindly enlightenment, and hearty co-operation, both students and instructors will be alike the beneficiaries.

*DOES WIDE ELECTION, PERMITTING NARROW READING, ESPECIALLY IN LITERATURES; AND DO MINUTE COURSES, PROHIBITING VIEWS OF WHOLE SUBJECTS, WEAKEN UNDERGRADUATE COURSES IN UNIVERSITIES? ARE COLLEGES MORE FORTUNATE IN THESE THINGS?**

JAMES H. CANFIELD, LIBRARIAN OF COLUMBIA UNIVERSITY, NEW YORK CITY

It seems only proper that a word of explanation be offered. I was asked to open the discussion of President Baker's paper, and consented. No abstract of his paper reached me. Just before coming to Asbury Park, I received a letter from Vice-President Bryan, informing me that President Baker had gone to Europe for the summer, had not prepared a paper, but had sent all the preliminary correspondence to Mr. Bryan, and that the latter would confer with me about this when we met here. At ten o'clock this morning President Bryan brought me a large package of letters, and we determined to present the greater part of them here this afternoon, as a symposium, in place of the paper.

I have read these letters carefully; have classified them, partly according to territory, and partly according to reputation; and am prepared to give you the gist of each. You will observe that they are marked by local color, and by some personal "atmosphere" as well, and that they indicate very clearly that the question under discussion, like the tariff from the standpoint of a one-time unsuccessful candidate for the presidency, is somewhat of a local issue. Yet there are certain underlying principles which are clearly fundamental; and you will find a very general consensus of opinion that a student ought not to "scatter," and that sound and thoro training ought to precede every attempt at specialization.

*The material for this paper was collected by President James H. Baker, University of Colorado, who was absent in Europe at the time of the convention.—EDITOR.

I have taken, first, the more well-known universities east of the Alleghanies, as follows:

HARVARD: "In the experience of Harvard University, wide election is more open to the danger of a scattering of attention among elementary courses than to the danger of narrow reading or undue specialization. In fact, the attention of our faculty has of late been directed to several contrivances for encouraging students to specialize more than they do."

YALE: "We have not had much trouble at Yale of the kind suggested by your question—not, I think, more than is the case with small colleges. The influences of the Yale traditions and Yale undergraduate life which tend to take a man outside of himself are strong enough to guard against the danger, except in the case of those few individuals who tend to specialize wherever they are put."

COLUMBIA: "These prescribed courses having been satisfactorily completed, the student will be at liberty to choose the remainder of his courses at pleasure, subject to the general restriction that, prior to receiving his degree, he must have made at least nine points under some one department. This restriction is new and is intended, of course, to prevent scattering. The man who has attained to freedom, and sees before him the immense and variegated bill-of-fare which Columbia College is able to offer in virtue of its place in a great university, is tempted to nibble and sip instead of eating and drinking. There are so many languages and sciences to be begun, so many 'interesting' courses of lectures to be heard, that he is in some danger of making up his entire curriculum out of more or less elementary odds and ends, and so coming to the end of his course without having acquired solid knowledge or the spirit of scholarship in any subject whatever. It should be observed that the new restriction, which virtually requires the student to take from three to five half-year courses in one department, is not at all onerous. It implies nothing more than what is already done by a large proportion of Columbia students. It is not designed to make an utter end of browsing, which within limits is not such a bad thing after all, but to admonish the student betimes of the importance of the long and strong grapple with some one subject."

UNIVERSITY OF PENNSYLVANIA: "You will observe that we are not in favor of free election—that a certain amount of required work must be done by every man who is a candidate for any one of our degrees."

JOHNS HOPKINS: "The experience of the Johns Hopkins University cannot furnish evidence of value on the subject referred to in your recent letter. Our undergraduate courses are quite distinct from the graduate courses, and we do not to any extent permit 'narrow reading, especially in literature,' and 'minute courses prohibiting views of whole subjects.' As to whether colleges are more fortunate in these things, I can only say that everything depends upon the college."

CORNELL: "The tendency of opinion in this university, as recorded in the history of its legislation, is toward a wider range of elective work. The course for the A.B. degree at the beginning was practically all required. It is now all elective, and in the professional courses elective work is beginning to creep in of recent years. This course of action reflects the prevailing opinion at this university. We do not think that such wide election weakens undergraduate courses, or that other colleges are more fortunate in making less provision for elective work."

To these I venture to add opinions of three of the typical colleges in the same territory:

DARTMOUTH: "I think that the terms of the question which you propose restrict the answer which may be given. I should say that 'colleges were more fortunate than undergraduate courses in universities,' if the question is stated in precisely the way you put it;

but as regards the latter question of electives, I see very little reason for difference between college work and the undergraduate work of universities. At Dartmouth all courses are elective after freshman year, and a part of the courses within freshman year. The only restriction to this is thru the group system."

UNION: "I regard any system of education that permits narrow reading and forbids a study of whole subjects as pernicious in its influence, and sure to show in the general weakness of our college men."

WILLIAMS: "There is discernible at this time a decided reaction from the elective system as practiced in the universities where it is most free, and an increasing demand for a more careful regulation of courses so as to provide a man with a reasonably symmetrical training before he begins to specialize in any minute way. We have here the group system, by means of which we seek to reach this end, and are likely to diminish the number of courses taken rather than to increase them."

Of the state universities I have selected the following:

MICHIGAN: "In reply to the question which you have submitted to me, I should say that if wide election and minute courses are so administered as to compel narrow reading and to prohibit views upon whole subjects, they would be open to criticism. But, so far as I know, pains are taken in universities to avoid those perils by requiring a broad foundation in the first year or two of study, or by controlling the work of the student to a large extent by the authority of the committees which direct or advise the elections. We, at all events, take such precautions here ourselves. Probably the danger is greater in the large universities than colleges, for the reason that the colleges are not able to allow much liberty of election, and of course by that fact they lose some of the advantages which are gained in the larger universities by greater opportunities for intensive work."

WISCONSIN: "The question is one which is very difficult to answer except by a long statement; and, in my judgment, it can hardly receive a satisfactory answer. . . .

"Put in another way, I think the question is equally difficult to answer: Is it better to secure a thoro knowledge of a relatively small portion of a subject, or a more superficial knowledge of a larger part? I do not think that any answer can be given to this question in general terms, but that the only profitable discussion regarding it can be with regard to the wisdom of the practical solution reached in the courses offered by a given department or institution.

"Speaking for the University of Wisconsin, I do not believe that the courses given in literature are so narrow and minute as to weaken the undergraduate courses, as compared with similar courses in colleges. I have no question, however, but that the large number of electives offered permits students to select a course which is narrower than is advisable. This, however, is something which is incidental to the elective system in any form.

"My own feeling regarding the relative advantages of colleges and universities is that, on the whole, the university has a decided advantage in these advanced courses. . . .

"For myself, I do not believe that the advanced courses in our universities are 'minute,' or that they 'prohibit views of whole subjects.'"

CALIFORNIA: "It is my present conviction that the small colleges have very much the best of us in their maintenance of smaller classes, attended by fixed groups of students; in their provision of instruction in certain selected and most important studies; in their presentation of these studies, especially in the freshman and sophomore years, in the general form more fitting for assimilation to culture-life; in their insistence on a certain order and the wider range of studies. I have in my experience found that the best candidates for advanced specialization come to us from the Canadian colleges, and others that have preserved the narrower curriculum. A man who has browsed about in many cheerful fields which he has chosen at will is very likely to be of no use for graduate work. The academic and the life-chances are altogether against a man who has begun specialization early.

The so-called elective system sometimes turns toward early specialization, sometimes toward continuous scattering; and both are bad. As things are now in this country, I think the first turn toward specialization in method of teaching and of learning should not, as a rule, come earlier than the junior, *i. e.*, the third, year of the college course."

INDIANA: "In general, I believe, as I suppose all do, in broader courses in the more elementary work, and in courses somewhat specialized in the more advanced work. The colleges have the advantage in the more elementary work on account of their smallness; the universities have the advantage thruout the courses on account of their superior facilities."

NEBRASKA: "The undergraduate work in the University of Nebraska for the past four or five years has been almost wholly elective. During this period it is probable that the students never have been happier, or presented a stronger or more efficient grade of scholarship. Yet a majority of the faculty feel that such wide election permits unwise choice on the part of weak students who enter the university without definite plans or purposes. Hence the faculty at a recent meeting recommended a new course of study, which gives opportunity of free election within certain range and groups of studies. This will be explained in the new catalog now in press. . . .

"My own observation has been that students seldom err in selecting too narrow a field. Our own students have in a great majority of cases elected wisely, taking a sufficient variety of subjects to give breadth, and enough of some one subject to give depth. Hence I should reply to the first part of the question: 'No, except in rare cases and usually with purposeless students.'

"Do minute courses prohibiting views of whole subjects weaken undergraduate courses in universities?' Undergraduates are profited by a number of intensive courses, but too many such courses are weakening. The intensive courses should come in the student's major or special lines, and should not, in my judgment, include more than one-fourth or one-third of his undergraduate work. . . .

"Are colleges more fortunate in these things?' I do not think they are."

OHIO: "There is a distinct protest in our faculty against undergraduate students doing very much work in what might be termed 'minute courses.' One or two such courses each year would seem to be all that would meet with hearty approval. We, furthermore, insist on general courses in particular subjects before the more minute courses are taken.

"My judgment is that the ordinary college is no more efficient and the results are no better in their undergraduates than in the universities of the class in which you and I are laboring."

PENNSYLVANIA STATE COLLEGE: "Every complete course of education must furnish at some stage a course of systematic, continuous, well-co-ordinated drill in the fundamentals of the principal branches of human thought and learning.

"The range of knowledge is so wide that no man can fully grasp it in such a way as to make all parts of it equally available; but, in the course of three or four years, the mind of the ordinary student, well trained in advance, can acquire a knowledge of the essentials of mathematics, philology, natural and physical science, moral science, and political science. During the same period, also, he may make excursions, more or less extensive and fruitful, into the outlying fields of literature and art, and general history, so that, at the end, he should be prepared to begin any independent work in any specialty that he should choose.

"During this period he may wisely be offered an election of *studies by 'courses,'* but only to a very slight extent, if at all, by individual subjects, or parts of subjects. That is to say that, if a young man wishes to pursue studies that will qualify him to become an engineer, men who have spent years in surveying the ground are far better able to direct his course of study than is the young man who enters upon it as a *terra incognita*.

"Whatever the title of an institution, as long as it maintains undergraduate courses, such courses are necessarily, in my judgment, subject to this controlling principle."

WEST VIRGINIA: "Election with reasonable limitation, and with wise guidance on the part of a competent class officer, seems to give the best results with the largest number of students."

OREGON: "The tendency, very strongly marked, is toward greater freedom in choice of subjects, and more intensive work in the subjects offered. With us the prevailing custom will be to give large rather than minute courses. We have not yet reached the point of specialization that makes minute subdivisions either practicable or desirable. In our judgment, the undergraduate work should not tend too strongly toward specialization. Complete, whole views are better for the undergraduate than single, narrow phases of a subject. In graduate work, of course, a different rule would apply."

From letters from other institutions of the university type the following extracts are of interest:

CLARK: "The answer to the first question would be a unanimous affirmative. Narrow intensive methods in literature, especially in English literature, also in history, we think an almost unmitigated evil, a sad bequest from the university movement so new in this country that it has not passed beyond the self-conscious stage to the college. This universitization of the college has something to do, I believe, with the anxiety in regard to the future which some of our colleges are feeling. I cannot but expect a reaction in this particular."

BOSTON: "Too many courses taken at once almost inevitably tend to make the work superficial. . . . With most students it is not wise to divert the attention among too many distinct subjects."

CHICAGO: "Wherever courses are limited in scope and free election is permitted, there is a possibility of a student's skipping from one subject to another without mastering anything. Our unit of instruction at the University of Chicago is a course extending thru only three months, so that in the Senior College, where election is practically complete, we encounter this danger at its maximum. The result is not so serious as might be expected. . . . For the great majority it is my conviction that the present tendency toward specialization much more than counteracts this possibility of scattering energy. The typical schedule at this university in the Senior College would comprise relatively few subjects, and rather a large number of courses in each; these courses often consecutive, and, when not consecutive, bearing a close relation and interdependence, one to another.

"There is in minute courses a chance of intellectual dissipation; but in the majority of cases this chance is overcome, entirely naturally, by the student's own desire to specialize. Where the danger is not thus overcome, nearly all the evil effects can be prevented by interest on the part of the faculty in their students and sympathetic advice."

STANFORD: "Wide election in universities greatly strengthens the work as a whole. The wider range given to good students, the better use they make of their time; and one of the most important elements of education is to learn to think for oneself and to devise for oneself courses and lines of study. At the same time, for second-rate students, wide election offers opportunities, on the one hand, for narrow specialization—which may sometimes be weak in its results because of too narrow a foundation. It also sometimes permits frittering away of one's time on unrelated subjects. This is especially true on the part of society men and others, whose time has no value anyhow. The remedy for both these difficulties we have found in the major subject system, whereby each student selects a major subject and a major professor, who is his adviser throughout his course, and who must assume responsibility for the elections in each year. . . . There is a constant struggle between the desire of professors to furnish their own students with minute and elaborate courses leading to erudition and profundity of view, as compared with the

desire of the same professors to have other departments give courses of a broad and superficial nature, which shall give wide views of the subject. These two points of view will exist so long as colleges endure, and the major professor system tends to ease the strain by requiring the major students in the department to do their work on the elaborate and minute plan, while courses may be given to others of a less exacting nature.

"Small colleges are not, I think, more fortunate in these matters. They have a very narrow range of choice, and a student is compelled to spend a large part of his time in subjects in which he has no interest, or with professors whose methods do not appeal to him."

WESTERN RESERVE: "The serious difficulty in a general elective system is that students scatter their electives over too many departments. They get knowledge—and that of a most superficial sort—without power. Power is created, I think, by the prolonged study of one or two subjects."

WASHINGTON: "Your question is not fair. You suggest that wide election permits, even induces, narrow reading, and that minute courses necessarily prohibit views of whole subjects. In every elective system the beginning courses in each subject, which are prerequisite for later courses in the same subject, are general in their character.

"Putting the question, 'Does wide election weaken undergraduate courses in universities?' I beg to say that it is not the general opinion here that it does. The elective system is simply one of money. Those institutions that can afford to have it, have it; those that cannot, retain a fixed curriculum and glory in the splendors which they see in it. Colleges are no more fortunate in having a fixed curriculum than universities are in having wide election. The elective system is an intent to fit the instruction in an institution to the students' needs, as they are supposed by faculty, students, and parents to exist.

"I cannot see that colleges are more fortunate than universities in any particular, except that, as they undertake work of lower degree, they have less responsibilities. There always will be people who sigh for the Golden Age, when every family kept a cow. These same people choose to send their children to colleges having a fixed curriculum, thinking that thereby they are getting the same education that Daniel Webster had, and are pursuing the 'simple life.'"

NORTHWESTERN: "Wide election—if that means scattered election—is, in my judgment, and I think in the judgment of our faculty, unwise. If great variety is presented to the student, there must be reasonable safeguard that the opportunity to elect is not abused, and that the student shall continue in the field elected until he secures some reasonable command over it.

"As to minute courses, my judgment is that these should supercede broader and more general courses, that intensity can only be secured after the student has a pretty broad view of the whole subject. If the university permits scattered election without continuity, or high specialization without fundamental preparation, it makes a serious mistake. I think, however, this mistake is as likely to occur in a college as in the college department of a university."

Colleges not otherwise classified report as follows:

SMITH: "We have found here that wide election, unless balanced by required studies, does weaken the undergraduate courses, and, as you will see from my report, we have endeavored to require enough to prevent superficiality in electives."

OBERLIN: "There is real danger in both directions you note, and I think the limitation of the colleges here has been, in some respects, a real safeguard, particularly when one is thinking of undergraduate education and not of the work of specialized scholarship. . . . If a man's study is made up of narrowly specialized courses, he is sure to lack both in needful discipline and in breadth of training."

CORNELL (Iowa): "Wide electives and minute courses in universities and colleges

weakens undergraduate courses, and in general the lower the electives come in the courses, the more are they weakened. Excessive electives may not be quite as prevalent in the colleges as in the universities."

WASHINGTON AND JEFFERSON: "Colleges are more fortunate in the matter of elections, except in cases where they try to imitate too closely the universities; and the undergraduate departments of universities are subject to harm from the introduction of the freer and narrower elections and methods that belong properly enough to graduate courses."

KNOX: "The policy of offering elective courses has gone entirely too far for the best results in undergraduate study. It seems, however, to have reached its limits, and the tendency at present appears to be in the other direction. . . .

"The wide election given in many of our universities does, in our judgment, seriously weaken the undergraduate courses. It has seemed to us that the undergraduate work done in universities suffers in this respect, because, almost of necessity, it has been dominated by the university idea, which is and should be essentially different from that which should govern undergraduate work."

BELOIT: "We believe in requiring students to take broad preliminary studies before taking up specialties, and we naturally think that the wide election of studies, and the narrow courses taken by students in the universities, naturally weaken the student. Here at Beloit we are finding difficulty in getting men of sufficiently broad training and wide sympathies to give our undergraduate courses as they ought to be given. The trouble is the universities are making narrow men, and they are not able to teach the broader courses required in the colleges. It seems to me that it is a great mistake, unless university graduates are going to be content to do special work alone. The average university graduate, at present, is certainly incapable of teaching college courses, not because of inability, but because he lacks training in the wide sense of the term."

ADELPHI (Brooklyn): "It is the opinion here that a wide range of electives and 'minute courses that prohibit views of whole subjects' do weaken undergraduate studies either in universities or in colleges. We believe here in the group system of electives, whereby the student takes his choice among groups of related and necessary subjects rather than among separate subjects."

OLIVET: "The undergraduate course should give us a world-view of things, with very little concentration upon any one part of a subject, and the university course for three or four years should follow the college course—which today gives a man but an introduction to an education, whereas a few years ago it completed his education."

SYRACUSE: "The vertebral column of a university should be the classical course, and all electives should be group electives conservatively and wisely chosen."

SIMMONS (Boston): "On the average undergraduate the influence of unrestricted election gives a far less sound education than an election restricted by the group idea, and minute courses, while emphasizing intensive criticism, absorb so much time that the student is prevented from getting the broad view of the field of learning which ought to be characteristic of the undergraduate courses."

I desire to say, in closing, that the complaint of Beloit College is well founded. Our scientific friends are far too apt to forget that there is unity in science as well as variety; and that an educated man wishes, rightly, for such general scientific instruction as will enable him to read an article in a current periodical without too frequent reference to a dictionary. He wishes, again rightly, to be able to understand the general movement in the scientific world. For this he needs to be given general views, not the ground-work for advanced specialization which in ninety-nine cases out of a hundred will

never be undertaken. To place a semester's work in the study of the angle-worm at the opening of the only course in physiology offered to college men, is rank folly. Not to know anything whatever except along the narrow line of a specialty is to get into a rut, and one of the worst of all ruts is the educational rut. The only difference between that and the grave is in its length.

WHICH IS BETTER: THE WESTERN PLAN OF ADMITTING STUDENTS TO COLLEGES AND UNIVERSITIES BY CERTIFICATES FROM DULY INSPECTED SECONDARY SCHOOLS, OR THE EASTERN METHOD OF ADMITTING ONLY BY EXAMINATIONS CONDUCTED BY REPRESENTATIVE BOARDS OR OTHERWISE?

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The question assigned me as a topic is a pressing one at this moment in the history of American education. Within a few years it may be determined which plan, with all it implies in shaping far-reaching educational ideals and practices, shall be national. The terms "western" and "eastern" must not import provincial pride, or sound a note of sectionalism. As a New Englander somewhat late adopted by the West, may it not be the good fortune of the speaker to lead you all in the discussion to common American ground?

We can adopt the words of Miss Lucy Larcom:

Two worlds I live in—East and West,
I cannot tell which world is best;
The friends that people both are dear:
The same glad sun
Shines into each; far blends with near,
And then is now—and there is here—
And both are one.

In truth, there is no single "western" or "eastern" plan of admitting students to college, tho there are dominating practices warranting the use of the terms. Bluntly stated, all the colleges are so anxious to get students that no system is consistently lived up to. They mix the certificate and examination plans, they distribute examinations in time and space, they annex local preparatory schools, or have quasi-certified schools of individual tutors and coaches.

From the point of view of the entering student and of the average American, who believes in the widest opportunity for a higher education in a democracy, the existence of twelve gates, open day and night, in the college Jerusalem may seem desirable. But to the economist and educator the evils of the competition are glaring and threatening, and opposed to this age of the conquests of co-operation and combination.

A glance at the evolution of our methods of admission of students to college will show what evils are imminent, and which is the better plan of admission.

The so-called "eastern" method of admitting by the examination of the individual student in its earlier form might have been called colonial or English. Originally each college examined for itself. There was "personal contact" between the student and examiner. The examination was more or less oral. The appearance and character of the candidate were weighed. With the increase of students and of entrance standards, the substitution of written examinations, first at the college, then at a distance, and with the multiplication of studies, the applicants have become not even names, but mere numbers to be hit at long range by rapid-firing examination-paper guns.

When the colleges began to fire into one another in concentrating their guns upon certain large preparatory schools, and particularly when the big universities brought up their heavy artillery, loaded some with ancient and some with modern subjects and methods, the situation became well-nigh intolerable. The secondary-school men cried out, and justly "continually do cry," and certain great movements were organized. Among the first was the New England Association of Colleges and Preparatory Schools dating from 1885. According to Dr. William C. Collar, of Roxbury, Mass., the association was formed for the purpose of bringing about uniformity in the requirements for college. He believed, at the sixteenth annual meeting in 1901, that its work would receive its consummation by providing for admission examinations by a joint examining board, as in the middle states and Maryland.¹ He believed these two boards "would slay the certificate system, and longed to see that done."² It was believed that "the certificate system was making no headway, and that the colleges, generally speaking, would be glad to give it up." On the contrary, apparently aroused by the discussion of this very meeting, the friends of the certificate plan formed the next year the New England College Entrance Certificate Board,³ now consisting of eleven New England colleges.

Mr. Virgil Prettyman, principal of the Horace Mann High School, is an example of the schoolman's cry for relief. In an article on "College Entrance Requirements and the High School Programme of Studies,"⁴ he contrasts with today a generation ago, when a boy was admitted to college with a training which would today place him not higher than the junior year of high school. The colleges require a training two years in advance of former times.⁵ The increase is in quantity rather than quality. One must know more things. It is a question if he needs to know any one thing better.

The Harvard examinations are arranged in such a way that a boy must keep fresh in at least six studies up to the close of junior year of the preparatory course. Unless a

¹ *School Review*, Vol. IX (December, 1901), p. 619.

² *Ibid.*, p. 625.

³ *First Annual Report*, 1902-3 (Providence: Snow & Farnham 1904).

⁴ *Educational Review*, Vol. XXVIII (October, 1904), pp. 304, 305.

⁵ Cf. Professor John H. Wright, of Harvard, *School Review*, Vol. V, p. 700.

boy passes in at least three subjects (eight credits), no credit whatever is given. It is necessary for the pupils in the last two years of the preparatory course to carry at least six studies abreast. The total result of the present program of studies is haste in preparation, dissipation of energy and interest, physical strain, or a tendency to negligence of duties, and illiteracy.

Mr. Prettyman suggests two remedies (not including the certificate system, in my opinion the cure for his difficulties):

Reduce the number of studies and raise the passing mark, or permit the boy to take examinations in three years instead of two as at present. The necessity for haste and for a cramming process is the greatest burden of the secondary-school man. Will the colleges lend a helping hand to the school?

Another representative secondary-school man, Mr. Edwin J. Goodwin, of Morris High School, of New York city, in an article on "A Comparison of College Entrance Examinations,"¹ shows the blight for secondary schools of separate examinations by the individual universities, and indicates what a great want brought forth when it established the College Entrance Examination Board. His study is a comparison of the questions of this board with those of Harvard, Yale, Princeton, and Pennsylvania. He rejoices

in the attempt to evolve a scientific method of examination that shall test the instruction and training of candidates for admission to college with substantial accuracy, without cramping the schools or blighting the enthusiasm of the teachers. That the College Entrance Examination Board has made invaluable contributions toward the accomplishment of this end cannot be doubted.

The rise and progress of the College Entrance Examination Board represents doubtless the best that can be done for "the eastern method of admitting only by examinations," and meets, where it is accepted, the evils of the conflicting examinations of competing colleges complained of by the secondary-school men. Organized² as recently as November 17, 1900, at Columbia, under the inspiration of Nicholas Murray Butler, its first secretary, it has grown from eleven colleges and four representatives of the secondary schools in the Association of Colleges and Preparatory Schools in the Middle States and Maryland, to twenty-five colleges and universities, and seven representatives of the secondary schools.

It has fulfilled the hope, expressed by the editor of the *Educational Review* in 1901, that it would hold annual uniform examinations in June, for the entire territory north and east of the Ohio and Potomac.³ The candidates examined have risen from 973 in 1901 to about 2,100 in 1905. Examinations have just been held at about 160 points in the United States and its dependencies, and at five points in Europe. A staff of almost 100 readers at the offices in New York city are to pass on more than 20,000 examination papers.⁴

In the words of President Butler: "The board has accepted the oppor-

¹ *Educational Review*, Vol. XXVI (December, 1903), pp. 440-56.

² *Ibid.*, Vol. XXII (October, 1901), p. 264.

³ *Ibid.*, Vol. XXII (December, 1901), p. 531.

⁴ Article by Thomas S. Fiske, in *New York Daily Evening Post*, June 20, 1905.

tunity that President Eliot pointed out during the discussion which led to its formation of 'making an immense contribution to American education.'"¹

In this day of "co-operative endeavor" it has been whispered: Is it possible that the eminent forerunners of the College Examination Board, the Regents of the University of New York, with their tested examination system and its thousands of candidates, might join in the combination? Further, there have been movements to make the tests for graduation from secondary schools identical with the tests for admission to college, upon the basis of the College Board's examination papers. Mr. Fiske, the present secretary, says "it is to be devoutly wished."² He declares that the work of the board is now almost ready to pass from a temporary initial state to a permanent condition.³

Impressed by its record, and believing that the time of its crystallization is at hand, one cannot suppress the query: Will the College Entrance Examination Board become national? Will it fasten an examination system upon us? Of course, to do this it would have to change its local complexion from a little group of twenty-five institutions centering about Columbia. The tendency to a close corporation, since membership is no longer dependent upon meeting an announced standard, but upon election, would have to be reversed. After the fashion of the Equitable Life, the nature as well as the vastness of the interests would require the mutualization of stock and the subjection to some form of governmental inspection. To cover the national field, the present work of the board would have to be so hugely increased that its present work would appear lilliputian.

Taking the figures of the United States census of 1901-2,⁴ and the present modes of the board, with the desire accomplished that graduation from the school should be dependent upon passing the board's papers, instead of examinations at 160 points they would be at the 8,127 public and private high schools. The present average of nine and one-half papers for each graduate would require for the 66,262 graduates the reading of 629,489 papers, in place of the present 20,000, and a staff of above 3,000 readers in place of 100, at an expense, upon the present estimate of \$5 a candidate, of \$331,310, in place of the present \$10,000.

Tho the scheme smacks strongly of concentration and the dangers of bureaucracy, and lacks a point of national attachment in the Bureau of Education as at present organized, there is nothing insuperable in it, if the College Entrance Examination Board system is really better than any other.

Before making answer, we must review two or three competing plans. First is that of old-fashioned examinations held by individual colleges. In his annual report last week to the Yale alumni, President Hadley surprised some by saying: "We shall probably continue to hold separate examinations

¹ *Educational Review*, Vol. XXII (October, 1901), p. 296.

² *Ibid.*, Vol. XXIV (October, 1902), p. 305.

³ *Ibid.*, (October, 1904), p. 302.

⁴ *Annual Report*, 1902, Department of the Interior Commissioner of Education, Vol. I, p. xvii.

instead of joining with other colleges."¹ We may take him as the fairest and ablest protagonist of the old way, while recognizing possibilities of new ways, as is shown by his address on "The Use and Control of Examinations" before the Department of Superintendence of the National Educational Association in February, 1901.² In brief he says: An examination has two distinct aspects, one looking toward the past, the other toward the future. It is a means of proving a student's past attainment, and also of testing his power for that which is to come. A written examination is apt to be a test of the *range* of a student's proficiency rather than of its thoroness. It loses a major part of its value as a measure of fitness for anything which is to come.

In the passage from the high school to college, the evil is felt most seriously because of the complete separation of control, and the remoteness of location which so often makes a system of personal consultation impossible. Here is the most acute controversy. Three methods have been devised: to make the range of examination questions wider; to supplement the written examinations by other tests like certified notebooks; to depend upon certificates given by the teachers of the candidates.

The first method may give too much help to the undeserving student. It offers great opportunities for the coach, for hasty cramming, and for the evils of the English civil-service and university examinations. The second method, of supplementing and correcting the results of examinations by accepting certified notebooks, etc., has the merits and defects of a compromise. The frank adoption of a certificate system as a whole would be more logical and better.

The third method, a certificate system, without full discussion of its merits and demerits, has much in its favor. A good preparatory teacher, in nine cases out of ten, can judge of the fitness of his pupils to enter college better than any college-entrance examination board. Each teacher also has a freedom in choice of methods which is of great advantage to him and his pupils.

The first obvious objection is that, on account not of dishonesty but incompetency, a large number of our secondary-school teachers cannot be trusted to give certificates. Second, the abandonment of an examination by the college takes away an important stimulus for keeping up the standard of admission requirements.

The third objection, and the decisive argument for the retention of the old plan, is that the colleges which insist on examinations think they get a better class of students by that means than by any other. They get the boys who do not shirk a trial. The fable of the choice of the two doors applies: The first door is labeled, "Who chooses me shall get what he deserves;" the second, "Who chooses me must hazard all he has." The certificate system attracts those who would go to the former door; the examination system, those willing to venture the latter.

¹*New York Daily Times*, June 28, 1905.

²*Educational Review*, Vol. XXI (March, 1901), pp. 286-300.

If each of these alternatives thus proves unsatisfactory, is there not some possible combination which may be suggested? Let us divide our requirements into three groups of subjects:

First, the prerequisites for power to go on with collegiate study—viz., mathematics and the required languages—to prove power of precise thought and of precise expression, where the examinations would be maintained in the hands of the college which is to have the student in charge.

The second group of subjects—viz., the prescribed readings in English literature, in Latin and modern languages—is considered auxiliary to the attainment of power signified by the first group. President Hadley says:

I should be in favor at once of putting all examinations on the extent of knowledge in these auxiliary subjects into the hands of a common examination board. Whether it would be wise to go a step farther and introduce the certificate system in subjects of this group, is a matter which I should hardly like to prejudge at present.

In the third group of studies, history and descriptive sciences, which, President Hadley assumes, are not a necessary basis for subsequent work, but a part of a general scheme of secondary education, recognized by the colleges as a concession to satisfy teachers able to teach them and not to degrade these subjects, the certificate system would be allowed from the very outset.

In wrestling with the objections to his combination and complex, if not compromise, system, he finds relief in extending "to teachers of proved ability the opportunity to recommend, at the risk of their own reputation, for provisional admission to our freshman classes, pupils to whom the new system seemed to have done injustice." Thus President Hadley is not far from the kingdom of the outright accrediting system, for which we hope he may become a leader, not only among his brethren of the eleven colleges in the New England College Entrance Certificate Board, but thruout the nation. The whole thing might be done if Commissioner Draper and President Butler became his coadjutors.

There is time for but a moment's glance at the evolution of "the western plan of admitting students to colleges and universities by certificates from duly inspected secondary schools."

It might be called the continental or German plan, whence it in part came to reinforce pre-eminently, and first in Michigan, a state system of public schools crowned by a state university. It, in some form, logically accompanied a state public-school system with a teaching state university, and has been cheerfully adopted, and to their edification, by the private colleges and universities, so that it covers the entire territory from the Ohio to the Pacific, and overflows into southern and eastern states.

In its rudimentary form, which the New England College Entrance Certificate Board has adopted, an applying school is placed on an approved list when it can prepare for a college course, and continue to prove its ability to give preparation for college by the record of its students already admitted

to college. The admission of the candidate without a collegiate examination in the subjects for which he is certified as prepared by the approved school is probationary.

Naturally, with the increase of schools and students, and with a zeal to maintain standards, there followed the visitation of the approved schools by members of the faculty related to preparatory subjects. Thus informally inspection of schools began, until now there are twelve state, or state university, inspectors in as many great western states, supplemented by visitors from the faculties, including great private institutions.

In the North Central Association of Secondary Schools and Colleges there has been for six years a Commission on Secondary Schools and College-Entrance Requirements, at the heart of which is a Board of High-School Inspectors. Uniform standards and entrance blanks have been prepared. For some time, by comity, schools accredited by one state university have been accredited by another. But now a list of first-class schools meeting the standards of the commission is becoming an accredited list thruout the entire Northwest. In another way has been attained what President Butler said the College Entrance Examination Board stood for: "uniformity of definition, topic by topic, with a uniform test, uniformly administered. Each college will continue to fix its own standards of admission and to admit its own students."¹

The difference is that the examination or uniform test is of the institution and not of the individual, ridding us of the evils of personal and paper examinations, massed so that all is staked at once for the pupil. President Hadley's allusion to the fable of the two doors is too literally true. Entrance examinations become a gamble, and the student seeking to gamble is commended.

A long line of witnesses might be cited from inspectors, college men, and secondary-school men, working under the plan of certificates from duly inspected schools, all in favor of the plan. Leon J. Richardson,² of the University of California, shows how the accrediting system has evolved rapidly since 1883 in that state, in harmony with republican institutions. The schools voluntarily established their relations with the university and may sever it at will.

William J. S. Bryan, principal of the Normal and High School of St. Louis, says the practice of admitting to the university on certificate only the pupils who have graduated from the approved schools has been a powerful lever in raising the standard of the work done.³

Edwin G. Dexter, professor of education, University of Illinois, says:

The East has been attempting the system of admission to college thru the certificate system—a modified accrediting system; but they have left out of it the high-school visitor, and therein lies the trouble. No inspection on the part of a college professor can ever take

¹ *Educational Review*, Vol. XXII (October, 1901), p. 291.

² *School Review*, Vol. X (October, 1902), pp. 615-19.

³ *Proceedings of the Fifth Annual Meeting of the North Central Association of Secondary Schools and Colleges* (1900), p. 11.

the place of the visitation of the inspector, the expert of the secondary-school system, the trained friend, adviser, and helper, and visible connecting link with the university. An advantage of the accrediting system is the increased proportion of high-school students who go to college. It is suggestive that in the graduating class of the public high schools in the North Atlantic states, the part of our country little given to the accrediting plan, 26 per cent. were for the year 1901 in the college-preparatory course. In the same class in the North Central states, where accrediting prevails, the percentage was 34. The accrediting system gives the college students with a better average preparation. The University of Pennsylvania receives about an equal number each year upon each of the two plans—individual examination and certificate. In the fall of 1901, 112 entered by the first method, and 101 by the second. At the end of the semester 49 per cent. of those entering by examination were conditioned, as against only 29 per cent. of the certificated students. A suggestive, but not a conclusive, comparison is of the percentage of failures in first-year subjects in one of the Atlantic coast universities, admitting only by examination, and those of five of the larger Middle West state universities, where 80 per cent. enter without examination. East: failed in algebra, 26 per cent.; in trigonometry, 34 per cent. West: failed in algebra, 15 per cent.; in trigonometry, 11 per cent.¹

Principal Ramsay, of Fall River, some years ago, in a study to determine the relative merits of the two methods of college entrance, received answers from college officers in favor of certificated students: in mental ability, five to one; in the general performance of college duties, three to one.

Professor Whitney, of Michigan, investigating the freshman grades of more than 1,000 students, about equally divided between those entering upon credit and those taking entrance examination, found that the average standing of the former was more than $1\frac{1}{2}$ per cent. higher than for the latter.

Impartial testimony might be gleaned from European educators. Professor T. Gregory Foster, in the report of the last Alfred Mosely Commission,² rejoices that it is a fundamental principle in American universities that the man who is fit to teach is also to be trusted to examine his own students. He remarks:

As long as examinations control the teaching, whether in universities or schools, in this country [Great Britain], so long will the teaching continue to be academic in the worst sense of the word, cribbed, cabined, and confined.

He notes the degree to which examinations by external bodies or examiners is regarded as baneful in the United States, both to the pupil and for the educational organization, and commends the attempt of the College Entrance Examination Board to guard against some of the evils by having secondary-school men on the board. But to professor Foster the accrediting system of the Middle West is "a more significant plan," and one rapidly spreading into the East. He says: In the states where it has been adopted the whole educational system has been unified and strengthened. The barriers between various grades of teachers are being removed. The teaching of all classes of teachers is thereby made more direct, more stimulating and attractive to students. The accrediting system as *versus* the older leaves the teacher and the taught free, and thereby stimulates to better training.

¹ National Conference of Secondary Education, Northwestern University (October 1903), p. 94.

² Pp. 115-18.

Professor Foster quotes President Harper as opposed to the accrediting system when he left Yale, but now as a firm believer in it as a result of his experience. The professor concludes: "It is perhaps one of the most noteworthy contributions of America to educational progress."

Mr. M. E. Sadler, director of special inquiries and reports, Educational Department of England and Wales, speaks¹ decisively as to certain principles applicable to our discussion:

State certificates bestowed as results of written examinations at a prescribed moment at the close of their school life are injurious in their influence as well on the work of the schools as on the physical, mental, and ethical development of the pupils, and also on the national ideals of education, and on the parents' conception of what education can do and ought to do. The more valuable influences of a secondary school lie in its tone, its *ethos*, in its tradition, in the outlook which it encourages its pupils to take on life and duty, in the relation between teachers and scholars, in the relation among the scholars themselves. None of these things can be tested by written examinations, conducted by examiners, however able or impartial, who have never seen the school. It is judged on *paper*. It is possible for a school to simulate great intellectual efficiency by reason of an intensive progress of "cram," which reflects immense credit on the skill and industry of the teachers, but guarantees little of permanent educational value to the pupils prepared. Yet a system of merely written examinations conducted by examiners at a distance fails, and must necessarily fail, to discriminate between two effects superficially and temporarily similar, but really and permanently different.

He adds: "the natural antithesis to written examinations is a system of inspection." He weighs the difficulties of inspection in a national provision for secondary education, and would find a formula for some form of consultative committee with the state—"neither to have too much state nor too little state." "*Laissez-faire* is impossible in this period of rapid transition."

This last is true in America. What we do we must do quickly. A national system—meaning thereby governmental co-ordination and possible inspection in harmony with the voluntary co-operation of private institutions, like the accrediting systems now prevailing in many western states, concatenating secondary schools, colleges, and universities—will give modern inter-state educational privileges, long needed to keep up with inter-state commerce and life, and heightening national ideals and power.

The line of evolution is clear: the oral examination of the individual pupil by the separate college; the written examination in the same fashion; the combination of colleges for written examinations; the slight recognition of the preparatory teacher in the combination; the great recognition of the preparatory teacher, and his examinations by the certificate plan; and the highest point of evolution, the examination by the combined colleges of the secondary school as a whole, and the accrediting of it organically, trusting it all in all or not at all.

The disappointed hearer who looked for a formal disputation in this paper may be still demanding a categorical answer to the question of our topic, "Which is better," etc.? Let him draw his own conclusions from the

¹ *Educational Review*, Vol. XXI (May, 1901), pp. 497-515; cf. pp. 507-12.

testimony marshaled from the best representatives of the different systems.

As an evolutionist, I see every system has a part to perform, and perceive certain principles at work which promise us, not only a better system, but a national and best.

DISCUSSION

EDWARD J. GOODWIN, second assistant commissioner of education, Albany, N. Y.—The permanence of any method of admission to college must depend upon its ultimate educational value. If it can be shown that admission by certificate is more productive of good teaching in the preparatory school, and that students instructed under such conditions acquire superior scholarship and more effective training, it is easy to believe that the college-entrance certificate will ultimately displace the entrance examinations. It is by no means conclusive, however, to call attention to the fact that the certificate system pleases tender-hearted parents; that it relieves the strain upon students; that it finds favor with the teachers; that it gives a greater degree of freedom to the schools; that it is less expensive; that it possibly increases the number of students going to college; that it lessens the work and minimizes the responsibility of college faculties. Unless it can be demonstrated also that its net results are favorable to vigorous training, accurate scholarship, and mental and moral virility, its value as an educational agency may rightfully be questioned.

No experienced teacher can fail to recognize the common abuses and serious limitations of written examinations as tests of a student's knowledge or ability. And yet, if we may base an opinion of their value upon the use made of them in the colleges, technical schools, and professional schools, we must conclude that not even the teachers in the higher institutions have been able to devise a more effective method of testing the attainments of their students or their fitness for promotion and graduation. It is significant to note, in this connection, that the oldest and most influential universities of the eastern states have never yet seen their way clear to admit or to graduate students without written examinations. Whether this policy is based upon the belief that the written examination is the best available test, or upon the conviction that satisfactory standards of instruction and scholarship cannot be maintained in the preparatory schools, if the admission certificate is substituted for the entrance examination, is a question which only the universities can answer.

In either case it cannot be denied that colleges and universities are justly chargeable with a large share of responsibility for the success of secondary schools, and that this responsibility is evaded when methods of admission are established with a sole view to keep out the unworthy. Progress in education, like the rain and sunshine, comes from above. In recognition of this responsibility, Harvard College within a generation by its entrance examinations has radically transformed and materially improved the instruction given in the secondary schools of New England. The same work for the schools of the Middle States is being done today by the College Entrance Examination Board.

Under the certificate system, colleges can control courses of study, cause laboratories to be built, regulate the equipment of the school, and fix the number of teachers to be employed; but they cannot establish and enforce methods of training and standards of instruction.

Benjamin Kidd, in his *School Evolution*, says that, "left to himself, this high-born creature, man, whose progress we seem to take for granted, has not the slightest innate tendency to make any progress whatever." Colleges that register schools on the testimony of an inspector tacitly recognize the modicum of truth in this affirmation, and the advocates of examinations act on the belief that an entrance examination is a more

influential agent of the college than an inspector present in the school every day of the year.

Teachers whose pupils enter college on certificate do not face an immediate, direct, and personal responsibility. Many of the subjects taught in the school are not continued in the college, and the minds of students entering college are not disorganized, even tho their knowledge may be. A student's failure in college may not be chargeable to the school; it is quite as likely to be the natural sequence of his home training, or the lack of good teaching in the college, or the contagious influence of immoral associates from the evil effects of which the college gives him no protection.

But when a teacher's work is to be tested by an entrance examination, he faces a direct, immediate, and personal responsibility. Then, if ever, he is under bonds to acquire an accurate and comprehensive knowledge of his subject; to lay out with deliberate forethought the work to be done by his class; to give systematic and precise instruction every time he meets his class; to concentrate his own efforts and the attention of his students upon the essentials of the subject taught; and to follow up his instruction with such frequent written exercises as shall give his pupils adequate training in written expression, and reveal to the teacher the defects of his instruction and to the student the imperfections of his knowledge. Compliance with these conditions brings to the teacher the highest degree of skill and success. To assume that the average teacher will lead this laborious and self-sacrificing life without the impelling power of necessity, is to disregard the well-known laws of human nature and the common knowledge of experienced schoolmen.

The final and decisive argument for entrance examinations is the effect of them upon the student's efforts, scholarship, and character. Boys, like men, work when they must, and rest or play when they can. Capable students expecting to enter college on certificate may easily reach the minimum standard required by the school for certification without doing the full measure of hard work that ought to be required from boys whose home life in the large towns and cities is more and more, as wealth increases, free from all work that carries serious thought and responsibility. My own observations unmistakably confirm the statement that the certificate privilege causes many well-endowed students to relax their efforts, and that an impending examination is a constant and much-needed incentive to faithful study.

Furthermore, the knowledge of a student preparing for examinations must be carefully organized by systematic and frequent reviews. The drudgery of reviews, so essential for sound scholarship in the secondary school, is so irksome to the teacher that it is rarely done thoroly and systematically, if the teacher is not held to a more rigid accounting than is possible in a school whose standing is fixed by a single annual visit of a univesity inspector.

It is a fact well known to experienced teachers that students are likely to fail in written examinations unless they have had constant practice in written recitations. No one of the teacher's tasks is quite so costly or so exhausting as the reading and rating of these written exercises. No part of his work is more essential. It is an axiomatic truth that no training given by the school is more valuable than that which enables the student clearly and accurately to state in writing what he knows and thinks. True it is that this training may be given to classes of students under the certificate system; it is much more likely to receive adequate attention when students are preparing for written examinations.

It is often said that an entrance examination is a cruel strain, an unnecessary hardship put upon immature and growing youths. The answer to this is that young men old enough for college are old enough to undertake serious tasks, to assume some responsibility. An examination for admission to college is something more than a test of a student's knowledge. It is a test of his self-control, his judgment, his power to meet a critical hour in his life with a steady nerve and a clear head. The training for such a crisis,

and the experience obtained in meeting the crisis, make for self-poise, for self-respect, and for virility.

Aside from its ostensible purpose, to ascertain the fitness of candidates to enter upon a course of higher training, the college-entrance examination has very great educational value to the school and college, and for this reason, if for no other, ought to be maintained.

SHOULD CHAIRS OF PEDAGOGY ATTACHED TO COLLEGE DEPARTMENTS OF UNIVERSITIES BE DEVELOPED INTO PROFESSIONAL COLLEGES FOR THE TRAINING OF TEACHERS, CO-ORDINATE WITH THOSE OF LAW, MEDICINE, AND ENGINEERING, OR SHOULD THEY BE ABOLISHED?

ALBERT ROSS HILL, DEAN OF TEACHERS COLLEGE, UNIVERSITY OF MISSOURI, COLUMBIA, MO.

That education, which is the highest concern of man, and which, in the language of Davidson, is "self-conscious evolution of the race," should be deemed worthy of human reflection, is, I believe, beyond dispute. Courses in the philosophy of education, the history of education, and in genetic and educational psychology, that set forth educational aims and values, give meaning to education, and give an account of the history of social progress, have the same right to a place in a scheme of liberal education that have general philosophy, ethics, sociology, and the like. Educational problems are among the most important of social problems, and demand the intelligent consideration of every citizen in a free state. Their study should be recognized, not only as a part but as an essential part, of a liberal education.

But probably the person who proposed this question had in mind by "pedagogy" the technical study of the methods and practices of teaching and of managing schools. Do courses in the theory and practice of teaching, in school management and the like, belong to a liberal education, and should they form part of a college course leading to the degree of bachelor of arts? Their aim is decidedly practical—to give skill in the instruction of children, and in the organization and management of schoolrooms and school systems. They would seem, then, to have no more claim to recognition as part of a liberal education than have technical courses in law, engineering, or medicine, which aim to give skill to the prospective lawyer, engineer, or medical practitioner. Their presence in college courses is probably to be explained, strange as it may appear, by the unwillingness of the universities to acknowledge that teaching is a profession for which an extensive special training is demanded. Forced by public opinion and the development of normal schools to offer some work designed to prepare the graduates of their college departments for teaching, they have grudgingly established chairs of pedagogy within their colleges, whose work, as we have noted, is partly liberal and partly

technical. The latter aspect does not logically belong with liberal studies, but to a distinct professional school for teachers.

But is the amount of this technical work demanded in preparation for the profession of teaching great enough to warrant the establishment of colleges for teachers within the universities, distinct from the colleges of liberal arts? Granted that the teacher needs a liberal education equivalent to that represented by the average A.B. course, does he need enough technical training in the art of teaching and of managing schools to warrant universities in organizing professional colleges for teachers co-ordinate with those of law, medicine, and engineering? To answer this question we must consider the needs of the teacher on the professional side, and examine the influences that tend to determine the teacher's skill, assuming sound scholarship and a reasonable amount of native aptitude for the teacher's calling.

The tendency to imitate, strong in human nature generally, is very marked in the conduct of class work by the teacher, and is perhaps the strongest influence in determining how he will teach. It is inevitable that teachers will teach as they have seen others teach; which usually means, as they have been taught. Now, it must be noted that this influence tends to perpetuate not only the practices of good teachers, but those of poor ones as well. So many bad examples are set that it becomes necessary for the institution that would train teachers effectively to provide facilities for the observation of good models of teaching in the various grades of school work. This calls for the establishment of model schools in which prospective teachers can acquaint themselves with the best forms of educational practice. The time spent in observation cannot be expected to count toward the A.B. degree.

Again, the insight into the best methods afforded by the observation of model teaching, combined with conscious reasons for the same, which courses in methods and management aim to supply, still leaves the prospective teacher to acquire personal skill by practice or experience; and it would seem that any institution which pretends to train teachers should make practice in carrying out his theories and ideals possible for the teacher in training. True, he will get practice enough in the course of experience, but the practice he thus gets is at the expense of pupils who cannot afford to be subjects; and the danger is that he may develop habits that are bad, or that fall short of his best possible effort, and that these habits may become fixed, leaving his fine theories ineffective. He needs first to practice under guidance, both in his own interest and in the interest of the pupils whom he will teach during the years that follow his graduation from the university.

These technical aspects of instruction in pedagogy—theory of teaching, special methods, organization and management of schools, observation of model teaching, and practice in teaching—naturally call for the organization of a distinct professional school for teachers, co-ordinate with the schools of law, medicine, and engineering in any large university. Along with this technical work should be grouped the courses on education that properly

belong also among the liberal studies, such as history of education, philosophy of education, and educational psychology, together with all work that has special significance for the teacher and is not provided by the college of liberal arts, such as free-hand drawing, manual training, and vocal music. One reason, then, for advocating the establishment of teachers' colleges as schools of large universities is that there is a demand for a large body of instruction bearing quite directly upon the work of teachers which college departments do not and cannot offer to students, unless we are willing to modify greatly our notions of the aim of a college course.

A second reason for their establishment is that not only are such courses as have been mentioned desirable courses, but it is very important that they should be grouped and organized for definite ends, and this cannot be done by a professor of pedagogy, or by any other professor, until he is authorized to do so by his appointment as director or dean of a college for teachers to which such courses belong. The organization of all work that bears on the professional training of teachers is at least greatly facilitated by the establishment of a distinct school or college with its own courses of study and its own faculty.

To the faculty of such a college should belong professors of educational psychology, history of education, theory and practice of teaching, school administration, art, manual training, vocal music, as well as professors representing the various liberal subjects of school instruction who are qualified to give courses on the teaching of the subjects which they respectively represent. This will bring together in one faculty at least about twenty-five men devoted to teaching and to the training of teachers, who will strengthen the hands of one another, and will develop among themselves and their students a professional enthusiasm and a devotion to the cause of education that will compare with the professional spirit now shown by the faculties and graduates of our colleges of law, medicine, and engineering. A chair of pedagogy in a college department, however well conducted its work may be, cannot hope to accomplish this result.

Not less important will be the influence upon the whole college faculty of these representatives of liberal studies who are also members of the faculty of the teachers' college. They will serve as a leaven in the interest of good college teaching, and help to make indifference to good teaching on the part of the members of the college faculty impossible, whereas now it is more or less popular. This value of the teachers' college will probably be more readily appreciated by state universities, whose responsibilities to the general educational interests of the state are apparent.

The establishment of professional schools for teachers within large universities is advisable, I think, because it will permit a more extensive and definite training of teachers for their profession; will favor a better organization of courses conducted with that end in view; will dignify the teacher's calling and give professional enthusiasm to those graduates of universities who

engage in teaching; and will tend to keep alive and strong the interest in good teaching and in educational work at large which should characterize the faculties of college departments in large universities. The state university which does not do something like the equivalent of establishing a school of education will finally have to yield the leadership of educational work in its state to institutions that aim especially to train teachers for the public schools.

But a further question arises as to whether the professional school for teachers within a university should be essentially a graduate school, beginning with the junior year of the college course, or should be a teachers' college in the stricter sense, offering a four-year course of undergraduate study in which liberal, professional, and semi-professional studies are organized with a view to training efficient teachers. The latter has some advantages. It is likely to give the prospective teacher better instruction in the liberal studies, at least better adapted to his needs; it should make a model high school unnecessary, as the freshmen courses offered by the professors of English, foreign languages, mathematics, and the sciences in the teachers' college should be practically models for high-school instructors also; these same professors, being also members of the faculty of arts, would exert a still greater influence upon the teaching in the college of liberal arts, because they would not only offer courses on how to teach their subjects for students of the teachers' college, but also actually exemplify good teaching in their own general courses; and the four-year course of undergraduate study, combining liberal and professional courses, would naturally produce more efficient teachers than two years of liberal studies without advice from the dean of the teachers' college, followed by two years during which he guides the selection of studies and otherwise assists the student to prepare for teaching. But, in general, I think that the course in the teachers' college should begin just where courses in law, medicine, and engineering begin, and that the teachers' college itself should be no more subordinate to the college of liberal arts than are the other professional colleges. I can see no reason why the teachers' college course should not begin at the close of secondary education, and continue thruout both the undergraduate and graduate phases of university study, leading to both the bachelor's and the doctor's degree. It would then be possible for a university to train efficient teachers for all grades of school work, and at the same time devote such attention as is necessary to graduate work in education, with a view to training leaders in educational thought and practice—school superintendents and principals, and teachers for normal schools.

DEPARTMENT OF NORMAL SCHOOLS

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY MORNING, JULY 5, 1905

The Department of Normal Schools met in the First Presbyterian Church of Asbury Park, and was called to order at 9:30 A. M. by President Charles C. Van Liew, of the State Normal School, Chico, Cal.

The regularly elected secretary, Miss Anna Buckbee, California, Pa., being absent, the president appointed Miss Agnes E. Howe, San José, Cal., to act as secretary *pro tem*.

President Van Liew appointed J. N. Wilkinson, Emporia, Kans.; Guy E. Maxwell, Winona, Minn.; and Miss Montana Hastings, Kirksville, Mo., as a nominating committee.

The regular program was then taken up, and first in order came the President's Address on "A Statement of the Issues before the Department."

The next paper, on the subject, "The Modern High-School Curriculum as Preparation for a Two-Year Normal Course, and the Sort of Training Which Makes for the Best Normal-School Preparation," was presented by David Felmley, president of the State Normal University, Normal, Ill.

He was followed by Theron B. Pray, president of the State Normal School, Stevens Point, Wis., who opened the discussion on the subject.

Charles De Garmo, of Cornell University; F. M. McMurry, of Teachers College, Columbia University; President John W. Cook, of the State Normal School at De Kalb, Ill.; Edward Brooks, superintendent of schools, Philadelphia, Pa.; President Livingston C. Lord, of the State Normal School at Charleston, Ill.; Stuart H. Rowe, of the Brooklyn Training School, and others, joined in the discussion, which was closed by Mr. Felmley.

The second paper presented was, "How Can the Normal School Best Produce Efficient Teachers of the Elementary Branches as Regards the Control of Both Method and Subject-Matter?" by Grant Karr, superintendent of Training Department, State Normal School, Oswego, N. Y.

The discussion was opened by H. T. Lukens, of the Normal School of California, Pa., who was followed by Miss Emily B. Rice, of the State Normal School, Albany, N. Y.; President Theodore B. Noss, of the State Normal School, California, Pa.; President John R. Kirk, of the State Normal School, Kirksville, Mo.; President Z. X. Snyder, of the State Normal School, Greeley, Colo.; Frank M. McMurry, of Teachers College, Columbia University.

President Z. X. Snyder, of Colorado, offered a resolution that a committee of three, of which the president should be chairman, should be appointed by the president to formulate a statement of policy regarding the preparation and qualifications of teachers of elementary and high schools.

On motion, the resolution was adopted.

The president appointed President David Felmley, of Normal, Ill., and President Z. X. Snyder, of Greeley, Colo., as members of that committee.

The meeting then adjourned.

SECOND SESSION.—THURSDAY AFTERNOON, JULY 6

In the temporary absence of President Van Liew, Vice-President J. D. Burks, Pater-son, N. J., called the department to order at 2:30 P. M.

The topic for the afternoon was "Co-operation of Universities and Normal Schools

in the Training of Teachers." Dr. F. M. McMurry opened the discussion and distributed leaflets containing his several theses on the division of the subject assigned him, viz.: "With Respect to the Training of Elementary Teachers."

Dr. McMurry presented briefly each thesis. The statement of each thesis was followed by a very lively and interesting discussion, which proceeded so rapidly that the secretary was unable to make a satisfactory report.

A formal discussion of Professor McMurry's theses was read by Guy E. Maxwell, president of the State Normal School, Winona, Minn.

On the second division of the topic, "With Respect to the Training of Secondary Teachers," a paper was presented by E. N. Henderson, professor of education and psychology, Adelphi College, Brooklyn, N. Y.

Z. X. Snyder, president of the State Normal School, Greeley, Colo., led the discussion of the paper.

Mr. Snyder closed the discussion by reading the preliminary report of the committee appointed to formulate a statement of the policy regarding the entrance preparation for students in normal schools, and the qualifications of elementary and secondary teachers, as follows:

To Members of the Department of Normal Schools:

In accordance with the resolution adopted by this body yesterday the following preliminary report is presented to be further elaborated and presented next year:

1. For entrance to the state normal schools all candidates except those who have taught shall have, at least, a high-school education or its equivalent.

2. That the course for such persons shall not be less than two years for those who are preparing to become elementary teachers.

3. That it is the function of the normal schools to equip themselves for the preparation of secondary teachers, and that the course of study for such teachers shall be four years.

4. That the high schools are the schools of the people, and not preparatory schools for higher institutions, and that the higher institutions should accept the legitimate product of the high schools; this statement shall in no wise interfere with a division of the work of the high schools, where it is feasible, into different lines of work.

5. That the high-school work, where it is feasible, should be differentiated so as to give an opportunity for the preparation of persons who wish to enter the normal school to become teachers, such preparation not to be normal-school work, but such work as will best fit them for the special work of the normal schools.

6. That the normal schools request that the colleges and the universities accept the work of standard normal schools as a full equivalent for their work year for year.

Respectfully submitted for the committee,

(Signed) Z. X. SNYDER.

This called forth a very lively discussion.

Mr. J. D. Burks moved that the report be accepted in its present form, and that the committee be continued to present a more extended report at the next meeting of the department, the present report to be a basis for investigation only. This was seconded.

Further discussion followed, and finally a substitute for the above motion, presented by President W. S. Dearmont, of the State Normal School, Cape Girardeau, Mo., was adopted, viz., that the report should be filed and the committee continued for further investigation.

The report of the Committee on Nominations was presented, as follows:

To the Department of Normal Schools:

Your Committee on Nominations makes the following report:

For President—John R. Kirk, of Missouri.

For Vice-President—D. B. Johnson, of South Carolina.

For Secretary—Mary Alice Whitney, of Kansas.

Respectfully submitted,

J. N. WILKINSON,
GUY E. MAXWELL,
MONTANA HASTINGS,
Committee.

The report was accepted, and the secretary was instructed to cast the ballot for the above nominees, who were then declared elected as officers for the ensuing year.

The department then adjourned.

(Signed) AGNES E. HOWE, *Acting Secretary*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

A STATEMENT OF THE ISSUES BEFORE THE DEPARTMENT

CHARLES C. VAN LIEW, PRESIDENT OF STATE NORMAL SCHOOL, CHICO, CAL.

It was the request of President Maxwell of the National Educational Association that each one of the department presidents should open his program with a summary of recent progress in the educational line for which his department stands. We are not always good historians of the recent past, but the progress of a people or a cause may best be revealed, perhaps, in the issues of which it has become conscious. The present statement aims at a brief summary of the issues which stand foremost in this business of training teachers.

But it would be idle for me to hint that any normal school man or woman is not at present clearly conscious of the great main issue involved in normal-school work. It is more than a century since the idea of training teachers was first suggested in this country, and hard on to a century since the first efforts to train teachers were made. For a century, then, the normal-school idea, which is the idea of a trained teaching service, has been growing. It has grown in definiteness of conception; it has grown in consistent practice. It started out in many instances as what we would call today an expanded grammar school, furnishing chiefly a more effective academic control of subject-matter; and it has become, in most instances, professionally strong in both theory and practice. In a word, the normal school has become the great exponent of a great profession, setting the pace, for the elementary schools at least, not only in spirit, but in ideals and practice.

Now, it is in this chief issue which the normal school has always had to meet that it must find its stimulus to new endeavor; but at present the new issue can be made clear only by projecting past history to its logical climax. The strength of the normal school lies in the fact that it has exploited a distinct and legitimate field, educationally, as yet practically untouched, except it be theoretically, by any other kind of institution. Even the men and women who enter the normal field after a university training have to find themselves in it before they can render real service. The future of the normal school unquestionably lies in a still further emphasis of its own movement at special points.

An analysis of the elements which should enter into the make-up of a teacher, as we are practically agreed today, are:

1. That general knowledge and culture which constitute the common stock in trade of the average citizen; but such knowledge and culture must be liberally, not meagerly, acquired.

2. Native teaching personality.

3. Professional culture, *i. e.*, the ideas which belong peculiarly to the teachers profession.

4. Skill in teaching, as demonstrated by actual practice, including skill in the ability to select, grasp, group, and arrange the materials of instruction with respect to the goals to be reached.

While we differ in the amount of emphasis we place upon each of these four requirements and in our method of meeting them, it is safe to say that normal schools are a unit in recognizing them as fundamental and inevitable. They have grown into recognition thru the experience of normal schools. They are, furthermore, the sources of present problems.

To begin with, we all desire a high standard of academic achievement; but we vary very greatly in our methods of making for it. The issue is squarely before us: Is it the business of the normal school to deal with pure academic instruction at all? If so, to what extent? In what lines? Or shall we require candidates for admission to dispose of general culture and training, before entering, by setting the entrance standard at, say, graduation from a high-grade secondary school? If we do, are our high schools giving such general culture and training as make for a good, especially elementary, teaching service? Apropos of entrance requirements to normal schools, I understand that Illinois has recently enacted a law establishing a system of free scholarships in its normal schools for graduates of the eighth grade. We shall look to our friends from Illinois, who are present, for some enlightenment on the significance of this law and its probable reaction. Is it true that in a state where so splendid a campaign in behalf of a trained teaching service has been carried on for years, the popular mind is still unable to grasp the normal-school idea, much less give it true support? Where should the academic standards of the normal school be placed? How shall they be attained? Thru high entrance requirements or normal academic work? These issues are still in a state of unrest.

It has become increasingly evident in recent years that secondary curricula are shaped with reference to college-entrance requirements. Yet only a small percentage of high-school graduates enter colleges. A large number of normal-school teachers feel that the secondary curriculum is not doing what it should do for its students in the way of general culture and effective training, especially when the work of the teacher is in prospect. Does this mean that in the near future the normal schools must attack the problem of secondary education, especially of the secondary curriculum, from their point of view, and bring the normal-school spirit to bear practically upon this phase of

general education? It seems not to be so much the variations in equipment, method, and achievement of the various high schools from which we receive pupils, that trouble us, as the persistence of an unfit but dominant type in the general product. This high-school problem is likely to be the most interesting to normal schools just now, as they are troubled about their own academic standards.

Turning now to the second-named requirement in the trained teacher, let us ask: Is there anything in normal-school experience to discredit or disprove the old-time maxim that the good teacher, trained or untrained, is the teacher who possesses a native teaching personality? If not, has the possession of native fitness to teach been adequately recognized in normal-school practice? Is there any one of us not familiar with the practice, still too common in normal-school circles, of permitting students to serve time for a diploma, to efface native unfitness, nominally, not really, by added years of a grind that barely lifts them to the level of the poorest? Are we not all conscious, too, that the fruits of this practice, whenever we yield, return to haunt us in our very defence of the training of teachers? Intimately bound up with the policy of every normal school, then, is this issue: Some principles must obtain by means of which the naturally fit may be carefully selected and the naturally unfit carefully rejected. As yet, no sufficiently radical measure obtains, altho such a measure, once inaugurated, would in effect be the final step to the popular recognition of a trained teaching service.

Given the sufficient background of culture and the selected personality, however, the next issue seems to lie in the way in which professional culture (Point 3) and skill in teaching (Point 4) shall be effected, especially in their relation to one another. Of professional culture we have been able in the past twenty years to develop a very considerable body. There seems to be an abundance of educational philosophies, pedagogies, psychologies, speculative, descriptive, and genetic, special methods, and highly specialized aid sciences of all kinds. But have we been able to demonstrate that the liberal study of general principles in the class-room has yielded proportionately increased effectiveness in practical skill? Are we, as is often claimed, in the position of the old-time schoolmaster, whose students pursued the study of grammar with all diligence, but could do nothing in the art of written expression? How much value lies in the general principle, elaborately developed in the class-room, even imaged in concrete illustrations, that is yet unassociated with the personal experience of the student in teaching? Is it not experience with things that work that underlies clear practical thinking and sound theory? One thing is certain: we have been turning a little from the attempt at a scientific statement of the business of education to a recognition of its artistic aspects. Under what circumstances, now, does any artist profit best by a knowledge of principles scientifically established? Is it by taking his brush and setting to work, at first imitatively, perhaps unconscious of reasons, and then gradually associating principles with his own practice? Has the genesis

of an artist, or the psychology of his development, any light to throw upon the production of the artist-teacher? Should professional culture follow or precede or parallel professional experience, and which of these, professional *culture*, or professional *experience*, shall take the lead and give the movement to the other? We are far from having reached a final solution of the issue. We need to pool our experiences again and again, until every bit of pedagogy, child study, or method we have to offer is made to give a clear account of itself in the skill of the teacher.

The last group of issues to which I wish to call your attention is dependent upon the relations which normal schools and universities bear to one another in the training of teachers. The first of these is suggested by the inadequate recognition which normal schools receive at the universities. In very many cases normal graduates who desire to pursue further studies, either before or after service as teachers, are required to repeat work already familiar, or to meet formal requirements that have no vital part to play in their development. They represent ordinarily good, thoro culture and discipline, but the universities do not care to recognize it. The result is a very general handicap in many sections to the post-graduate development of the great teaching body of the country.

The most serious problem, however, in which both normal schools and universities are alike to have mutual interests, is the training of secondary teachers. At present the vast majority—one might almost say practically all—of secondary teachers enter active service untrained, except on the academic side. If these teachers are university graduates, as they are today in the majority of cases, their command of the subject-matter of the secondary curriculum is generally effective, except possibly in small high schools where a single teacher is required to handle too many branches and specialization is impossible. If they come out of the normal schools, as they do in a few instances, they are deficient in breadth and grasp of subject-matter. But in the latter case they are much stronger in the arts of instruction, discipline, and school organization. Furthermore, there is not a college or university in the land which practically trains all of its candidates for secondary service, or is able to vouch reliably for their teaching personality, or their skill in the management or instruction of a class. The evil in the situation does not stop here. There are as yet very few universities which exhibit any disposition to grapple with the problem at all, or to recognize the principle involved. There are very many in which the average attitude of the faculty is not only indifferent and skeptical, but even hostile to the idea of practically training the secondary teacher. Yet almost every other department of university training is today recognizing the principle of practical efficiency in training for other lines of service.

There are many reasons for this state of affairs. One great difficulty, even in the few universities favorably disposed, seems to be to get support for practical facilities. The demands for mechanical, engineering, mining,

commercial, and agricultural equipment for practice is so great, and these courses appeal so forcibly and directly to our modern commercial interests, that none have been able to supply the candidate for secondary-teaching service the needed equipment of training schools and training-school forces. Again, therefore, the educational departments in our universities have been thrown back upon the purely theoretical work in methodology and pedagogics. This, however, is not the kind of work which will ever win in university quarters the final recognition of the necessity or benefits of training teachers; and it ought not to, because it is inadequate. Then, too, university departments of education feel called upon to cover a broader field than secondary education; to initiate educational research and investigation; to treat fundamentally the entire field of educational goals, materials, and methods. Consequently they rarely present courses suited specifically and solely to the practical needs of the secondary teacher. In association with other teachers of all classes, they are cut off from any intensive study of their own problems—and this despite the well-established principle that the most effective theoretic study for teachers is that of special methodology. Finally, it is difficult to see how the cause of a trained teaching service can ever thrive in an atmosphere where there is so little of teaching. The university professor is too commonly not a teacher. His interests tend to make him rather a lecturer, an experimenter, sometimes even a reader of dictation.

Enough has been said to point this last issue to which I wish to call attention. The situation with regard to the training of secondary teachers is one which stands practically in the way of a final popular recognition of the need of training teachers. We are ready now to raise the question: Is it not for the normal schools, the schools devoted to this one idea, the schools already equipped for such work, generally to undertake at least the *practical* training of teachers for secondary schools? If so, how shall it be accomplished? For some years some normal schools, notably among those of the Mississippi valley, have done some work also in the classics, and their graduates have thus been able to become high-school teachers, winning recognition for practical skill and efficiency. Ypsilanti has recently begun the training of secondary teachers, both academically and professionally. The San Francisco Normal School is just establishing a Training High School, in which it is proposed to train college graduates as teachers. Shall the normal school, then, undertake higher academic work as well as professional; or shall it co-operate with the university and, while emphasizing the great cultural benefits of the university career, seek to supply for college graduates that practical and professional training alone which universities are so far from realizing? Could not the situation be speedily and greatly improved in this way without serious additional expense? May not these institutions become complementary in this work thru co-operation? Would not such co-operation be a relief and a benefit to the university?

These are the issues which I have intended to bring before this department

both in this preliminary statement and particularly in the papers which are to follow.

In conclusion, I wish to suggest that the work of this department would profit if a committee were authorized to prepare a statement of policy and recommendation touching many of these issues, especially that of training secondary teachers; and I so recommend.

THE MODERN HIGH-SCHOOL CURRICULUM AS PREPARATION FOR A TWO-YEAR NORMAL COURSE, AND THE SORT OF TRAINING WHICH MAKES FOR THE BEST NORMAL-SCHOOL PREPARATION

DAVID FELMLEY, PRESIDENT OF ILLINOIS STATE NORMAL UNIVERSITY,
NORMAL, ILL.

In discussing the question propounded by your committee, it has seemed best to change the order of the sub-topics: to consider first the best sort of preparation for a two-year normal course, and then to compare the requirement with the modern high-school curriculum.

It is now generally recognized that in the high-school period there should be some differentiation of studies with reference to vocation. So, while we retain in all high-school programs the studies in history, government, and economics that contribute to intelligent citizenship, the studies in literature and art that refine the taste, and such studies in English grammar and composition as contribute to a good English style, there is a growing conviction that secondary education should differentiate along five chief lines, all to receive equal time and emphasis. We are providing the traditional course with its language, history, and literature for the speaking and writing professions; mathematics, physics, and manual training for useful and artistic construction; biology and chemistry for the physicians and farmers who are to deal with life and the conditions of life; commercial geography, economics, and the theory of accounts for the world of trade; and the various arts and applied sciences that relate to household economics for the mistresses of our homes. These five forms of the high-school curriculum cover nearly all the leading lines of human activity. Preparation for teaching demands, however, a generalized curriculum; for the elementary teacher must deal with those fundamental knowledges and arts that are of universal value, while the special teacher in the fields of secondary and higher education needs surely as much breadth of culture as a general high-school curriculum affords. It seems, therefore, at first thought, that the high-school curriculum of highest general culture value is the best curriculum for the training of teachers. If the modern high-school curriculum is not good for the prospective teachers, it may be questioned whether it is good for anybody.

Yet there are some of the knowledges and arts taught in the schools in

which we feel the candidate for teaching needs to be especially proficient. If this be not true, there is no point to the present inquiry. In the normal school itself the student's time must be engrossed with pedagogical problems. The inductive investigation of teaching, to discover its principles; studies in psychology, to afford an adequate deductive basis for the rules of general method; the history and science of education; questions of school organization and management and practice in teaching—these must constitute at least one-third of his program. If to this is added a re-examination of the studies of the elementary and secondary curriculum, with an eye to the problems of teaching, and at least one study in literature or the social sciences, to nourish the student's deepening interest in social questions, we have little room in the two-year normal course for acquiring the general knowledge, or the skill in the school arts, that the accomplished teacher must possess. Hence the normal school must demand of the high school such preliminary training as will permit the normal school to do its work.

I shall venture to state some of these legitimate demands:

The prospective teacher should have a living knowledge of all those fundamental forms and activities of nature that condition human life. The intellectual powers of the race have been developed thru man's long struggle to discover the laws of nature, and to turn its energies toward his own ends. This knowledge has been the chief component in the education of every generation of men. In the past, when the few months spent in the elementary school were given to acquiring the arts of computation and written communication, when the higher schools were largely devoted to ancient languages, this fundamental education was secured incidentally thru the spontaneous activities of boyhood, or thru the necessities of industrial life. The knowledge of nature thus obtained was ill-organized, usually superficial, but with a fullness of information along practical lines usually denied to the youth of today. Modern life has taken the boy out of the fields and woods, and shut him up in the schoolroom. It has greatly abridged the apprentice system. The technical school is taking the place of apprenticeship in preparing for industrial life, and the elementary school in its lengthened terms must provide in a systematic way the knowledge once afforded by the free opportunities and employments of country life.

Hence the demand that the young woman come from the high school with a living knowledge of the natural sciences; that she shall have a fair acquaintance with the plant and animal life of the region; that she see with some clearness the relation of variety of form and function to the conditions of existence; that she be acquainted with the various biological laws that make up the theory of evolution, and be able to account for many observed phenomena by reference to these laws. The time will soon come, I trust, when we may add to those requirements what the needs of children demand today; that she love flowers and know how to care for them.

She should have some acquaintance with the nature poets that reveal

the spiritual significance of natural phenomena, and know something of the names and works of the great writers that in the past half-century have revolutionized the thought of the world thru the revelations of natural science. She may not have read extensively in these, but she certainly should read them with interest and appreciation, and look forward with pleasurable anticipation to those hours of leisure that will make their treasures her own possession.

There is needed, too, a thoro knowledge of physiology, both of temperance physiology and of the other kind; not merely for the better care of her own health, but because it is vital to wise school administration. No architect has so far perfected his arrangements for heat, light, and ventilation, and the physical comfort of the children, as to leave nothing for the intelligent teacher. Moreover, the problem of fatigue, of exercise and physical training, the relation of learning to physical growth—in fact, nearly all the questions raised by modern pedagogy demand a good knowledge of physiology for their intelligent consideration.

Physics and the elements of chemistry are of equal importance; but what is wanted especially is the ability to account for ordinary external phenomena; for dew and frost, cloud and rainbow, combustion and decay; and sufficient insight into the laws of mechanics and of the various forms of energy to explain pumps and steam engines, telephones and trolley cars. I have known teachers to spend two weeks upon a model of Cæsar's bridge who could scarce name, much less explain, any of the great structures and machines that play so great a part in modern civilization.

Similarly there should be knowledge enough of earth science to appreciate the forces that have formed soil and mountain and river valley, and have sculptured the landscape, to awaken intelligent interest when in the presence of these natural forms.

Of no less importance than to know the laws of external nature is a knowledge of the ways and institutions of men. The fundamental study here is geography, which deals with the way in which human life is conditioned by latitude, climate, soil, and other features of the material environment. While earning a living is not the most important human interest, it must in a way take precedence of everything else. Hence those studies in commercial geography that deal with the resources of this planet, with the tools and processes that man employs to render them available, and with his methods of transportation and exchange; those studies in economics that unfold the laws governing the production, distribution, and consumption of wealth, and that afford a rational basis for judgment upon the greater part of the social and political questions that confront the citizen, deserve a large place in the preparation of the teacher. The interest in these studies deepens with mature years; therefore they deserve a large place in the normal school itself.

Manual training should be included in these preparatory studies, not merely because the use of tools has had a large share in developing the intel-

lectual powers of the race, nor because certain brain tracts become atrophied unless developed thru the so-called hand-training, but quite as largely to put the teacher into more intelligent sympathy with the multitudes of hand-workers whose children are to be taught. It is said that every problem of vice and poverty, of pauperism and crime, comes to the door of the school for its solution. No one should teach unless he knows something of the relation of these problems to his own work.

The story of our race, of the unfolding of its institutional life, is vital to all who wish to understand our institutions, to see their reason, or possibly their present unreasonableness. To see the need of government and study its machinery and workings is to foster the natural desire for active participation in the duties of citizenship. History, civil government, and other studies pertaining to citizenship must have a large place in the education of a democracy.

Now, the preparation of the candidate for teaching in all these lines need not be extensive; it must be intimate and vital. We observe, in regard to men and women who have enjoyed a secondary or higher education, that they carry forth from college a live interest in some subjects, while to others they rarely return after leaving school. This difference is partly due to individual taste, partly to the environment in which they are thrown when out of school; but very largely, we must agree, to the character of the instruction in these studies while in school. If subjects have been taught so as to establish a vital relationship between them and the practical affairs of men; if the knowledge acquired is so far connected with the extra-scholastic world as to form an adequate basis for apperception when the student comes in contact with this world; if, moreover, the student leaves the subject in school knowing of books to be read and problems to be investigated, he is likely to keep up his study in later years. The prospective teacher needs knowledge, but he needs still more that interest and outlook that are the guaranty of future growth.

In mathematics the requirement is a fair knowledge of arithmetic as applied in useful construction and business affairs; so much of algebra as will give some insight into general number-relations; geometry for its deductive reasoning, and, on the practical side, to develop definite ideas of symmetry and proportion, and afford a clear basis for the arithmetic of material construction.

Mathematical drawing should be included in the program of every prospective teacher. The taste for such work develops in the early high-school period. If the instinctive interest is properly nourished at that time, we may look for neatness, regularity, and order in all graphic work thruout the life of the teacher.

No one will question that the high-school graduate should bring to us acquaintance with much of our best literature. Anyone with fiber fine enough to turn to teaching for any but the most mercenary consideration surely will read and enjoy the great masterpieces in which the best men and

women of our race have put their best thoughts into permanent and beautiful form. If the school is to refine and lift up our national ideals, it must do so largely thru biography and literature. But the mere acquaintance with literature gained thru cursory reading is not enough. Passages, paragraphs, whole poems must be read and re-read until they become an everlasting possession. If the practice of committing to memory is not well established before the age of eighteen, it will rarely become so.

Every teacher should be a superior oral reader. Every poem was written to be read aloud. The first step in teaching a poem is not to have the allusions looked up, the words defined, or the sentences parsed. It is not to discuss the meter, the rhymes and alliteration, the figures of speech, useful as some of these are. It is rather to read the poem to the pupils so well that its music shall be heard; its rhythm, its melody, its harmony of sound and sense, that give charm to every great work of literary art. The teacher must understand and feel the thought and spirit of the poem; but unless he has perfected his voice as an instrument of expression, he can do little to awaken an appreciation of its beauty and power. The few teachers who can read well often seem afraid to read to their pupils. The children enjoy it so much that it seems like wasting time, if not positively wicked. We still hold to the opinion that work is what you don't like to do. Too much time may be devoted to reading aloud mere books of information, which have no special literary merit. After the mechanics of reading are mastered in the first four or five years, all reading aloud should be of literature—literature in the best sense. There has been in the past few years a lamentable decay in the art of oral expression, especially in our high schools. There is no possibility of relief until good reading is made an essential qualification of the teacher.

Along with reading we must place the other school arts. The teacher should sing; she should write well; she should be apt with crayon in illustration, ready with drawing or diagram to portray the appearance or inner thought of things.

The teacher should know art and love it. As stated by President Eliot in his recent Buffalo address:

The main object in every school should be, not to provide the children with means of earning a livelihood, but to show them how to live a happy and worthy life inspired by ideals which exalt and dignify both labor and pleasure. To see beauty and to love it is to possess large securities for such a life.

We are all aware that while a good work of art speaks to both prince and pauper, still for an adequate appreciation of beauty in any art we need some acquaintance with the technique of expression. We study drawing, not that we may draw, but that we may appreciate drawings. In all these fields the vitalizing spirit of the teacher is the chief factor in the growth of the pupil.

Nothing has been said of the quality of the student's English. The normal school may justly expect candidates for admission to have so far emancipated themselves from the slang of the early high-school period, and

the local provincialisms, as to be able to express ordinary commonplace thoughts in respectable English. Most defects in language are defects in thinking. Muddiness of expression is due to turbidity of thought. The fundamental need, therefore, is that during the grammar-school and high-school period pupils be taught to study—that is, to get the thought out of printed page or laboratory experiment—and not rest satisfied until this thought is clear. Where discriminating thinking prevails, an adequate vocabulary soon appears.

I have said little of mental discipline, because I believe that the alertness of mind, the power of concentration, the discriminating judgment, the strong and abiding interests that are needed in the professional school are best developed thru self-forgetful devotion to the knowledges and the arts of highest value in teaching.

It probably has occurred to some of you that this paper is sketching an educational utopia, and that no high school ever has produced, or ever will produce, graduates of the quality indicated within four years. The writer does not propose to lengthen the course, but to eliminate useless subjects and improve existing methods.

The chief obstacle is the study of Latin. In the programs of most of the high-school graduates that seek the normal school, Latin has engrossed one-fourth of the recitation periods, and from 40 to 60 per cent. of the time spent in study.

The limits of this paper forbid any detailed discussion of the value of Latin in the secondary school. A rigorous experimental demonstration of its value is impossible. The eminence attained in practical affairs by certain graduates of the traditional classical course may be in spite of, not because of, their classical studies. Our school system selects and promotes to its higher courses and to its diplomas the very people whose health, capacity, ambition, and wealth already mark them as the favored few of their generation. I believe that most of them in the general absence of higher education would attain a like prominence in their day.

Since arguments on this question are mainly expressious of opinion based upon *a priori* considerations, I shall venture to say that Latin contributes little to the prospective teacher, unless indeed she proposes herself to become a teacher of Latin. The place of Latin in our schools is purely traditional. Since schools are no longer confined to the clergy, and Latin has ceased to be the language of scholars and diplomats, as in the days of Bacon and Milton, schoolmasters are put to it to invent arguments for the study, chief among which is the resulting mental discipline. But modern pedagogy rejects the dogma of formal mental discipline. The discipline acquired in studying a foreign language is helpful in the further study of foreign languages. The knowledge of Latin helps little in the study of the Romance tongues. We usually recognize new words in those tongues from their similarity to English cognates, not from their Latin derivation. Whatever aid the derivation

of English words affords any one of us is due, not to his study of the sentences of Cæsar or Cicero, but to his independent study of Latin roots. To gain a knowledge of Roman literature and life, it is no more necessary to study Latin than to study Hebrew to understand and appreciate the Bible. Lastly, the constant translation of Latin into English as actually conducted does not with one pupil out of ten contribute to the growth of a vigorous idiomatic English style. We hear almost everywhere, "Cæsar said himself not to be about to be made more certain," or other absurdities scarcely less flagrant.

With Latin eliminated, there will be time for further study in arithmetic, English grammar, geography, and American history—studies commonly relegated to the grammar school, but needing in many of their vital aspects the maturer comprehension of the high-school period. Room may be found, too, for the studies in reading, in hand-work, including art, for which now so little time is afforded.

The other chief defects in the high-school curriculum can be traced to the dominant influence of the college in determining, not only the curriculum, but the methods of instruction. Since the report of the Committee of Ten in 1893, high-school inspectors from school and college have insisted that secondary teachers shall be college graduates. Yet the college student rarely hears any discussion of the ends and means of education, of the peculiar problems of the adolescent period, or of the method of instruction. Thrown into the high school with no resource except his own experience as a student, he must needs imitate his own teachers. In this way the method of the university has been projected into the high school. Physics has become quantitative, engrossing the time of the student with endless measurements. The construction of "Stewart's curve" or the verification of "Joule's equivalent" is to the normal student of much less importance than to know the modes of utilizing exhaust steam, or why the housewife must frequently add cold water to the cream she is churning. In biology the microscope has come into daily use among children who have never learned to see a tithe of the interesting and important phenomena of plant-life that are visible to the unaided eye.

Instruction in English is an admitted failure in almost every secondary school. The root of the difficulty is in the specialization of high-school teaching, which now treats language as a separate branch, under the name of English, whereas habits of expression, good or bad, are inevitably formed in every class-room. Language is not merely the vehicle of expression. It is the form of the thought itself. To write a clear, accurate, and orderly paragraph requires clear, accurate, and orderly thinking.

Instruction in the principles of any kind of doing can only set up ideals of right conduct; habits of right action can usually be gained only thru persistent individual effort supplemented by the example and demand of our entire environment.

We grant that ideals should be clear, attractive, noble, determining conduct by their inherent beauty and reasonableness; yet is it not as reasonable to

expect to cure a bad case of round shoulders in the physiology class, as to secure good English thru the unaided efforts of that department?

In conclusion, I would say that the modern high-school curriculum is not affording proper preparation for a two-year normal course; that the fault lies in the undue influence of the college, which has been permitted to convert the people's high school into a fitting academy, to shape its curriculum with reference to the traditional ideals of the college rather than the needs of modern life, and to furnish to the high school its complement of teachers accustomed to college methods, ill-informed as to the problems of secondary education, and wholly untrained in teaching.

As a remedy for this state of things is suggested:

1. State inspection of high schools by the state department of education; said inspection to be upon a liberal basis, without exclusive reference to the wishes of higher institutions, and to be accompanied by a state appropriation for approved schools.

2. A rigorous requirement of professional training for all high-school teachers.

DISCUSSION

PROFESSOR T. B. PRAY.—The recent enrichment of our high-school courses demands our heartiest approval. The addition of such subjects as botany, unknown in the high school I attended, if it leads the pupils to a careful observation of plant-life, and to close acquaintance with the flora of his own neighborhood, and then to a knowledge of plant-relationship and conditions of plant-growth, should give the teacher greater power to appreciate the natural interests of children, to enjoy and to direct their pleasures and excursions. It should give her greater power to teach, and above all, greater power to stimulate their love of knowledge. Therefore the long courses in botany are not too long nor too broad; but they must be so planned and administered as to accomplish for the future teacher the great purpose of expanding her sympathy with the child's interest in nature, her appreciation of the exceeding beauty and fascination of the child's plant-world. Doubtless also the greatest future happiness of the student is to be gained as the child gains his acquaintance with plants, thru the eye rather than thru the compound microscope. But whatever method be pursued in this and in other sciences, we shall agree that the trained observation, the discipline in accuracy and in logical thinking, the awakened imagination, are all most desirable results of such a course viewed as preparation for teaching.

So the most hearty approval must be given of the increased attention to literature and to history. The best things that have been thought and said thru the ages are as efficient today as ever before in molding the minds and hearts of men. Here the purpose will control method, and so inevitably select suitable matter. For example, some Scriptures are valuable for reproof, and for moral instruction and guidance in all affairs of everyday life; other portions give wings to the spiritual imagination. It is of most serious consequence whether our attention be focused upon the material—gold, silver, or lead—of which the caskets are made, or upon the precious treasures contained therein. Clearly, we must distinguish sharply between a knowledge of literature—that is, a loving appreciation of beautiful expression of inspiring thought—and a knowledge of all the trappings and millinery that serve only to distract the mind from worthier objects of pursuit.

Whether *Hiawatha* shall in the elementary school be a weariness to the flesh, or make

the pupil sorry to miss a single exercise, will depend upon the poetry and imagination in the soul of the teacher.

Long high-school courses in history, wisely managed, will give breadth of view; toleration of differences; genuine respect for those who differ from us; contempt for narrowness, bigotry, provincialism; unbounded admiration for heroism, sacrifice, and all those noble and ennobling qualities that make men great.

All these foundations for general culture found in the modern high-school course are well adapted to prepare the student for teaching. But, after all is said about the spirit of the teacher, her interest in nature and in life and the children under her care, her broad sympathies and general culture, certain fundamentals, the three R's if you please, the tools of knowledge, must be completely hers. She can teach effectively only what she knows certainly. If she becomes a student in the normal school, she can study profitably only methods relating to, and illustrated by, subject-matter of which her knowledge is exact, definite, usable. Pedagogy, like all other sciences, must find a concrete foundation in experience. How shall a teacher compare methods of reckoning interest, and adapt them to the need of the hour for her class, who cannot get the exact answer by any of them? How can she develop the new out of the unknown? How shall a class get mastery of the transitive verb from a teacher who cannot distinguish positively between the object and the attribute complement? For profitable instruction in pedagogy of any mental process, the process itself must be absolutely clear. Moreover, effective teaching demands such breadth of knowledge as makes abundant illustration easy, ready at need. Do not mistake. There is no call upon the high school to give all its students such exhaustive knowledge of number as would qualify a professor of mathematics. But teachers *must* have, and all students *might* have, on leaving the high school a more complete mastery of the common branches than can be had by children of twelve or thirteen years of age. When pupils graduate from a four-year high-school course at sixteen or seventeen years of age, having given no definite study to the fundamental branches of arithmetic, geography, or grammar since leaving the seventh or eighth grade, it is not surprising, though very unfortunate, that teachers in the normal school must stop teaching pedagogy, and instruct in arithmetic or grammar to make the pedagogy intelligible. When normal students in their so-called "practice teaching" find failure very often on account of ignorance of the subject, how can a two-year course give them such knowledge of pedagogy as to send them forth fairly equipped teachers? May we not ask for the *teachers* what the business men are so loudly demanding for their interests, that somewhere, somehow, without sacrifice of any desirable attainable degree of culture, there be found, before the end of the high-school course, a little room for arithmetic, whose logical relations and sequences will be more apparent and real to the student on account of the study of other branches of mathematics; for grammar, the universality and necessity of whose laws will be illumined by other literary and linguistic studies; and for geography, now at last relieved of its infinite drudgery, and made many-fold more interesting and intelligible and human by a wider knowledge of history and other sciences than was possible for the thirteen-year-old child in the eighth grade?

Verily, these things ought to be done, without leaving the others undone.

The normal schools are not seeking the privilege of instructing in the common branches, but they dare not shirk the duty, glad as they would be to do so.

FRANK M. McMURRY, of Teachers College, Columbia University, would omit much of the algebra as well as Latin in the high school in order to give more time for other studies. He emphasized the necessity of training in methods of study, not only in the high school, but also in the grades. The elements that constitute good study should be determined, and then impressed upon the pupils.

PRESIDENT JOHN W. COOK, of the Northern Illinois Normal School, said that one difficulty arose from too early selection of work for life. Young people are not able at

first to determine what they want. The universities should recognize this. The fourth year of the high school should be a special course for those who would teach, and should include a thoro review of the elementary branches. This work should be rigorous and so thoro as to be truly cultural.

CHARLES DE GARMO, of Cornell University, said that the fundamental difference in the quality of teaching demanded in the grades from that demanded in high schools started in the universities. The people in the latter have the idea that some subtle essence emanates from them that acts like a ferment to produce good teachers. He also called attention to the present New York law which allows any university graduate to teach two years, but he must pursue rather a rigorous course of reading and study if he elects to pursue the calling.

STUART H. ROWE, of the Brooklyn Training School, called attention to the fact that it is now possible for normal schools to make something of a selection from high-school graduates of those best fitted to undertake the normal training. He considered it desirable to have some system by which those students who desired to qualify for teachers should have special work in high schools that should be received by the universities as the equivalent of that now required.

HOW CAN THE NORMAL SCHOOL BEST PRODUCE EFFICIENT TEACHERS OF THE ELEMENTARY BRANCHES AS REGARDS THE CONTROL OF BOTH SUBJECT MATTER AND METHOD?

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The question of how the normal school can best produce efficient teachers of the elementary branches is so broad that its adequate discussion would involve the consideration of a whole system of pedagogy, as well as of the administrative system of a commonwealth whereby it puts its educational policy into practical working. In the brief time allotted, one can do little more than call attention to some of the chief principles involved, with little hope of reaching anything like a final solution of the question. Accordingly, it has seemed wise again to call attention to some factors in the normal school's production of efficient teachers, which, if not the most important in the whole process and system of the educational forces known as the normal school, are at least organically connected, and are also essential to the very life of the normal school. Among these factors are (1) the central organization and general policy of the normal school; (2) the course of study; and (3) the relation of theory to practice, not only as it appears in the practice school, but as it appears in every other part of the work of the school.

The following propositions are fundamental presuppositions, necessary to the very existence of the normal-school idea, and should remain inviolate as the leading and predominating ideas in the whole organization and conduct of the normal school, if it is to produce efficient teachers:

1. The facts of education are capable of scientific formulation in accordance with social and physical laws which are immutable, eternal, and inexorable; and hence education has gone beyond the stage of mere empiricism.

2. The school is a social institution which is the peer of the other social institutions—home, church, state, and property; and which, like them, has its own peculiar genius, laws, and principles, which must be discovered and observed, if the school is to accomplish its object in the best way. Each institution has its field as well as its limits. They are all most intricately and intimately related, yet each is free and independent, and should under no circumstances be used as the mere servant of any other. Thus the state cannot influence religious faith and domestic love as it will, and there are many things which money cannot buy. The soul is a self-active entity which develops in accordance with its own laws, and the school has as its realm the developmental phase of humanity as revealed, say, during the first twenty-five years of life. It should endeavor to discover the laws which control this development, and then give the best possible opportunity for realizing them. Under no circumstances should its policy be shaped in accordance with the genius of another institution, whether political, religious, domestic, or commercial. To this end—

3. The authorities of the normal school should be those who have studied and understand education, and are devoted to the school for its own sake. It should not be a means to something else, but be an end in itself worthy of the best attention, efforts, and devotion of those who control it. Positions on the faculty should be granted for *educational efficiency* chiefly, and graft, sectarianism, nepotism, commercialism, and charity should be given very minor and subsidiary influence, if they come in at all. Thus teaching will become a profession and cease to be a mere trade. It will become the life of the teacher, and not be a mere uncomfortable incident in that life, "the noblest profession" and not "the sorriest trade." In this way it will be made evident that education is a science, and the school will gain the respect that is due a great social institution such as it is.

4. The student body should be made up of those who are desirous of perfecting themselves in educational proficiency. "Without unity of aim, unity of plan is unthinkable." To use the normal school for other purposes than the preparation of teachers is as unwise as it would be to use a theological seminary for the preparation of mechanical engineers.

5. The aim of the normal school is one, viz., the preparation of teachers for efficient service in maintaining and promoting the educational welfare of the communities where they may be employed. To this end it should propagate that which is good in present educational practice, discard that which has been "weighed in the balance and found wanting," and put into "current coin" ideas which have been theoretically well-grounded by the reformers, but which have not yet been adopted in popular practice.

Students of education generally accept these facts as axiomatic. Popular

acceptance of them has grown, but there is still room for improvement in this line. In the better understanding of these principles, and the practical adjustment of the affairs of the normal school to them, lies the chief hope of best producing teachers of the elementary branches as regards the control of both subject-matter and method.

Following this improvement, there will be greater hope for betterment with regard to the course of study in elementary schools. At present elementary branches in the course of study are looked upon as reading, writing, arithmetic, and a few other more or less technical branches which as tools are indispensable to a participation in social life. It would be unwise and rash to intimate that these branches should receive less attention. In fact, they should have more. This will be effected thru their better adaptation to the immediate needs and wants of the pupils. One great trouble with the teaching of these subjects at present lies in their being regarded by the elementary teachers as subjects complete in themselves, rather than as technical portions of larger unities. They are not ends in themselves. They are only means to ends.

The elements of our life are found in certain fundamental impulses, instincts, and interests, which are for the most part self-purposes, and which give meaning to life. They reveal a person's heart of hearts, his heart's core. A child is born a-doing things. These impulses and interests are already functioning within him. Among them are the nascent forms of adult interests and occupations; among others, those which are summed up and designated as home, government, religion, art, and the different forms of life which come under the head of property, industry, commerce, trade, etc.

Education is the development of these native impulses into these permanent forms. The course of this development is the course of study, in which the mind, thru its summarizing power, organizes its detailed and more or less isolated experiences into wholes which constitute the personality.

This process of organization marks out the course of a child's growth. From day to day, from week to week, from month to month, out into the years he summarizes, generalizes, organizes. This process is the central feature of his course of studying and thinking. If we have a written record of what he has done, how he has gained in strength, broadened and deepened in comprehension and self-consciousness, like that which Preyer wrote about his infant son, we have a biography, which is an elementary form of history. The content of this personal history is the organization which has taken place within the child—his personality. Without memory, which is the psychical form of history, he never could have become anything. Thru this process of organization he is enabled to rise above the shifting scenes of the moment, and enter the universal and abiding. It is the ladder by which he climbs to divinity. History in this sense has a far deeper interest, value, and significance than a tale that is told. It occupies an essential, central place in life, and would seem to be of primary importance.

Professor Droyson says: "History is humanity becoming and being conscious of itself." In this sense, education is merely a phase of history, a way the race has of perpetuating, possessing, and coming into a consciousness of itself. Herbart must have had some such intuition when he called attention to the fact that history and literature are the most important subjects in a child's course of study. For history is given us not only by means of words, but much valuable light is thrown on the past by a study of temples and tombs, monuments and money, art, language, utensils, seals, etc., etc., which are treated in the so-called historical help-sciences. Thus history is neither mere verbal relation of experiences nor mere experience. It is both of these and more. It is the synthesis of summarized experience with adequate expression. Thus all things human are a contribution to history, and all we possess is a product of history—not only our government, religion, art, and the things usually treated in history, but the means of transportation, the various arts of building, manufacturing, etc., and all the numerous activities and industries with which man is occupied. In this way all hand-work and manual training become a part of historical instruction. Thus we are in deed and in truth "the heirs of all the ages;" but if we would truly possess our heritage, we must, as Goethe says, "earn it." And right here, in this process of earning our heritage, is where education comes in.

A full discussion of how the past is handed over to the present in the life of a child, of the place of literature and art in this transmission, and of numerous kindred subjects, would lead us too far at this time. Enough has been said to show that mental growth and organization constitute the internal phase of history, whose external phase is the multitudinous expressions of all that man has done, and which surround us on every hand. This would make history the primary elementary subject in the course of study, because only thru its internal phase, organization of the mental powers, is growth possible at all, and thru its external phase all we possess is given us. But in this growth certain forms of externalization are necessary. And this is where the so-called technical subjects find their place. Language, reading and writing, arithmetic, drawing, etc., afford the means thru which this development takes place, while the developing self, as manifested primarily in history, literature, manual training, etc., gives that which will fill these subjects with meaning, thus making them secondary elementary subjects. They will be the better taught from being given this secondary place, owing to the greater meaning they will acquire.

In the very definition of these subjects we see that they have their *raison d'être* in something else. Language is said to be the expression of thought by means of conventionalized symbols. It is a synthesis of external sign and internal significance, and the vitalizing part of it is surely the internal significance, the meaning. All who try to teach reading properly place the chief emphasis on the thing read, first in getting the thought, and next in properly awakening that thought thru oral expression, in the minds of others.

Now, the thought is a product of development, of organization, of growth, of the internal phase of history. When books are found to contain something which is of value to a boy, the most powerful motive is furnished for his mastering the technique of reading. This value comes as the result of thought and life.

The case is similar with arithmetic. Number is the mental form which the measurement of things takes on. Its value depends upon the value of the things measured. The boy who is seriously interested in levers and other mechanical powers has no trouble with ratio and proportion. We do not measure, as a general thing, merely to be measuring; but when some result, in itself valuable, will be improved by measuring, the measuring and calculating will be forthcoming. And so it is also with writing, composition, drawing, etc. When some valuable end is to be reached thru these modes of expression, then they will be much better done than when they are pursued as ends in themselves.

In the present practice of most elementary schools the chief emphasis is placed on these secondary elementary branches. Language, reading and writing, arithmetic, drawing, etc., are placed in the foreground, and history, story (stories), nature, manual training, hand-work, and "objects of interest" generally, are used as means for giving a fuller understanding to these subjects, which have come to be known as essentials. To see that this is true, one has only to glance at the average elementary text-book, where almost the whole attention is devoted to the technique of the subjects, and almost none to that of which they are the technique. The stories, objects, and problems are always devoid of organic connection with each other and usually with the life of the learner, rarely appropriate, and sometimes hopelessly superficial and disgustingly trivial. This practice of placing the chief emphasis on the secondary elementary branches has existed since long before the normal school was established, and it is one of the greatest obstacles to its best production of teachers of the elementary branches. The normal school should shift this emphasis to the primary elementary branches, and thereby put greater meaning into the secondary branches, while at the same time it could devote its main efforts to the real development of the personalities which it hopes ultimately to influence. This will bring the normal-school course into a higher state of organization, wherein the students will be brought to do two things at once—give instruction that educates and teach technical branches, and do them both much better because they are done together.

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The relation of theory to practice is one of the most abstruse human problems. It has appeared in every system of thought since Plato and Aristotle. Religious sects have been formed upon their discussion, faith, or works. In his *Critique of Pure Reason*, Kant gave a solution by stating that both are necessary. They are mutually complementary, and neither can exist without the other. "Conceptions without perceptions are empty,

perceptions without conceptions are blind." Theory has concrete existence only in practice, and practice is steady and reliable only as it is the embodiment of well-founded theory. One must see the general in the particular, if one is to proceed with confidence, and one must have the particular to be sure of the general. Theory lives only in practice. Practice has meaning only in the light of theory. The two must grow together, each rectifying the shortcomings of the other, establishing and perfecting the unity of the pedagogical process, if well-balanced and conscious progress is to be made.

This vital relation of theory and practice has a bearing on all the work of the whole normal school. Perhaps its most obvious effect is in the practice school, where the educational theory for which the school stands is being realized in concrete form, where hypotheses are going over into theory bodied forth in practice, and where new theories are being formulated from the practice. This work takes place in the form of preliminary plans, observation, conducting morning exercises, entertainments, conferences (individual and general), practice lessons, criticisms, reviews, and summaries, as well as in the conduct of the instruction, discipline, management, and training of a regular class. The variety of the ways in which this relation of theory to practice will affect the practice-teacher is great, but the one main point of their equal balance and importance should never be lost sight of.

This relation of theory and practice should be kept constantly in mind by all members of the normal-school faculty, and borne out in every detail theoretically as well as practically. Thus the teacher who promulgates a theory should have the opportunity and responsibility of seeing to it that it is realized in practice. The normal school is no place for the promulgation of pure theory. The universities can take care of that. If the practice is not to be handed over to an inferior person, then there is no person in the world so well fitted to see a theory carried out in practice as the person who promulgates it. Theory which will not work out in practice is worthless, and the one who advocates a certain theory should make it work, explain its deficiencies, or as a last resort alter the theory. With this sort of an arrangement the theoretical department will be as greatly benefited as the practice department.

The importance of the relation of theory to practice, not only shows itself in the work of practice-teachers, teachers of methods, and supervisors, but is equally evident and inevitable in the work of everyone else connected with the normal school, from the president down to the youngest child in the kindergarten. Everybody should be a theorist as well as a practitioner, and the balance between the two should be kept as nearly perfect as possible. Then the idea for which manual training stands will have made a great stride toward realization. The school will then be an arrangement to give those who attend it the best of such experience as they are capable of, and at the same time lead them into as deep an understanding of that experience as possible.

If those at the head of the normal school believe that education is a science; that the school is the peer of the other social institutions, church, state, family, and property; that the aim of the normal school is to prepare teachers and promote educational progress; and if the course of study is reorganized in such a way as to shift the main emphasis from the technical subjects to those of which they are the techniques, thus placing them in proper relation to subjects which play the leading rôle in life, and hence in education, and then place theory and practice on a parity so that they may mutually complement each other; then I believe that the normal school will be able best to produce teachers of the elementary branches as regards the control of both subject and method.

Such a central organization, and such a modification of the subject-matter and the method pursued, would soon make apparent that moral, social character, as the aim of education, is to be taken seriously in every phase and every moment of school work, in instruction as well as in discipline, management, and training. Kant gives primacy to the practical will. Self-activity is the deepest principle in us. We are always doing something, and, whether we will or not, doing something for someone else. Our lives are social. The center of gravity is always in the outgoing self. The deed and service are presented on every hand. "Do unto others as you would be done by," and, "Act according to maxims that might become universal." This greatest of all truths must permeate every detail of the normal school's work, if it is to do its best in producing efficient teachers of elementary branches.

DISCUSSION

HERMAN T. LUKENS, State Normal School, California, Pa.—The usual plan is to demand scholarship as a condition of entrance into the normal schools, and then expect to devote the two years of the normal course to what is called professional work. Scholastic knowledge is thus sometimes regarded as quite irrelevant to method. Method is then treated as an external attachment to knowledge, to be gained independently as professional preparation, and then applied.

Now, scholarship and method are separable in the sense that a student may get scholarship with very slight attention to method, or he may get method or have a natural gift of teaching without much scholarship; but if he is to possess both, the most efficient way—indeed, the only successful way—is to acquire both together.

The tendency to separate the two results is ignoring largely the professional preparation that comes from right scholarship. It is assumed that scholarship is anterior to professional preparation, instead of being itself the most important part of it. The profession of teaching is not analogous to the profession of law, medicine, or theology, in respect to the general preparation required.

To get scholarship before method is about as wise as for the child first to get the forms of grammar, arithmetic, etc., and later put content into them. We learn by using, and not before using, as a preparation for using.

We all know that our students teach as they have been taught far more than as they have been told to teach in our methodology. In fact, all our discussion of method with them, all their study of psychology, and all their work in child study are possible only

on the basis of their own experience with method of being taught, self-knowledge by introspection, and memory of their own childhood.

When Holmes was asked when he would begin the education of a child, he is said to have answered: "Begin with the grandmother." When would you begin a teacher's training in right method and insight into soul growth? Well, the grandmothers and grandfathers in this case are the normal-school teachers of the elementary-school teachers.

The separation of academic from professional preparation implies that method is of minor consequence in the academic preparation, and leads to its neglect while the students are learning subject-matter. In many normal schools the teachers of academic subjects bother themselves very little about the methods of teaching.

There is method in subject-matter itself—natural method of the highest order; and this scientific method in the subject-matter is the method of the human mind itself. It is the business of normal schools and collegiate schools of education to present subject-matter in science, in language, in literature, and in the arts, in such a way that the student both sees and feels that these studies are significant embodiments of mental operations, that they simply express and illustrate in their concrete form what common, everyday modes of thought-activity are capable of producing.

Scholarship *per se* may itself then be a most effective tool for training and turning out good teachers. Every normal-school teacher in every department should consider himself a teacher of methods, should keep in the closest touch with the model school, and should consider his own teaching as part of the demonstration of model or normal methods.

The teachers in the normal school should have advisory powers in the model school, and frequent conferences with the training teachers should be held. But is this enough? Should not the heads of departments in normal schools also have visitorial and advisory powers in all the elementary and high schools in their respective districts? Would not this, on the one hand, tend to improve attention to good methods and stimulate professional improvement in the schools, and, on the other hand, give the normal schools a closer touch with their graduates at work, and enable them to see better what are the needs and difficulties that the normal schools should meet?

I. THE CO-OPERATION OF UNIVERSITIES AND NORMAL SCHOOLS IN THE TRAINING OF ELEMENTARY TEACHERS

FRANK M. McMURRY, PROFESSOR OF THEORY AND PRACTICE OF TEACHING,
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[THESES]

1. Both universities and normal schools should aim to prepare teachers for work in elementary schools.
2. Duplication of work in universities (in undergraduate departments) and normal schools is justified in the following lines:
 - a) In various academic subjects, such as literature, history, science, etc.
 - b) In professional courses for teachers, such as educational psychology, history of education, general and special method.
 - c) In attempts to apply and test educational theory in practice schools.
3. Co-operation between undergraduate departments of universities and normal schools should consist—

- a) Of such comparison of views and practices in occasional discussions on the part of the faculties, as these common interests suggest, the university departments of education taking the lead, owing to their superior opportunities for study.
 - b) Of ready acceptance in normal-school students in the universities with full credit for equivalent work.
4. It is the peculiar mission of the graduate departments of education in universities, so far as elementary schools are concerned—
- a) To advance knowledge of education in the elementary field by the application of a scientific method to—
 - (1) Library research.
 - (2) Experimentation, in the psychological laboratory and in the experimental school.
 - b) To instruct students in the advanced study of elementary education, preparing them for the duties of superintendent, principal, supervisor, and professor of elementary education.
5. Co-operation between the graduate departments of universities and normal schools should consist in such close relation as will—
- a) Allow the former to stimulate and instruct the latter thru both their investigation and their personal contact.
 - b) Encourage the more successful students of the latter to undertake advanced study of education in the former.

DISCUSSION

PROFESSOR McMURRY, in introducing his first thesis, said that university faculties usually care very little for preparation for teaching. One argument for a department of education in a university is that faculties may learn something of the art and science of teaching.

EDWARD BROOKS, superintendent of schools, Philadelphia, Pa., would have the most highly educated and most scholarly men and women in the elementary schools, and especially in the kindergarten.

PRESIDENT LIVINGSTON C. LORD, Charleston, Ill., doubted the assertion that more skill is required in primary work than in the intermediate and grammar grades. He thought that good work in the primary grades was often neutralized by poor teaching in the grades following, and that the poor, weak teacher would do less harm in the first grade than elsewhere.

MR. McMURRY urged further in support of his first thesis the fact that attendance in both normal schools and universities is largely a geographic matter, the students going to the place most convenient, and this is often a university. If the university trains only for superintendents and for secondary schools, it neglects the greatest part of its field of work.

Under the second thesis, it was recognized that a certain amount of duplication now exists, and should rather be increased than diminished. It was urged that it is impossible for the elementary or high school to give the immature mind the subject-matter required for good teachers.

There was much discussion on the question of practice schools for universities. At

present most universities do not want them, but they are needed there for the same reason that normal schools require them to order "to keep down to earth," and first-hand knowledge can best be obtained by contact with young people. Without practice schools these departments do as much harm as good. Theories should be tested by direct practice in the schools.

Universities should come to the assistance of normal schools and work with them. They should be leaders in the full sense, because their men have the time. Normal schools today are reaching more healthy conclusions than are universities, because they test their theories.

Owing to the limit of time, Mr. McMurry commented but briefly on his remaining theses (Nos. 3, 4, and 5), as follows:

The university professor has more time for study than has the normal-school teacher, and should therefore take the leadership in investigation. It is the function of advanced departments to lead in the whole field. Many of the larger questions regarding education are not yet even formulated. There is little scientific method, and, if we ever have it, it should come from the advanced departments of the universities, and the profession should be able to look to departments of education in universities for investigations. The university professor is more interested in his subject than in the relation of that subject to people, and it follows that some adjustment is necessary in order to benefit the college graduate who desires to teach.

II. THE CO-OPERATION OF UNIVERSITIES AND NORMAL SCHOOLS IN THE TRAINING OF ELEMENTARY TEACHERS

GUY E. MAXWELL, PRESIDENT STATE NORMAL SCHOOL, WINONA, MINN.

One of the opportunities for the co-operation of universities and normal schools in the training of elementary teachers lies in a more sympathetic attitude the one for the other; for heretofore there has been too great a tendency on the part of the normal school to be jealous of the university, and to fail to admit the worth of its work; while the university, on the other hand, has found many flaws in normal-school entrance requirements, courses of study, methods of work, and in the product which the normal school has turned out.

The normal school, on the one hand, ought earnestly to reach after higher standards of admission, to do keener work in the class-room, to insist upon longer periods for training, and to employ better instructors. Again, it would appear that the normal school will avoid a cause for antipathy between these schools if for the present it does not covet too earnestly the training of teachers for high schools, but is willing to leave the care of the secondary school to the college and university. If, however, the university will not establish proper technical training for teachers, including an effective kind of practice-teaching in high-school grades, the normal school would seem to be justified in asking for funds to add one or two years to the present courses, and to take up the training of teachers for high schools. Moreover, the normal school ought doubtless to keep pretty closely in the beaten path of professional and technical knowledge, rather than to attempt by original

investigation to blaze new educational trails; for the university is better equipped to do this work, and the task legitimately belongs to it.

The normal school ought to encourage its graduates to go to the university, after a period of grade-teaching in the common schools, arranging its program of studies, where possible, so that it will fit the university courses. The university ought then to take these experienced and trained teachers, and to prepare them for supervision and leadership in common-school education.

But if, as was first suggested, the normal school is to urge its graduates to regard their formal education for teaching as incomplete until they have found their way thru the university, this institution, in turn, must encourage and advance elementary education, and show its liberality toward the normal school by offering full and fair advanced credit to a student for work done in the normal school; especially so, if the student has followed his normal course by two or three years of successful experience in teaching. That is to say that, there being a straight road from the kindergarten thru the graduate and professional schools of the university, the normal school ought to be regarded as a part of this road, or, at least, to be regarded as a road lying nearly parallel to the main line, so that little, if any, time would be lost by a student's switching off the main road temporarily in his preparation to teach in the elementary schools.

It has not been until very recently in Minnesota that normal graduates of two years' work above the high school could secure even one year's advanced credit in the university of that state. I understand that, while universities and colleges in some other western states offer nominally two years of advanced credit in certain courses, it is with some difficulty in actual practice that graduates of the normal school secure such recognition; while in the East the normal graduate is often put upon the same footing with high-school graduates, and required to pass his entrance examination for the freshman year.

If the normal school gathers in from villages and rural districts many bright young people of sterling worth and starts them upon an educational career, but fails to point the way with sufficient directness and enthusiasm to a higher education; or if, with proper effort on the part of the normal school to send such students to the university, a fair and just inducement is not held out by the university, many of these young people, the bone and sinew of society, will never be saved for higher education and completer service. Moreover, such a fair and just inducement, offering the opportunity for future growth, would bring into the grades of the elementary school, thru the normal school, that factor whose absence we all deplore, viz., the man teacher. But how can a man at present be urged to go temporarily into elementary schools, if his preparation therefor yields no advantage in advanced credit when he takes up his university work later?

It is safe to say, I believe, that two years of work above the high school, carried on under the influences of a good normal school, together with two

years of successful teaching, the usual time required for the indorsement of a normal diploma as a life-certificate, is a sufficient guarantee of the quality of the student, so that two more years at the university will justify the granting of the bachelor's degree. The maturity of such a student, his grasp of the seriousness of life and the development of a real purpose, his ability to think, his mastery of the fundamental branches of the common school, as well as his study of literature, psychology, the history of education, etc., with two years of university training, would turn out the normal-school graduate far ahead of the average of his class.

Universities and colleges make the mistake, which is often made by prospective normal students, of supposing that when arithmetic or United States history appears in the course of study at a normal school, a review of the old seventh- or eighth-grade work is indicated, not understanding that there is meant, rather, a new view and a constructive view of the subject, and one of as much cultural, disciplinary, and practical worth as is given by the ordinary linguistic and mathematical subjects of the first two college years. As Commissioner Harris has pointed out, these common branches in a normal school are re-examined in their relations to the higher branches from which they derive their principles; that, for example, arithmetic is studied in the light of algebra and geometry, principles are discovered, rules are demonstrated, and the subject takes on new and far-reaching phases. Again, the eighth-grade study of arithmetic, history, or grammar was given principally to memory, while it is only in the later pursuit of these subjects at the normal-school age that they receive the reflection they require, by which their inner relations appear and their significance is really felt. Let no one, therefore, despise the common branches, or suppose that freshman algebra will equal geography in difficulty, in the training to be secured, in the content of the subject, or in its nearness to life; and that a constructive study of English grammar or United States history is any less enlightening or culture-giving than freshman Latin.

On the part of the university, again, a greater co-operation would result if there could be developed a belief on the part of the average college instructor that the technically trained teacher, other things being equal, will far outstrip his untrained neighbor; for there is almost a universal tendency on the part of college teachers to believe that teachers are born, or, if made at all, are made by being filled to overflowing with enthusiasm for their subjects. Experience shows that it is not sufficient to be simply filled with one's subject. In this connection it is well to remember that, while the first normal school in America opened its doors but sixty-six years ago, and the first president of the first normal school west of the Mississippi is still living, so vital was the service for which the new institution was organized that in less than sixty years the number of public normal schools increased to 126, exclusive of city training schools and private schools for teachers. All this came about thru the interest of the common people in the movement and their appreciation of the value

of professional training, and in spite of the slings and arrows of ridicule and criticism which came from persons who ought to have had clearer vision. More recently the call of the common people thru the common school has come up to the university saying: "Ye call yourselves the salt of the earth. Wherewith do ye salt our lives?" And the demand for trained teachers has become so great that nearly every university of prominence has heard it and has founded its chair of education or its teachers college. Even so the weakest place in American education is found in the lack of trained teachers, and the time is upon us when the doctors of philosophy, the masters of arts, and the professors of learning should come into close sympathy with the needs of the people in this direction.

"The university, supported by society for the service it can render thru scholarship, has heretofore directed its efforts primarily in support of the three older learned professions." There is, however, no field where the service of scholarship is more needed than in elementary education, nor is there any where scholarship will find more difficult problems to engage its attention, nor problems whose solution will more fully minister to the welfare of society. For example, there are lessons being taught day by day in the elementary schools which have no value, cultural, practical, or disciplinary; there are other subjects included in the program of studies which on the whole are valuable, but contain many useless topics, or those of too great difficulty; while, again, valuable and well-adapted material is very badly presented. From all these sources comes a waste to society which the university can best help to save. The determining of a program of studies for the elementary school of a twentieth-century democracy would have far greater value for the people than most other university research.

Again, the university ought to help the elementary school to see the purpose for which it is supported, for the average grade teacher cannot give an adequate statement of the things which he seeks for his boys and girls; he does not know what kind of knowledge is of most worth, nor whether knowledge, development, character, or something else is the primary purpose. Even if he has a fairly definite grasp of what he aims at, he will scarcely know the best means for securing the end sought. He and all the rest of us await the mature scholarship of the university to discover and state those definite and helpful principles upon which the practice of the elementary school is based.

Our American education is not very fully systematized, and the lack of uniformity and system may be a thing not to be regretted. Nevertheless, the getting together of universities and normal schools in the training of elementary teachers would doubtless be one of the great benefits that could come to American education at the present time.

I. THE CO-OPERATION OF UNIVERSITIES AND NORMAL SCHOOLS IN THE TRAINING OF SECONDARY TEACHERS

E. N. HENDERSON, PROFESSOR OF EDUCATION AND PSYCHOLOGY, ADELPHI COLLEGE, BROOKLYN, N. Y.

The normal school sprang up in America in order to train elementary teachers. It was a product of that demand for universal popular education by which, according to Horace Mann, the democracy was to be saved; a demand which meant far more and far better common schools than any of which our forefathers conceived. In the creation of our system of elementary free schools, the normal school has done magnificent service, and one is perfectly safe in saying that it will continue indefinitely to be the foundation upon which those institutions rest. Beginning with the object of giving a somewhat more advanced and far more thoro training in subject-matter than the common schools were providing, it has rapidly been growing into a purely professional school. The time is past in which the normal school can be looked upon as a substitute for high school or college—as a finishing school for a liberal education. There must always remain in its program a considerable amount of liberal study, but that is because there can be no adequate preparation for the profession of teaching without such culture. On the other hand, the normal school has come to devote itself almost, if not quite, exclusively to the furtherance of a platform and a policy that in our country were originated by itself—namely, that teaching is a profession for which there should be specific professional preparation.

In the beginning the quality and training of secondary teachers in our country were, as a rule, far superior to those of teachers in the common schools. The college graduate has always played an important part in such work, and before many years the high schools will doubtless be provided with faculties every member of which possesses at least a bachelor's degree. The part that the normal schools have played in the training of secondary teachers has been inconsiderable. Save in the case of a few more advanced normal schools, they have not contemplated such work for their graduates. In the first place, the secondary-school teacher needed a command of subject-matter far in advance of that required in elementary work. Because of the extent of this need, training in method had little chance to grow into a demand. The college, which knew much of subject-matter, was in consequence, altho it knew nothing of method, deemed the appropriate fitting place for the high-school teacher. Moreover, the high school has always been to a great extent a preparatory school for the college. As such, the college has assumed the right to determine its program, to fix its standards, and, of course, to train its teachers.

But the conception that the teacher may and should be professionally trained has been extended to apply not merely to elementary teachers, but to secondary ones as well. Universities have established departments of

education, so that training equivalent to that furnished by normal schools may be given to those who expect to teach. These departments have in several cases grown into teachers' colleges. As compared with the normal schools, the university departments of education have suffered because they have usually been unable to furnish their students adequate opportunity to observe model teaching, or to practice their art. In the evolution of the normal school into a purely professional institution, this observation and practice work has come to be the nucleus about which all the program is arranged. It would not be extravagant to say that, if in any field the maxim that "learning should be by doing" applies, it is in that of the teacher. Hence, I think, one might very properly declare that the future of university departments of education depends very largely on the development by them of model and practice schools. In short, they should become teachers' colleges.

Here we encounter certain difficulties. The rooted antagonism of the older departments in our colleges to the department of education, the conviction that practice-teaching means "normal-school methods"—a question-begging epithet that covers the hostility of a decided ignorance—the feeling that method in teaching is "humbug" anyhow, the lack of money and enterprise to push such developments, have all prevented the natural evolution of teachers' colleges side by side with colleges of law, medicine, engineering, etc. The normal schools had a clear field for growth in the demand for better-trained elementary teachers. The teachers' college has to fight its way against the university tradition that to know your subject thoroly is the indispensable and only condition for teaching it successfully—unless, indeed, we add that other quality, the inborn instinct to teach.

In this emergency, what solution would seem more natural than that the normal schools should set up practice and model schools for secondary teachers? They have no conservatism to overcome, they have the plant already in some cases, and in any event could easily add to their practice and model elementary schools a high school of the same character. The normal school would then become the professional school for teachers, and the evolution of such an institution would be complete.

To this plan the following objections may be urged: In the first place, the high-school teacher should be possessed of his bachelor's degree. At least such extended knowledge of subject-matter as is involved in this is coming to be indispensable for him. But, as matters are now turning in our leading colleges, a large part, if not all, of the senior year can be given up to professional study. Hence there should be a college attached to the university to which the prospective teacher may repair for this work, just as the prospective lawyer finds his affiliated institution near at hand. This gradual transition from the liberal to the vocational, in which we lead to the second without losing sight of the first or ever giving it up, is, to my mind, an eminently desirable arrangement. We should endeavor to make all culture react on the business of life, and so ultimately on the vocation. But, above all, we

should liberalize the vocation; and if any profession needs to keep this important truth in mind, it is that of teaching. To separate the teachers' college so entirely from the university as the handing over of its practice and model work to the normal school requires, would mean, I think, a deplorable chasm between the liberal and the professional. These two sides of education need to be brought together. To increase their isolation would be to sterilize the one and commercialize the other.

In the second place, a fully equipped teachers' college is an important adjunct of a university, because there is need of an institution to train, not merely secondary teachers, but also college instructors and superintendents as well. Such a school must needs be in a large center, near the best available libraries and schools, and provide opportunity for all kinds of observation, research, and experiment. The training of the secondary teacher may better go on in such an environment than in a normal school devoted primarily to the training of elementary teachers, whose preliminary training will not, as a rule, fit them to demand such advantages.

Finally, every reason that would place the professional schools of law, medicine, engineering, etc., in the university would situate the teachers' college there also, and the time is coming when mere departments of education that are not teachers' colleges will be in far less repute than they are even today.

But if the university training of teachers is ever to take its proper position, it must become more than a mere incident in a four-year liberal-culture course. The ancient contention that to know a subject is the one condition for teaching it does not find an impressive refutation at the hands of the average department of education. What is needed is a course extended enough and rich enough to offer at least an excuse for a comparison with the three- and four-year courses in law and medicine. The very least that one can propose is one year beyond the taking of the baccalaureate degree. This, combined with the senior undergraduate year, which in many institutions may already be devoted entirely to professional work, will make a two-year course, the successful completion of which would, in my judgment, entitle a student to attempt high-school teaching. The time is going by when we should discriminate against the other professions so much as to allow a student fresh from the college to teach a class, when we will not allow him to plead before a court or administer nostrums for pay. Young men are, under present conditions, not easy to convince that teaching may not be regarded as a mere stepping-stone to something more worthy—a means of making money quickly, of tiding over financial embarrassments until they can get a fresh start to do the thing they like. One of the first things to be done to make teaching a profession is to get people to take it seriously, and a good training in a teachers' college is, to my mind, the only adequate way of bringing about this result.

The teachers' college advocated above would become, in the nature of

things, the only institution thru which one could prepare for secondary teaching. On the other hand, the normal school would remain the only institution to prepare the elementary teacher. Should these two branches of the profession remain distinct, each under the control of a separate influence? Such a condition could result only in lack of sympathy between the elementary and secondary schools, with a corresponding lack of harmony and system. It would discourage ambitious men and women from preparing for elementary teaching, because this would be time lost, if one wishes ever to enter upon more advanced work. It would necessitate from the beginning a choice on the part of the prospective teacher of the specific sort of work he or she shall probably do permanently. These results may already be found to have come to pass in large measure. Normal schools and elementary schools are deserted by men. They tend to be avoided by those whose means and ambitions give them the courage and the inclination to make at once for the remoter but more attractive goal. There is much lack of harmony between elementary and secondary schools, between normal schools and colleges. All of this is greatly to be deplored. It is of the greatest importance that in teaching, as in every other profession or business, progress should be from below upward. Those teachers who enter the elementary schools should feel that by so doing they have not blocked the advance to secondary work, if they seem fitted for this. Indeed, common-school work should constitute the natural and proper stepping-stone to secondary work, or to principalships and superintendencies, or to normal-school and college positions. The apprenticeship in schools where salvation depends not so much upon knowledge of subject-matter as upon ability to teach will vastly improve the quality of our higher-grade teachers. Indeed, I have heard it said by many a young man, who had paid little or no attention to the question of professional training for teachers, that he was nowhere so poorly taught as in college. There can be no doubt that, if *teaching* is to be one's main business in life, he would better begin at the bottom and learn his trade. It is true that a taste for the knowledge of subject-matter that fits one for high-school or college teaching cannot be acquired while one is young. But an *apprenticeship* in elementary teaching need not extend beyond the plastic period. Moreover, the methods of teaching learners of different grades do not differ so radically that we may not expect to gain the most valuable experience thru handling the children. The power of getting the point of view of the class, so necessary to every successful lesson, is nowhere so much in demand as with elementary teachers. Nor is the danger of taking the common-school attitude when dealing with more advanced students one to be feared, provided the methods of the lower grades be not made reflex by too many years of practice.

Finally, if it is contended that the spirit of the university teacher should be that of research, quite as much as, if not more than, that of teaching, I reply that, granting this somewhat questionable assumption, there is no evidence to prove that one who has served an apprenticeship in teaching of

a lower grade is by that fact to any considerable degree disqualified for research. Rather does it seem likely that, when his tastes for research have appeared and his capacities therefor have developed, he will be found far more practical, *i. e.*, far more effective in his investigations because of having learned a useful art. Moreover, if his normal-school training has been of the proper sort, the elementary teacher will be alive to the importance of originality and investigation at every turn. His practice will be liberal, and this will go a great way toward making any later liberal study or research practical.

If my contention that all teachers should serve an apprenticeship in elementary teaching be granted, then the natural career of the profession would pass thru the stages of graduation from high school, and from normal school, a year or so in elementary teaching, then the liberal college, and finally the teachers' college course. But it would be manifestly unfair to compel a student who has taken the normal-school course to work for five years on the same footing as any high-school graduate before acquiring the diploma in secondary teaching. He should, in all justice, be allowed to complete this work in three years; otherwise the student who goes directly to the college will have such an advantage that the route of the normal school will be unpopular. It will be chosen only by those whose ambitions are satisfied at the thought of elementary teaching as a permanency; plus those who wish soon to be placed in a position to make a fair income. It would be likely that very few of that class who wish to undertake higher work would go to the normal school at all. Hence the proper continuity of work in the teaching profession would not exist.

How should the three years that are thus allotted to the liberal and teachers' colleges be apportioned between them? It is my judgment that the normal-school graduate should in his college course have at least one year of purely professional training. The problems of the new kind of work to which he aspires need special treatment. He should get critical study of them with abundant observation and practice work. Moreover, years, advanced attainments, and especially practical experience all fit the student for far more effective study of his profession than was possible to a mere high-school graduate. It would be folly to count the normal-school work as the equivalent of that of the teachers' college. The objection to such a plan on the part of liberal-college men would be that it allows the normal-school graduate to complete the liberal-culture course in two years, whereas the student who enters from the high school requires three. Professional education will be declared to be getting more than its share. The criticism may be met by two conditions, one of which is to some extent realized today. It is that the normal schools should have in their courses some work designed, not to meet certain supposedly indispensable needs of the common-school teacher, but rather to broaden the outlook along lines not strictly professional. There may not be anything that the elementary teacher ought not to know, but there are many things that he can manage to get along without. Among these let

the normal-school student choose some subjects—and they would better be elective—in which he shall decide especially to interest himself for the sake of their broadening effect. Secondly, let him pursue these subjects after graduation from the normal school while he is engaged in teaching. Such work could be organized under the direction of the college authorities, and its results could be tested by the various methods in vogue. . The completion of an amount that could easily be done by any intelligent candidate for a college during one or two years' teaching would, taken with the liberal work of the normal course, easily cover the credit of a year in liberal-college work.

It will be no inconsiderable gain if the students in our teachers' colleges come with some practical experience. When that experience has been a thoughtful one, as it may be expected to be with normal-school graduates, it will furnish to the teachers' college a high order of preparation for its investigations and discussions. It is the lack of a living set of problems that makes students in the educational work of our colleges so frequently uninterested. What is presented to them seems either a platitude or meaningless, because their experience, which has been that of learners with minds directed toward subject-matter, does not furnish them with preparation to grip the problems of one who is trying to develop this knowledge effectively in others. In short, our college educational courses are excellent examples of a violation of the commonplace principle of apperception.

The scheme thus outlined seems to me the one toward which we are drifting. I do not think that I have in the entire course of this paper offered an original suggestion. This is all in simplest prose the logic of events—a logic that will bring harmony out of confusion, and will substitute co-operation instead of discord in that work in which you as normal-school men are especially interested, namely, the development of a sound and thoro professional training for all classes of teachers.

II. THE CO-OPERATION OF UNIVERSITIES AND NORMAL SCHOOLS IN THE TRAINING OF SECONDARY TEACHERS

Z. X. SNYDER, PRESIDENT OF STATE NORMAL SCHOOL, GREELEY, COLO.

I. All public schools are established for the benefit of the people.

This important fact is sometimes lost sight of when the function of an institution is made to serve some other end. Sometimes the institution becomes the end, and all effort is directed toward its growth in some line remote from its intended use, that of serving the people. Teachers frequently grow to think that the institution with which they are connected is in existence and is maintained for them. Teachers are specialists. The subject of the specialist is far more important to him than the child, or pupil. Under such conditions, if there is to be a sacrifice of subject or child, it is the child that is placed upon

the altar. A public educational institution tends to lose its proper relation to the people just in proportion as it becomes a machine. Programs, courses of study, laudation of subjects, standards of preparation, ownership of the school by teachers, examinations, periodic promotion, ignorance of children, percentages attained, text-books, are all elements that enter into a first-class machine which becomes a sacrificial altar on which the children are offered and the people suffer. The sentiment for educational progress is usually in advance of the teacher. Great educational movements have had their origin among the laity. The reason of this is that the conception that the school belongs to the people is not appreciated. The lack of the fullness of this conception is because the teacher is not professionally trained in the widest sense. That this democratic idea of the function of the school may prevail, the teacher must be professionally trained both theoretically and practically.

II. The public-school system should be a unified organization embracing all grades, from the first to the university, inclusive.

In such a school system, from the kindergarten to the university, inclusive, the grade or school above should accept the product from the grade or school below. This would eliminate the estrangement that now exists in passing from the kindergarten to the primary school, from the grammar school to the high school, and from the high school to the college or university. In the latter two of these transitions is where we find the falling off in attendance. The greatest slaughter of the children occurs in the entrance years of the high school and of the college. This is because of the extreme estrangement. From one department to another should be as gradual as from one grade to another. A mutual understanding should be among those having charge of these different departments, so that when a child goes from one to the other he goes with as much joy and ease as he does from grade to grade. The conception that the school is of the people for the children should always prevail. No school should be a preparatory school for the one above; the one above should be a receiving school for the one below. This sort of organization will not prevail until teachers are trained to know and feel the true function of the school system as an organized unit for the education of the whole people, or until education fits into life in its industrial, æsthetic, social, and spiritual aspects.

III. That a teacher may understand the grade or school in which he works, it is necessary to understand the organization in which he is working and its relation to the people.

A surgeon, that he may know all about a certain part of the human body, must know much about the structure and function of all parts of the entire organization. He must see each part in the unified organization doing its work toward the building and maintaining the whole. So must a teacher as fully understand the different grades or schools of the entire system, that he may understand the grade in which he is working. Not only must the physician know the relation of each part of the human body to the whole, but

he must know the relation of the individual to the entire social body. This is for the wholesome development of the entire people. So with the teacher. He should not only know the relation of the department in which he teaches to the entire system, but he should know the relation of the system to the entire people, that the social mind and heart may be refined and enlarged.

IV. The secondary-school teacher should have academic and professional training.

His academic training should, as a rule, be in a school of higher grade than the school in which he teaches. He should have a broad, vital outlook in the subject he teaches; broad in that he sees the subject as a whole in its relations to all other subjects; vital in that he sees its relations to the real life of the pupil as a part of the people, that is, to his acquired experiences and to his vital functioning natures at the present time. His professional training should be both theoretical and practical. His theoretical professional training should be the study of a human being in all aspects, physical, mental, moral, social, and spiritual. The data derived from this study, together with a study of educational systems, the conceptions underlying them, their evolution, their founders, their success, their failures, a study of the great educators, their influence on the social problems of the times and on civilization, the influence of the doctrine of evolution on pedagogy, on moral and social problems, and life in general—all this, together with a practical study of children, he should organize into a science and art of education. His practical work should consist in a study and in an understanding of, and in actual teaching in, all the grades, from the first to the last, inclusive. Not that he is to be an expert in any other department than his own, but he should understand the entire organization so that he would know the part and function of each grade or school in it. He would then be in sympathy with child-life, and would never sacrifice the child for the subject or the machine. All this study and preparation forbid that an atom, an amoeba, a mathematical proposition, or a school machine should ever become more important than a human soul.

V. The school or institution that undertakes to prepare secondary teachers should have a training school including all the grades from the kindergarten to the high-school, inclusive.

However important it is that the secondary teacher should know the subject which he teaches, the teaching profession has not yet risen to the point where it feels that a thoro professional training is just as necessary. There is a strong feeling that the teacher should be prepared in subject-matter, but no abiding feeling for his professional equipment. If there is such a feeling, it seems to be satisfied if the teacher has had a few theoretical lectures in some pseudo-pedagogical department of a university.

When one sees the average grammar, secondary, college, or university teacher teach, he feels that he would like to have him come in touch with a real modern kindergarten, where he could get an inspiration of child-life at first hand, and that he might be filled with the spirit of the Great Teacher and

say: "Suffer little children to come unto me, for of such is the Kingdom of Heaven."

There is no place, except in a sufficiently organized and equipped practice school, where the secondary-school teacher can get his preparation. He should study the school as an educational unit, and in its parts from kindergarten to high school, inclusive, teach in the different grades, see its relation to civilization, and then make a very special study of the natures, motives, and interests of high-school children.

VI. Normal schools and universities should be equipped to prepare secondary-school teachers.

Normal schools, with but few exceptions, are not equipped to train secondary teachers. Nearly all of them lack the high school of the training department. Many of them lack laboratory equipment. Some of them lack even a good elementary school. These deficiencies may all be overcome without any very great difficulty. A person who is preparing himself for a secondary-school teacher should have an opportunity to observe, teach, and study in all grades, from the kindergarten to the high school, inclusive. When the high school is once added to the training department, the normal school is in very fair shape to train secondary teachers. If the normal school should strengthen its faculty and enlarge its equipment, and require from four to five years for high-school graduates to complete the course, it would send out very well-trained men and women for the secondary schools.

Universities and colleges are not, as a rule, prepared to train secondary teachers. They have no practice school. There are only two or three in the country that are equipped for such work. Many of them are not well equipped in laboratories and apparatus; some of them are not equipped at all. Here the most radical changes in faculties would have to occur, that they might be prepared for such work. Laboratories, apparatus, training school, research work, scholarship, and all combined, are not sufficient to train a secondary-school teacher, if the institution lacks the professional spirit in the normal sense. This professional spirit grows out of the attitude of the faculty toward the whole problem of public education. The great and radical change would have to occur in the college and university faculties before they could ever claim to train teachers.

Granting, for the sake of argument, that all these appropriate equipments be acquired, a co-operation of work might be carried on in which a study of education thru the elementary stages be acquired at the normal schools, and a further study of secondary education be got at the colleges and universities; all this based upon some system of credits that would be satisfactory. This plan is in a way in operation at Teachers College and the School of Education at Chicago.

When the field is viewed from the broadest and most detailed standpoints, one is inclined to think that the normal school's function should be extended to the thoro training of secondary-school teachers, both as to scholarship and

professional training. The normal schools would not have to undergo as much change and enlargement as the colleges and universities; it is a function that seems natural for them to assume; it is in a large measure what they are doing; the spirit of the institution is in the pedagogical direction. A collegiate training in a normal school prepared to do the work would certainly be the ideal place and training for a secondary teacher.

DEPARTMENT OF MANUAL TRAINING

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 4, 1905

The department met in Young People's Temple, Ocean Grove, and was called to order at 10:15 by the president, Arthur H. Chamberlain, Throop Polytechnic Institute, Pasadena, Cal., who gave an address on the topic "The Problems That Perplex."

Frank M. McMurry, of Teachers College, Columbia University, New York city, addressed the meeting on "How Can Class Teachers be Educated to the Value of Manual Training?"

The paper was discussed by W. W. Stetson, state superintendent of public schools, Augusta, Me.; James P. Haney of New York; Jesse D. Burks, Albany, N. Y.; John F. Reigart, of New York; Henry T. Bailey, of Massachusetts; and others.

Charles F. Warner, principal of the Technical Arts High School, Springfield, Mass., presented a paper on "Industrial Training in Public Evening Schools."

The chair then appointed the following as a Nominating Committee:

Clifford B. Connelley, Allegheny, Pa.	Annie L. Jessup, New York, N. Y.
Oscar L. McMurry, Chicago, Ill.	E. B. Kent, Philadelphia, Pa.
W. L. Richardson, Toronto, Ont.	

A Committee on Resolutions was also appointed by the chair, as follows:

W. F. Vroom, New York, N. Y.	Mrs. Ida Hood Clark, Milwaukee, Wis.
Frank M. Leavitt, Boston, Mass.	

SECOND SESSION.—WEDNESDAY, JULY 5

The department met in the Young People's Temple, in joint session with the Department of Secondary Education, and was called to order by President Chamberlain. William Schuyler, the president of the Department of Secondary Education, was introduced, and made a brief introductory address.

Charles H. Keyes, superintendent of schools, South District, Hartford, Conn., then presented a paper on the subject "The Necessity for Special Manual-Training High Schools." The paper was discussed by Jesse D. Burks, principal of Teachers Training School, Albany, N. Y.; Charles D. Larkins, principal of Manual Training High School, Brooklyn, N. Y.; Edward J. Goodwin, Paul Kreuzpointner, Walter S. Goodnough, and Henry Turner Bailey.

Miss Katherine E. Dopp, Extension Division, University of Chicago, Chicago, Ill., presented a paper on "Forms and Limitations for Hand-Work for Girls in the High School." Discussion of the paper was opened by Miss Anna C. Hedges, director of department of domestic arts, Pratt Institute, Brooklyn, N. Y., and Walter S. Goodnough, was continued by Mrs. Annie L. Jessup, director of domestic art, Public Schools, New York city, and William Noyes, Teachers College, Columbia University, New York city.

The Committee on Nominations presented the following:

For *President*—Frank M. Leavitt, Boston, Mass.

For *Vice-President*—Charles R. Bates, Port Deposit, Md.

For *Secretary*—Oscar L. McMurry, Chicago, Ill.

It was voted to instruct the secretary to cast one ballot for the nominees. The ballot was cast, and the candidates were declared elected.

The Committee on Resolutions presented the following, which was adopted and referred to the president:

WHEREAS, The problems which confront us in the manual-training field, as outlined by the president of this department and the searching criticisms so ably presented by Dr. Frank M. McMurry, suggest the need of careful study and co-operative action on the part of all teachers of this and kindred subjects; therefore

Resolved, That the president of this department be requested to invite the co-operation of the Departments of Elementary Education, Art Education, and Child Study in the development of a course of study in elementary schools which shall recognize the true body of thought for which the term "manual training" stands, and shall assign it to its proper place in the curriculum.

The department then adjourned.

THIRD SESSION.—THURSDAY, JULY 6

Joint session with the Department of Art Education. For program, see minutes of the Department of Art Education.

FRANK M. LEAVITT, *Secretary*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

THE PROBLEMS THAT PERPLEX

ARTHUR HENRY CHAMBERLAIN, DEAN AND PROFESSOR OF EDUCATION,
THROOP POLYTECHNIC INSTITUTE, PASADENA, CAL.

My topic may be construed to cover a somewhat general discussion of certain of the issues before the department, or to consider other problems that are pressing upon us at this time. The past few years have multiplied the problems, and many perplexing questions are now before the manual-training teachers, as they are before teachers in all other lines of school work. From its position as a special subject given in a few localities only, manual training is becoming so general thruout certain districts that teachers and patrons the country over are discussing its many phases. Only a few days ago there came to my desk a copy of a paper sent out by a prominent publishing-house, headed "To the Teachers and Educators of America: \$400 in Cash Prizes;" and then followed a list of subjects on which essays might be submitted in competition, the subject for one of these being "The Educational Influence and Value of Manual Training."

I have no desire to encroach upon the territory to be covered by those who are to follow me, nor do I care to forecast the discussions to which we are to listen. Permit me to suggest, however, some of the problems that are to my mind, the real issues to be faced.

Is manual training to be taught as a regular subject, as is arithmetic or geography, or is it to become an illustrative or expressive element in each of the school subjects? If the former, is the instructing to be done by special teachers, and are they being adequately trained? If the latter, are we to have special teachers, or shall the grade teachers instruct in the arts? How may the grade teacher acquire a technical knowledge of processes and a realizing sense of the necessity for such work? Will the teaching then be conducted in the regular class-rooms with special equipments? Shall older boys and girls engage in like occupations, and if not, where shall differentiation for work between boys and girls begin, and what forms shall be given each? If the regular teacher carries the manual training as well, shall we insist upon men for the upper grades, or if, as under the present system, it is taught by special instructors, are we to increase the force of male teachers? And, in any event, how can we obtain them at the present salary rate? At present, in most towns and cities where boys in the grades have from two to three years of instruction dealing chiefly with wood, is their interest in working with this material so weakened as to render them half-hearted in the wood-work courses of the high school? Is too much stress laid upon technique and finish in the work accomplished, without sufficient attention to the thought-side? Is there a false standard underlying our idea of the term "educational" as applied to the arts, and should the processes touch more closely the actual demands of real life—that which we are pleased to term the *utilitarian* as opposed to the *educational* view? Should individual or communal work characterize the spirit of the grades or of the high school? How is the beautiful in form, in construction, and in decoration to become a part of the work? Is a fairly well-defined or clearly thought-out course to be followed, or is the pupil to be allowed to do largely as he will; or, again, can a middle ground be taken in this matter? How may the equipments provided for work along manual lines find a more complete use thru evening or Saturday classes? And, finally, do all these questions become subordinate to that of the character, the spirit, the ideals, of the teacher who is to guide and counsel? These are a few of the problems that perplex not only the manual-training teachers, but those who are studying education in its broadest sense as well.

With this mere mention of certain of the perplexing problems with which we as teachers are surrounded, I shall consider at this time one main issue only; namely, what may be called the purely manual side, as distinguished from the industrial phases, of our problem, together with such attendant issues as technique *versus* thought-values, and the constant as opposed to the variable course of study.

Tradition and habit are stubborn enemies, if misdirected. Says the author of a recent bit of fiction: "It is wonderful what a fund of useless information some people assimilate and cling to with a persistent determination worthy of a better cause." This might well furnish a text for what I may say regarding the industrial phases of the subject. It is not an extravagant

statement to make, that many of the principles supposed to be at the foundation of our manual courses—principles borrowed in a sense from Sweden, Russia, or France—have never been considered by these peoples as principles at all; or, to put it in another way, while with Europeans, who furnish us with certain of our ideas in manual training, the application of principles have been changing, we have kept strictly to the traditional lines. Moreover, many of the ideas put forward by the Europeans as fundamental in years past have been discarded by them for more modern and rational ones, while we who copy from our neighbors have not informed ourselves of their advance and still continue to worship the old.

As an example of this, take the well-known course of study idea as exemplified in the so-called *sloyd*, now fallen into disrepute with many. To make plant-labels, and flower-sticks, and hammer-handles is not, they say, necessarily educational or industrial. It is, to be sure, manual, and tradition forces many to adhere to the practices of course work. Many of those who think they are following the principles as laid down by Herr Salomon himself are as far from the reality as they could well be, and many others—by far the larger number of manual-training teachers in our country today—are not aware that Salomon does not, for his own country even, advocate the same principles and methods to which he adhered in an earlier day. Could he see the work as carried on by many of those who insist they are teaching *sloyd*, he would cry out against the practices as being narrow and mean and spiritless. We have as teachers of manual training failed, as have our European friends, to grasp the meaning and significance of our subject, and we continue to misinterpret and misapply educational principles.

Most of those, too, who have abandoned the term *sloyd* and attached another horse to their cart, will, if they analyze fully their work, find it is as far from the industrial and actual as is the product of the old school. I know schoolmen of the broadest education, open-minded and scholarly, who still refuse to believe that the manual training of today has a place of importance in the school. For these men I have no word of criticism. They are, I believe, justified in their attitude, their belief being based upon their knowledge of manual training as they see it in the cities and towns with which they are familiar. What they have seen is work in wood—articles produced by certain tool manipulations and, indeed, articles supposed to be of actual use. The results, however, even tho of superior technical quality and produced under the guidance of a teacher of mechanical attainments, are not educational. They do not touch deeply and thoroly the interests and needs and environments of the people. They have to do, not with life, but with lessons.

This matter of the real as opposed to the artificial in manual training was brought home to me most forcibly at the St. Louis Exposition in two ways. It was remarkable that, while in high-school work some little attention was given to what might be considered the thought-processes, in almost every elementary-school course shown a traditional sameness was apparent, the

flower-sticks and plant-labels being always in evidence. What a welcome change, however, when one visited the exhibits from the country of the marvelous little Filipino! Those of you who saw this exhibit will recall what a vast array of native hand-work was shown—rugs, baskets, articles of furniture, utensils for household use, tools, decorative materials; these and a host of other things were exhibited, all work calling for constructive ability and appreciation of design. It was with a feeling of delight that I observed some of the specimens of handicraft of the children of these islands, so simple, so free, so honest, so useful, so beautiful, and made from materials that were at hand and with which the makers were surrounded. As I examined these products, a young man, an American teacher in the islands, asked if he might now show me the best work in manual training done by the school children—something that would point clearly to the fact that they were being educated. I was dragged to a sacred part of the exhibit and shown a glass case with a “Do not handle” sign containing some of the most uselessly useful objects, from the standpoint of the makers, that could be conceived. There were pin-bowls, flower-sticks again, corner shelves for bric-a-brac, and more of like character made from wood (much of it being American wood), by American tools, under American teachers, and containing elements neither of utility nor of beauty; and even tho they had, whether made in China, Kamtchatka, or the Philippines, with little educational value, since under the scheme of work the pupil is not allowed to put himself into his occupation, the thinking having been religiously done for him beforehand, and the whole cooked and predigested before being given out; a veritable “you press the button and we do the rest” course of study.

Leaving the exhibits, I was more saddened than disgusted. Instead of directing the native abilities and natural artistic tendencies of the pupils along the channels making for thought-power, and such as would assist them to advance mentally, commercially, and industrially, which to this people is the real education, we are trying to cast them in a mold that has been fashioned to fit a race decades in advance, and withal a mold that is man-made, and too often containing flaws, from the standpoint of utility and beauty.

Have I made the case too strong? I am simply putting the matter at its utmost point to illustrate more clearly the great principle under discussion. There are many intermediate stations, I grant you; but you who are familiar only with the work in your immediate neighborhood, or with the teaching and methods employed in the school you yourself attended, would marvel at some of the wonders to be seen in the manual-training world. It is remarkable how slight consideration is given locality and environment in the make-up of a course of study. As I stood the other day beside some rude dwellings of a simple people in a western desert, and watched the natives as they worked at rug-weaving or in fashioning the basket, I recalled the question put to one of these people by an eastern woman. “Isn’t it too bad,” said she, “that you live so far away?” And the native woman returned a wondering glance

as she replied: "I don't live far away, I live right here." How much more important that the child in any given locality should learn to make the best possible use of the materials which nature has provided at hand, than that he should deal with the product of the distant place and follow the work laid down for his foreign brother in order that at a given moment every pupil in the universe may be working upon exactly the same thing. And even tho utility be a consideration, one generally finds that no mental energy in construction is demanded.

Let us have a real, live, industrial form of work in this day, when the one topic which overshadows in public interest, according to the convocation council in the state of New York,

is the industrial and commercial development of this country, and the training which should be given our youth in the public schools, colleges, universities, and special schools, to best fit them for the changing conditions which the twentieth century is bringing to them.

Technique? Yes. No one within the hearing of my voice appreciates more fully than do I the value of technique, of accuracy, of producing an article exact in every detail. To me there is something grand, almost humanly moral, in a piece of work perfect in construction. But is technique the end and aim of a course in manual training? Is it the end of life? Seek ye first the kingdom of heaven, and technique shall be added unto you. I see greater technique in the petals of a flower, no two of which are counterparts in size, form, or color, than in twenty-seven match-brackets, each made from fourth-inch stock, the backs regular in outline, and of exact and unchanging dimensions. Is there no technique in the coloring of the bird, and are they all alike? Must one have uniformity to get technique, even tho there are no two Japanese prints precisely similar? I would have technique; but if it had to be gained at the expense of producing boys with individuality gone, with independence dwarfed, and power of leadership undeveloped, I would bury technique and look for soul.

But, you say, individuality later. The child must not be allowed to choose at first. He must learn his alphabet, his multiplication table, his notes in music, and thus lay a foundation. Technique and the tools of knowledge must be had in the beginning. Whatever grain of truth there may be in this philosophy, the husks will come soon enough in life at the best. Give the child the fruit. Give him work that will make him happy and contented and willing to remain in school, not discontented and impatient, remembering, with Eugene Field, that

It's the songs ye sing and the smiles ye wear,
That's a makin' the sun shine everywhere.

To summarize, then, we must strive for results that are more than manual; and to do this the work must be actual and humanizing. Technique must be had, but only as it comes in connection with the thought-side; and greater individuality is to be allowed in opposition to set and traditional courses of study.

I stood some months ago upon a mountain-top and saw far below into the wonderful valley where spire and stream and tree stood out silent and beautiful. A companion turned to me, after some moments of silence, and said: "Man works upon a grand scale. See this valley, once barren and dreary and unpeopled, now a garden-spot of peace with its thousands of happy homes and its prosperous towns." "Yes," I replied, "man does work upon a grand scale, but God works upon a grander. See what nature has done." And there, stretching away as far as the eye could pierce, range upon range, and peak upon peak arose, one beyond another—canyon, and scarred mountain-side, and snow-covered crest, without which no peaceful valley would have been possible. Man-made courses of study are frequently of less value than those which the child would naturally follow.

HOW CAN CLASS TEACHERS BE EDUCATED TO THE VALUE OF MANUAL TRAINING?

F. M. MCMURRY, PROFESSOR OF THEORY AND PRACTICE OF TEACHING, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK CITY

1. Probably the most pressing need in establishing manual training more firmly is fuller evidence that the subject contains a body of thought comparable in importance to that in literature, history, geography, or nature study.

The very fact that manual training is named as it is directs attention away from the subject-matter to the instrument used—the hand. Until this name is modified, people will feel inclined to disregard the subject-matter in the field as something of minor importance. At any rate, there is a tendency in this direction.

The observation of the average recitation in manual training likewise suggests a lack of rich thought in this field. It is almost the rule that students who accompany me in observing such recitations are impressed with the want of ideas during the recitation period.

The customary discussions of manual training in teachers' journals and conferences emphasize the utility of skill developed by manual training, and the value of the discipline secured thru the exercise of the hand; but they do not usually direct much attention to the richness of the field of thought concerned.

The printed curricula that are circulated similarly call attention to the materials used, such as wood, bent iron, clay, raffia, etc., but give an impression that the field is composed of individual and little topics. They suggest an absence of large principles, and great thoughts intimately related to social life.

All these facts tend to belittle the subject of manual training as a separate study. They indicate that, just as some studies, like literature, are allowed

to consist mainly of theory, it is allowable for other studies, like manual training, to consist mainly of doing, construction, practice.

But the dignity and worth of a study find their center in the ideas it contains. A study is only a field of thought, and when a so-called study lacks a rich field of thought, it is weak. Spelling, for instance, is regarded as a necessary subject, but it lacks dignity, because it lacks ideas. Arithmetic is a necessary field, but it is relatively dry and lacking in stimulation, because of a lack of interesting ideas. So long as history consisted largely of names and dates, it was a poor subject of study; so is geography, as long as it was made up of the location of places. These latter two subjects, however, have increased in richness and dignity as they have dealt with political principles and physical principles respectively. Engineering is a study that commands respect of people in general. It involves the two factors, thinking and doing, but the thinking required is prominent enough to subordinate all doing to itself. Manual training will always be lacking in respect for itself, so long as the motor activity required fails to be entirely subordinated to the ideas in that field. Theory must always control practice and direct it in order to make a subject of study healthful. The study is otherwise mechanical and unworthy.

2. A second need is a real conviction that expression normally accompanies impression in the educational process.

It was recently stated in the newspapers that the music department of Columbia University might properly deal with the theory of music and the history of the subject, but the art of actually producing music was unworthy of attention in the university. The dean of a woman's college once remarked to me that she would readily give credit toward a college degree for whatever studying called for active thinking, but the moment that doing began to constitute a part of the subject, as in domestic science and domestic art, she would raise an objection to giving credit. The idea in both of these cases is that an educated man is one who knows and who can think, but he is not necessarily an actor. The application of theory in any study weakens the subject from the educational point of view. This is a very common idea, and is practiced in most of the studies, as, for instance, in literature, geography, and fine arts. It is the rule that instructors in these subjects feel that their responsibility has ceased when students have been brought to appreciate the thoughts.

People who represent this conviction have often heard, no doubt, of the principle, "No impression without expression;" but they disbelieve it on the whole. To them the end point in each study is knowledge and not action. Manual training, however, stands for this principle very plainly. The educational value of the subject is not reached until plans are fully realized in materials. Thus manual training stands in opposition to most other studies taught in the public schools, and if it is right in principle, in combining practice with theory, the other studies are wrong in their attitude toward this point.

Here is an issue that must be fought out before manual training can become fully established.

3. The first of these needs can be perhaps most effectively satisfied (a) by describing the curriculum in terms of prominent phases of industrial life, rather than by naming merely the individual objects of construction; (b) by regarding each object of construction as only the concrete approach, the introduction to some prominent phase of industry; (c) by allowing ideas more plainly to dominate all construction.

A curriculum for the seventh and eighth grades in one of our prominent cities gives the following objects of construction for the seventh and eighth years of school: match-scratcher, octagonal mat, easel, whisk-broom holder, book-rack, bracket-shelf, footstool, inkstand and pen-tray, knife-box and blacking-case.

These objects were probably chosen from two points of view. One was that the children could do the work necessary, and the other that the materials for the articles could be secured. These are always necessary considerations; but, on the whole, there is a much broader point of view, and one to my mind far more fundamental. Basketry, for instance, is a kind of work commonly undertaken in the schools, and in some places it occupies very much time; but, from my point of view, it should receive much or little attention according as it is a prominent or insignificant industry in social life. The canning of fruit in domestic science might or might not be allowed to receive attention as part of a course of study according as it is relatively prominent in adult life. Weaving is certainly worthy of much attention, because the manufacture of cloth, rugs, etc., is an industry of enormous importance. Book-making and hat-making are likewise prominent lines of work, and considerable attention should be given to these topics in the schools. Each proposed topic, therefore, is important as it may afford an introduction to a prominent phase of our industrial life. It is to be regarded as an introduction to such industrial life, and is not an end in itself. The construction of a book may well be undertaken with much care and occupy much time, but not mainly because of the utility in a narrow sense of such work, or because of the mental discipline received, but because good work on that topic will bring one into close touch with a very extensive occupation. A regular part of the study of this topic would be an excursion to a place where books were actually manufactured, if such an excursion were possible. Thus manual training becomes a study dealing with industrial life, and approaching it in the most concrete, and therefore excellent, manner—by actual making. But the end point is not merely making, it is the actual contact with social life.

The objection that I would raise to the above-named list of articles to be made in the seventh and eighth grades is that they end in themselves; that is, in mere making, not in a large field of thought. If some of them, as possibly the match-scratcher, are regarded as introduction to large topics, my objections fall away; but, as I have read the announcement of this course, I feel that that is not the intention.

In regard to (c) of the above thesis, there is a tendency in manual training to neglect even the thought that is plainly called for, just as in arithmetic. We all know how children in the latter study feel that arithmetic consists largely of figuring and not of thinking. So there is a tendency on the part of both children and teachers to feel that construction consists almost solely of motor activity, instead of head-work. The result is that recitations rather seldom begin with review of thought previously presented, and call for summaries, recapitulations, and drills on the facts learned. The teacher too often at the very beginning of the recitation tells the class to "go on," while, if it were some other study that was concerned, like history, geography, or literature, there would probably be a review at the beginning and an occasional summary later on.

4. The second of these needs can be perhaps most effectively satisfied by considering the relation of practice to theory (a) from the point of view of evolution; (b) from the point of view of the present child life and adult life; (c) from the point of view of the assimilation of ideas, and consequently from the point of view of general efficiency.

According to the biological theory and the theory of evolution, the purpose of knowledge and intelligence is found in adaptation to environment. A bear, for instance, needs intelligence for the sake of protection and food. Thus brain-development, as well as knowledge, find their purpose in action. Action is the end point of life.

As to children, it is a matter of common observation that, while they think and plan, the execution of their plans must immediately follow the conception of the same. With them, theory and practice are inseparable. The same holds substantially with reference to adult life. The immense majority of adults are engaged in active employment of some sort; for example, about a third of all the inhabitants of the United States are engaged in agriculture. Certainly a farmer needs to know how to farm, otherwise he does not make a living. But he does not spend most of his time in reflection. It is spent, on the contrary, in carrying out the plans that he has conceived; that is, in action.

I happened to be sitting near a five-year-old girl recently, who was attempting to make a doll dress. She set out enthusiastically, but, after laboring for some ten minutes without much success, she remarked suddenly, "I guess I don't want to make a doll dress;" and she threw her material aside and went off to play. She had a plan in mind, but it had failed to work, and it was the practice in this case that too severely tested the theory. Adults meet with the same kind of experience constantly. They conceive plans which seem good, but it is practice, and practice only, that can fully test their soundness. It is only when one has experienced the shock of the misfit between what he has thought will hold, on the one hand, and what he finally finds to be true, on the other—it is only then that one is really sharpened to the point of developing good judgment. Leave out the test of practice, and people

can think all sorts of things, and be entirely wrong. We need headers, such as practice brings, in order to develop sanity or efficiency. Manual training, because it provides this test, is superior to many other subjects. A well-educated man is one, therefore, who can do as well as know, and efficiency is a good term for the statement of the aim of education, because it includes these two factors.

5. But the difficulties of instruction in manual training are unusually great, and its teachers must show an ability much above that of the average before this study will command general respect.

One of the difficulties with manual training is that there is one body of thought to be taught touching the handling of tools; a second body of thought touching the nature of materials; and still a third touching the plan of the object to be constructed. So here are three kinds of theory that have to be offered where ordinary studies only contain one.

In the second place, while most studies end simply with theory, as above suggested, each of these bodies of thought must find actual application in practice, which enormously increases the teacher's difficulties.

The fact that this practice is present allows for unusual confusion also in regard to the main aim that one is trying to accomplish. There is already frequent confusion in other studies as to whether one is aiming primarily at useful knowledge or mental discipline, or a certain favorable attitude on the part of the student toward the whole field. But in the case of manual training an excellent finished product in the trade sense is also urged by many, which greatly increases the difficulty.

Further still, the kind of discipline that may be called good is reasonably well established in the ordinary subjects, but the most desirable kind is by no means fully established in the manual art. We scarcely know the kind that is desirable there.

These facts altogether are certainly sufficient to show that the man who has been a successful carpenter, or the woman who has proved a competent housemaid and nothing more, will prove absolutely unfit to teach manual training or domestic science or domestic art respectively. Teachers who really succeed in the manual arts must possess good native ability and receive an unusually good training in preparation for such work. Of course, salaries must be correspondingly high. Teachers who succeed reasonably well in the other fields are not sure to succeed in these, owing to the unusual difficulties to be encountered.

DISCUSSION

W. W. STETSON, state superintendent of public schools, Augusta, Me.—The Acadians of northeastern Maine lived in practical isolation until within the past decade. They exhibited unusual facility in the language arts, the use of tools, and the observance of conventional forms. Before the schools of this section were of standard grade, the pupils made miniature duplicates of the utensils found in the home and the implements used on the

farm. A majority of the teaching force in the school had attended the rural schools and the Madawaska Training School. None of them ever saw a manual-training school. At the end of the second year of work in this branch the pupils presented for exhibition a large number of specimens, including all of the machinery necessary for the manufacture of cloth from wool, a complete set of blacksmith's tools, a buggy, and numberless articles of simpler construction. This experiment indicated that the teachers in our rural schools can train their pupils to decorate schoolrooms, provide needed apparatus, improve school grounds, if they are interested in these matters and are willing to work with the children.

A somewhat careful study of this experiment and the work done in some of the modern manual-training schools has suggested the thought that it is possible for experts to be so severely technical that they are led to use language which has no meaning for the child, or multiply their directions to such an extent that the student is left no opportunity to work independently and learn thru experience the principles underlying his task.

It seems to me that we have made two serious blunders in our work in industrial training: first, we have waited for the expert to give us the last and minutest detail before we started, and, second, we have so overdone the directive part of the work that the child has been lost in the haze which has been manufactured by the instruction.

We have devoted so much effort to constructing and installing school machinery that we have no time left for the boy for whose benefit it is installed and kept in motion. We have been more anxious to develop skill than we have been concerned to cultivate the taste or train the thought. The conventional and mechanical phases of the work have received the major part of our time and effort.

We have directed, managed, and held the boy in place, until he can neither go afoot nor alone, and he has neither the desire nor the capacity to take the initiative. He is wanting in moral fiber, intellectual power, and physical vigor, because he has come to feel that he is a cog, while he knows he has the fitness to be a wheel. Too much of the work only helps him to do his little part in his little place, if he is called upon to do it at the regular time and in the routine way; but you belt him on to a new shaft, and he either will not turn or will wreck the whole plant.

We have labored so long on the artistic mortise, and we have been so occupied with the mechanical details, that the interest and joy of the student have been killed. He has none of the pleasure of learning how to do things by making mistakes in doing them. He has been directed and instructed in his doing, until he can go thru his work as correctly as a piece of machinery would do the same thing; but he has lost the power of thought and the impulse to feel. He is incapable of that exercise of the imagination which makes such work a means of grace. He can whittle and plane and drill and bore and produce a combination that has all the correctness and all the poverty of the worker who has been drilled and bored and stupefied by exalting things to a place of supreme importance that should be known without a consciousness of the knowledge.

In a word, the mechanics of training have been erected into an altar. Those who have worshipped at this shrine have all the littleness that comes to those who worship graven images. It is not strange that the victim becomes as wooden as the material on which he toils.

Still we are told in pious phrase that manual training is the supreme agency in moral development. Is there any worthy work, or thought, or question that is not, in its last analysis, distinctively moral in its essence?

The boy on the farm learns many lessons in lines, angles, squares, cubes, and all sorts and kinds of figures, without the benumbing processes so often found in this work in the schoolroom. It is true, he stumbles for a long time, in the twilight of his own ignorance; but he breeds the discernment which leads him to discover where daylight is, and his struggle gives him strength to walk toward it and into it. He cannot use many technical terms, and he can give but few scientific definitions, but he can do the thing that needs to be done. When a tongue pulls out of a sled in the woods, he can repair or replace it.

When the emergency comes, he is there, and he not only rises to, but above, the occasion. These experiences have made these same boys captains of industry, noted lawyers, famous clergymen, distinguished teachers, skillful physicians, honest statesmen. It was in farm homes and among primitive but stimulating surroundings that they gained the power which won them their positions of honor. They did things and developed thinking capacity in their doing. They were not swamped in technique, but were taught by service.

I have two pleas to offer this morning: (1) Give the boy who must learn thru his eyes and hand a fair chance to be educated. Make it possible for him not only to do things, but to get the intellectual training which will make him a master in the field he enters, and thus aid him in doing his work better than anyone else of equal capacity has done it. (2) Squeeze out the whey, and let the instructor and pupils be companions, working together to produce results and develop power, each being an investigator, inventor, doer.

FRANK M. LEAVITT, principal of Manual Training Schools, Boston, Mass.—May I be permitted to call attention to some of the more obvious—perhaps I should say, to one or two of the mere surface—indications of the question. Someone has said that nothing educates but hard work. If this be true, to be educative any subject must afford opportunity for hard, initiative work, and must also possess the interest which will incite the pupil to perform this work. Does manual training possess these characteristics? You will, I believe, agree with me that it does; yet this is not quite the question assigned; but, "How can class teachers be educated to the value of manual training?" I would answer, we must take the unconverted teacher, if one yet remains, by the hand, and lead him to the manual-training room where the boys and girls are having their lesson, and ask him if there is any time during the week when his pupils apply themselves as they do during this period.

It is said that imitation is the sincerest flattery. There is another form of flattery which I have sometimes observed, and that is when the grade teacher complains to the principal that his boys pay too much attention to their manual training; that they are spending too much of their out-of-school time in the manual-training room. The unprejudiced outsider does not see it in the same light. He says: "When you have found any kind of work that boys like better than play, you have found a thing which is too good to part with."

But to return to the teacher whom we are trying to educate; according to the program, to the value of manual training: We should embrace every opportunity for correlating his work with that of the manual-training teacher. We should give him every chance to observe manual-training methods, and every opportunity to help in the work and to share in the pleasures of it. Under these circumstances he will certainly be convinced.

JAMES P. HANEY, director of manual training, New York city.—Is not the proposition advanced by the author of the paper one which recommends the abandoning of manual training as a subject in which motor work commonly appears, and the substitution therefor of a new subject in the curriculum—"the study of industries"—in which motor training will play but a modest part?

MR. McMURRY.—To some extent I would say yes to this question. I should prefer to name the subject differently from the name manual training, calling it possibly the study of industries, for reasons above suggested. Motor activity also seems to me at present too prominent, just, as above suggested, figuring is relatively too prominent in arithmetic. I should not want to spend all of the time in actual construction. On the other hand, the motor activity might well be prominent. Articles should be carefully planned and carefully made, and since the work of actual construction is to be the introduction to some phase of social life, special emphasis must fall upon it. There would be no tendency, therefore, to slight construction; but construction should not be the chief aim in the work.

MR. HANEY.—Manual training as a form of expression has a valuable part to play in the curriculum in giving concrete shape to various ideas, in relating itself directly to many other subjects which require constructive work for their proper presentation. The present proposition is one which recommends that the relationship now present be destroyed, and that a new subject be developed segregated from the other subjects of the curriculum.

MR. McMURRY.—In reply I would say that I believe heartily in correlation, but I should not want to make manual training something which merely illustrates or clarifies thoughts contained in other studies. The moment any study fails to have a controlling idea of its own, according to which subject-matter is included in it or rejected, it utterly ceases to be a study. That is the very definition of the term "study" as applied to branches of knowledge. As I understand Mr. Haney's statement, he would not have a separate study called manual training, with a content distinguished from that of other branches. In that case, why have a separate name called "manual training." The subject-matter offered would be merely a continuation of geography, or history, etc. The method alone, even tho it be different from that of some other study, cannot constitute a study. Any study, to the extent that it is a study, must have its own content; otherwise it has no reason for a separate place on the program or a separate name.

INDUSTRIAL TRAINING IN PUBLIC EVENING SCHOOLS

CHARLES F. WARNER, PRINCIPAL OF THE TECHNICAL HIGH SCHOOL AND OF THE EVENING SCHOOL OF TRADES, SPRINGFIELD, MASS.

The topic assigned to me suggests a somewhat limited application of a very broad and very important question that has in recent years impressed itself upon the educational thought of the country. This is not the first time that industrial training has played a part in the discussions of the Department of Manual Training. In fact, when this department was first organized it was known as the "Manual and Industrial Department." At the Los Angeles meeting in 1899, it was voted to ask the Board of Directors to change the name to the "Department of Manual Training;" and this recommendation was carried into effect. It would seem from this, that manual-training teachers, like the general public, have not always drawn the distinction so sharply as they do now between educational manual training and that kind of training which may be described as distinctly industrial, approaching closely to, if not actually becoming, the teaching of trades. Everybody now recognizes that teaching all the pupils of a school, in a practical way, the technical principles underlying the most important mechanical trades, with the training of the hand, the eye, and the mechanical judgment that are incidental to such a process, is quite a different thing from giving one class in a school thoro instruction in the principles of one of these trades, enabling them thru much practice and repetition to acquire considerable skill in the operations of that trade. The one is the function of the manual-training school, the other is the business of the trade school.

Probably no country in the world has done more than our own to advance

the cause of manual training as a feature of general education. Manual training has entered into and modified the whole field of school work from the kindergarten to the college. The more strictly educational phase of it is naturally found in the elementary schools. In the secondary schools, while the educational side is by no means lost sight of, the distinctly practical element is properly emphasized to a certain extent. This grade of manual-training work is distinctively American. Manual-training or technical high schools as we know them are not found abroad. In France and Germany, for example, manual training as such is found almost entirely in the elementary schools. There is extensive practical education besides this, but it is found in trades schools in which the youth of both sexes are trained for special industries. In Germany, the system is thoroly scientific and there is no confusion of thought about the purposes of the several kinds of schools. But the manual-training high schools with all their problems, their splendid achievements, and their promising future are distinctively American. They are in no sense trades schools; and yet they owe their existence, in part, to the popular demand for a more practical kind of secondary education than that which was furnished by all the high schools of ten or fifteen years ago and by many of the present day. Nor is it probable that our manual-training high schools will be converted into trades schools, because the American people as a rule, though intensely practical and conscious of the demands of an industrial and scientific age, wish their children to have a broad training, with as much of culture as possible, at the same time that they acquire a knowledge of fundamental scientific principles and some appreciation of industrial methods. With this end in view, they have already built and equipped a considerable number of manual-training high schools, and they will probably go on building and equipping them. But these schools are costly and they will be required to give the greatest possible return on the investment. It is a fair question to ask whether these expensive equipments in buildings, apparatus, and teaching force cannot be made to yield good returns along the line of strictly vocational training or trades teaching as well as in the way of general education.

That there is a demand for the teaching of the mechanical trades there can be no doubt. The question has been discussed for several years past in the meetings of this department and need not be enlarged upon here. Manufacturing interests are constantly impressing upon educational authorities thruout the country the fact that our mechanical industries and our commerce are suffering from the lack of trades schools. Our great wealth of natural resources, the importation of skilled laborers from abroad, and artificial trade conditions have thus far succeeded in keeping this need in the background; but the need is real and it has already begun to assert itself. It could not be otherwise. Census reports show us that one-fourth of the whole number of people engaged in wage-earning occupations in the United States are employed in those industries which are based upon the mechanical trades. From the same reports we also learn that the value

of the products of our mechanical industries is more than half of the total average value of all our products. It follows as a matter of course that in certain so-called manufacturing centers a much larger proportion than one-fourth of the people are employed in shops and factories, and the relative value of the manufactured products rises to a still higher figure. Once an agricultural nation, we have become a nation of manufacturers. Brought about as the change has been by exploiting great natural resources, without much regard to economy and by shutting off foreign competition by means of a protective tariff, we have neglected to make provision for the proper training of the great army of artisans necessary to maintain our position in the front rank among manufacturing nations. The German representatives at the St. Louis Exposition, in their reports which were widely circulated in the foreign press on their return, said that German manufacturers had nothing to fear from American competition, because our methods of production are wasteful, we have no skilled artisans to speak of, and we have no means of producing them. For the Germans there is no American peril.

When we compare our almost total lack of distinct training for the trades with the extensive and scientific trades-school system of Germany, we wonder how we have accomplished so much industrially, and we can but feel the ultimate folly of neglecting to provide better industrial training in the future. Such trained workers as we have had—and we have always had a few—survived the revolutionary conditions which destroyed the older industrial methods of their generation, including, for the most part, the apprenticeships. But even these men must soon pass off the stage and give place to a new generation of workers less fortunate in their training than their predecessors. Meantime the need for special training has greatly increased. Modern methods of intensified production, the manufacture of interchangeable parts, the complicated processes to be followed, the highly specialized machines to be kept in repair and operated efficiently—machines that do everything but think and seem even to do that—all these demand a controlling hand which shall have at command accuracy and skill and knowledge of a higher order than was necessary in the less specialized trades of the past. The rising generation must be trained to meet this demand, if our manufacturing communities are to hold their own in the competition of the world's markets. In his inaugural message, the present governor of Massachusetts called attention to the commonwealth's need of trades schools, and the legislature has responded by authorizing the appointment of an industrial educational commission. That commission has been appointed and will soon begin its work.

The wisdom of laying the best possible educational foundations for industrial development, already abundantly proved by the example of Germany, is generally admitted by those who have given the question any thought. It means economic advantage and social progress. Why, then, are we as a people so slow to act in this matter? Here and there thruout the country, foreseeing philanthropists have created funds for the promotion of industrial

education; but, speaking in a general way, very little has as yet been accomplished in this line. There are not more than a half dozen schools—hardly that, I think—that are worthy to be called trades schools, altho there are several endowments to be invested in such schools in the near future. It is surprising that more has not been done for trades education either thru private endowments or at the public expense. Those who should most fully appreciate the economic value of trades schools seem often to doubt the immediate necessity for them. Our industries have prospered without them and we still seem to be getting our work done after a fashion. Our industrial leaders are more inclined to make the most of present opportunities of profit to themselves than to protect the future interests of any industry or any class of workmen. Even the workmen themselves are too well satisfied with their own limited knowledge and skill. Low standards of industrial efficiency, a quick market for comparatively unskilled labor, protection against foreign competition, and the exclusion of many manufactured articles requiring expert knowledge and refined skill, the assumed, but by no means proved, hostility of unions, together with our present commercial prosperity under conditions as they are, all combine to turn public attention away from the economic arguments for trades schools. And then, there are the problems of organization, which seem appalling to those who have given some attention to the question of establishing such schools. What among the almost countless processes of the trades are suited to school methods of instruction? How many trades are to be taught? What, in fact, constitutes a trade in the modern sense of the term? It must be confessed that these are puzzling questions. But year by year the need for trades schools has become more and more apparent. Foreseeing men of public spirit recognize it. Not only the leaders, but the rank and file of the industrial army, some of whom have experienced the benefits of such trades instruction as we have, are asking for it. The well-equipped manual-training schools thruout the country suggest a natural connection between occupational training and the work of the schools, and they constantly call attention to the propriety of making trades teaching a part of the educational system of every industrial community. Perhaps these manual-training schools, thru their own suggestive influence as day high schools and, more especially, thru their direct exemplification of the benefits of trade training as evening schools for those employed during the day in shops and factories, may be more instrumental than any other force in bringing about a general system of instruction in the mechanical trades.

For several years the City of Springfield has carried on an evening school of the mechanical trades, making use of the shops, equipment, and some of the teachers of the technical high school. It had a small beginning in 1898, with classes in machine-shop practice and plumbing only. These classes were chosen because the principal demand in that city was thought to be for instruction in these trades. The school now has classes in machine-shop practice, in plumbing, in pattern making and other wood-work, in mechanical

drawing, in shop mathematics, and in electricity. The courses laid out for these several departments are as thoro and complete as it is thought possible to make them in an evening school. The attendance upon this school is now over three hundred and is remarkably constant. The per cent. of attendance is 84.4, which is far better than that in most night schools. It comes nearer to that of the regular day high school than it does to that of the average evening school.

The object of this school, as stated in a recent report of the school committee, is "mainly to give men already employed in the trades, who know, therefore, at least a part of the trade in which they are employed, an opportunity to broaden their mechanical training and make themselves more efficient workmen. It is not the function of this school to train apprentices as such, but to supplement the imperfect and highly specialized training of modern shops by giving machine hands, helpers, and apprentices, so far as there are any apprentices, an opportunity to gain practice in a greater variety of work than would ever be open to any one man under the modern system of machine production. The aim of the school is to enable a mechanic to acquire a wider range of practical knowledge and to improve the quality of his work, and thus reach a higher classification in his trade with increased wages. This is a great advantage to the individual workman; but it does not materially affect the condition of the labor market in general."

It is a public school. Tuition is free, but a fee of five dollars is charged which defrays the expense for materials used and serves as a guarantee of good faith on the part of those who enroll. The per capita expense was, in 1904, \$15.21, allowance being made for the incidental fees. It is a popular school and the various city governments, since its organization in 1898, have promptly voted the necessary, tho moderate, appropriations for its maintenance. While its existence is due almost wholly to the fact that the equipment of the technical high school was easily available, it has returned to that school an equivalent, probably much more than an equivalent, in helping to attract public attention to the value of practical training for high-school boys, in justifying the cost of thoro technical training and the expense of its development along modern lines, and in actually saving several hundred dollars annually thru the value of the tools and machines made for use in the day school. It may not have been necessary thus to justify the maintenance of technical education in the city's high-school system; but the influence of the evening trade school has certainly been helpful in this direction. In fact, both schools have felt the advantage of mutual support.

It may be said that such a school as I have described is, after all, not a trades school in the most complete sense of the term—that it falls far short of answering the need for thoro and comprehensive industrial training for the youth of our country. It is a kind of shop continuation school. Its pupils are largely men already employed in the trades who wish to improve their knowledge of the trade they follow or, perhaps, fit themselves to take up

a more profitable one. Its office is to supplement and facilitate shop training and to enable mechanics to do a high grade of work. For this reason it receives the support of employers of labor, who welcome any means whereby their men may be trained to do a better quality of work. It appeals to the men themselves, whose shop training has, for the most part, been limited to narrow lines, because it opens the door to a wider range of practice, to a broader knowledge of their trade, and, consequently, to promotion with higher wages. It is not opposed by labor unions, because, while manifestly advantageous to individual workmen, it cannot, however much it may be extended, operate to increase the number of men employed in the trades taught and thus tend toward a reduction of wages. But while it may accomplish all this, is it to be considered an answer to the demand for systematic instruction in the trades?

It is probably not the final answer to this great need; but, in view of all the circumstances, it certainly offers a very practical, tho perhaps partial, solution to the problem. What, in a word, are the conditions to be met? There are carpenters enough, but very few who can make a clean joint or lay a good floor. Advertise for a machinist, a tool-maker, a plumber, and tho a hundred may come where one good workman is wanted, not one of the hundred will prove to be a good workman. All our industries are embarrassed by inefficiency and lack of skill among the workmen, not, generally speaking, by a scarcity of workmen. What we most need is enlarged opportunities for training to be offered to those who are already employed in the narrow lines required by the specialized trades of the day. And this is the one thing that every manual-training school in the country, within the limits of its equipment, can offer and should be willing to offer. These schools should open all their shops, their laboratories, and their courses in science, mathematics, and mechanical drawing to those who have the greatest need for the instruction which these facilities are designed to give. To most of those engaged in industrial occupations, who have experienced the lack of opportunity in the modern shop, such instruction as the manual-training schools of the country could give would be a liberal education. To every earnest workman it means a certain degree of breadth in place of narrowness; it means increased power, greater self respect, greater value to himself and to those dependent upon him; it means that the young man, who has been stationed for five years at the same machine and might otherwise remain there ten years longer is set free to range among a large number of machines and become familiar with them all; it means the freedom that education always gives.

Let me give a few instances that have come under my observation in the Springfield Evening School of Trades. Two years ago a man twenty-six years of age, employed in a machine shop at \$1.10 per day, entered our evening class in mechanical drawing. After a little more than one year he was recommended to the position of assistant foreman of the Densmore Typewriter Co., and secured the place at \$2 per day. He has been advanced rapidly and is

now holding a very responsible position at \$21 per week. He gives the school credit for making his success possible.

Another young man, twenty-one years of age, who went to the school the same year, having had some experience as a subordinate in the drafting room, is now, as the result of evening-school training, in charge of the designing of tools and fixtures for a large automobile company at a salary of \$25 per week.

It was only yesterday that a man came to my office bringing his son, who has just finished the grammar-school course. As a foreman in the United States Armory, he had known of a number of men who had been advanced because of their attendance at the evening school. He spoke of one whose rating had been nearly doubled after a brief course in our machine shop. School work beyond the elementary grades had hitherto seemed to him to have little practical value. He is no longer skeptical. He believes heartily in the evening school and he wishes his boy to take a full technical course in the day school.

It is not necessary to multiply examples of this kind. In its brief history of seven years the Evening School of Trades has numbered nearly eight hundred different men. I can recall no less than fifty instances of advancement due to the school that have come under my personal observation. One would expect improvement, of course; but the surprising thing about it is the degree of advancement secured by so many in so short a time as the result of work in this evening school in connection with practical work at the trades during the day.

Compared with the varied and extensive trades-school system found abroad, industrial training in public evening schools may seem very incomplete; but such as it is or may be, let us make the most of it. It will, at least, be a clear gain to the cause of industrial education and a great advantage to those workers in the industries who are fortunate enough to be able to attend such schools.

THE NECESSITY FOR SPECIAL MANUAL-TRAINING HIGH SCHOOLS

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For the city large enough to support two high schools, good pedagogy and sound public policy demand that one of them should be a manual-training high school. This is the proposition which it is my purpose to establish. It is a position into which I have been driven by the convincing logic of conditions. It by no means implies that some manual training shall not be made available for all the pupils of all our high schools. For the city able to support but one high school, a manual-training course, side by side with classical courses, business courses, scientific courses, English courses, etc., is the best provision that can be made. But, for a city large enough to support two or

more high schools, it is unwise to duplicate institutions. Better teaching of a larger student body at less cost will accrue from a division of endeavor between two institutions, differing in organization and equipment, appealing to different clientages, and having different subordinate and specific aims.

The high school supported by all the people should make attractive provision for all the children of all the people—who desire and are able to do work in advance of that done in the grammar schools. A division giving to the manual-training high school the business courses, permitting it to emphasize physical sciences, mathematics and modern languages, and preparing especially well those who desire to go to scientific and technical schools, and giving to the other the classical, literary and traditional college preparatory work, permitting *it* to emphasize Latin and Greek, literature and biological science, will attract and hold more pupils than two schools duplicating all these opportunities. The cosmopolitan high school in this country is, and is bound to be, dominated by the college preparatory idea. Its principal and best teachers are devoted to the college ideal. Its leading pupils have traditional college preparation prominently in mind. Under these influences, manual training, business, and other semi-technical courses are undervalued. It becomes good form for pupils to select college preparatory or literary courses, regardless of their own aptitudes, limitations, and aims. Gradually the manual-training and other semi-technical courses come to be looked upon as weak-minded courses, or courses for those condemned to spend their after-life in shops and factories. It soon comes about that many pupils, not seeking what are falsely called pure culture courses or college preparation, do not enter the high school at all. Then, again a large number of those who, under the influence of the traditions, have unwisely chosen other than the semi-technical courses, which alone could command their interest and highest endeavor, soon show their loss of interest and drop out of school.

Pupils who have every reason for choosing manual-training courses, who have enjoyed their manual-training work in grammar school, who have deplored every loss of a manual-training lesson, go into the other atmosphere and, under its pressure, make the unwise choice of a course, which omits the manual-training work, for which they are especially fitted and which, because of their previous interest, would have the largest educational value for them. When they discover their mistake they drop out of school. Especially is this true of boys. If we desire to keep the boys of our larger cities in school longer and give them more of the education which equips for the serviceful life, we must provide manual-training high schools. The cost of the plant requisite for a good manual-training course is another argument against duplication and in favor of the special manual-training school. This is particularly true of the equipment for the last three years of a good manual-training high-school course. The manual-training shops and laboratories of each of two general high schools will, as experience has repeatedly shown, be run on full expense for half the capacity of either. The separate

manual-training schools avoid one half the heavy initial expense of equipment and divides the per capita cost of maintenance by two.

Again, the difficulty of co-ordinating economically the time schedules of shops and laboratories for the manual-training classes, in the general or classical high school, with the recitation periods for the academic branches is another argument in favor of the separate school. Where manual training is simply one of the options of the high school curriculum, we find needless duplications of shop sections of ten to fifteen pupils instead of the desirable full section making complete use of the full equipment ordinarily provided for from 25 to 30 pupils. Dr. Wooden says:

The weekly program for a manual-training school cannot be made to fit, or co-operate advantageously with, the program of a classical school. The manual contingent of classes have double periods in the shop—and they should go with full ranks, or there will be lack of economy in teachers; hence they cannot combine with other students in academic studies. Again, they study different subjects, and they generally take the studies they have in common a different number of times per week. When book drawing and shop-work are required of every pupil, the boy recites three academic lessons daily, and his mathematics, science, and foreign language or history come four times each per week; his English, three times a week for four years. The classical pupil generally has four recitations daily, and each five times a week.

A class in Latin or history may range from ten to forty pupils. A shop class under one teacher should never exceed twenty-four, and when a tool laboratory is fitted for twenty-four boys, the twenty-fifth boy drifts idly about without bench, lathe or anvil, and feels as forlorn as does the man who boards a sleeper at midnight and finds all the berths occupied. Hence the few shop boys out of a large classical section are generally sent to shop by themselves. Whenever I visit the shops of a manual-training high school, I find every place occupied and the teacher's services fully utilized; while in the high school in which manual training is optional, I generally find the shop divisions small and the teacher's time partly wasted. No two musical notes were ever more discordant than the weekly program of a classical and of a regular manual-training school.

The independent manual-training school, too, offers opportunity for better teaching thru constant correlation of the work of the various shops, laboratories, and class-rooms. One teacher can reinforce another, one branch illumine and strengthen another in a way that is not possible where manual training is simply an elective for pupils taking little of the remainder of their work in common. On this point, Mr. Charles F. Warner of the Mechanics Arts High School of Springfield, Mass., writes me as follows:

In an independent manual-training high school there can be systematic correlation between the work of the various departments, each deriving support, illustration, application, etc., from one or more of the others. For example, there is constant application of certain principles of physics, chemistry, and mechanics, as well as general mathematics, in the forge shop, machine shop, pattern making shop, etc. The work in plane and solid geometry and all the work of the drawing room support each other constantly. It is easy to enforce these correlative reasons upon students having some interest in the correlations; but to a class of mixed pupils reference to the experiences of the shop or drawing room would be entirely meaningless. It is not true, however, in my opinion, as some have stated, that classical and literary references fall flat upon the ears of manual training school students. I find them ready to take up with literary work involving the study of the classics through translation.

This judgment tallies exactly with that expressed by Dr. Woodward of St. Louis, in discussing this question a year ago. Many of you will remember that he said that too much stress could not be laid on the more efficient correlation possible between the teachers and subjects of the independent manual-training school.

For example all the processes of our forging shop, our brazing and soldering shops are used to illustrate the principles of physics and chemistry. Our geometry, plane and solid, gets uncounted illustrations and applications from "projection," "intersection," and "shadow" drawing. The exercises of the machine shop serve to illustrate the principles of friction, moments, the development of heat, electricity, the action of steam, compressed air, etc. All these illustrations would fall flat and weak upon the ears and eyes of pupils studying Greek instead of shopwork and drawing.

On the other hand, before a class of manual boys whose acquaintance with the traditional fields of study is of necessity limited, all reference to mythology, Greek and Roman history, classical biography, and the writings of Homer, Virgil, and Cicero, generally lacks force and application. I recall a scholarly and venerable teacher of ethics and political economy who always found engineering students "woefully ignorant of matters which every well-educated person ought to know." Had he gone into their technical lectures and into their engineering laboratories, and been put on the rack himself, he in turn would have been found "woefully ignorant of matters which every well-educated person ought to know." When manual and classical students mix in classes, profitable correlation is well-nigh impossible.

The larger high-school attendance in communities supporting the two kinds of high school is another argument for the independent manual-training school. Compare, if you please, the attendance on two traditional high schools in any city supporting such, with the attendance in any similar city supporting both kinds of schools. Wherever the populations are widely different in number, compute the number of students for every thousand inhabitants and you will find that, where you have the independent manual-training high school, the attendance runs from 10 to 20 per cent. greater and the attendance of boys from 15 to 30 per cent. greater. The fact is, that the manual-training high school attracts and holds a large number of pupils who do not go to the traditional high school offering excellent manual training as an elective or optive.

DISCUSSION

CHARLES D. LARKINS, principal of Manual Training High School, Brooklyn, N. Y.—I wish to register my protest against separate manual-training high schools. Manual training, as a means of expression, should form a part of the curriculum of every high school, and every elementary school, too. Manual training in the high school stands for general education. Either the training derived is essential or it is not. If it is, it should be accessible to all, and if it is not, it should be discontinued altogether.

WILLIAM SCHUYLER, assistant principal of William McKinley High School, St. Louis, Mo.—In the Middle West, the influence of the college course is almost nothing, only a small percentage of the pupils take it. The manual-training course is as important as any. The matter of program can be arranged if one will take extra trouble. It has been successfully managed in the McKinley High School. It is a good thing for a pupil

in the classical course to have an opportunity to learn to express his thought with his hands. It makes him a better all-round man.

As for class distinctions. They do not as yet exist in the schools of the Middle West. Girls of well-to-do families are fond of cooking and laundry work and boys of carpentry skill. Democratic ideals prevail. Sons of street-car conductors and daughters of policemen hold high positions in the schools if they win merit. I hope that class distinctions will never enter our schools.

HENRY TURNER BAILEY, educational editor, Worcester, Mass.—Are we not wasting time in opposing theory with theory? The fact is that manual training, if it is taught at all in towns and small cities, will have to form a part of the general course. In larger cities, it will have to be considered as a part of one or more courses offered by the one high school. In still larger cities, there will be a separate manual-arts high school established, when the first building is outgrown and courses become more clearly differentiated. And when our cities get large enough, we shall have still further differentiated schools, like the professional schools of Paris—schools for furniture makers, for printers, for designers, for potters, for housekeepers, for dressmakers and milliners, all for pupils of sixteen years old and upward—commercial high schools, agricultural high schools, and whatever else we need.

FORMS AND LIMITATIONS OF HANDWORK FOR GIRLS IN THE HIGH SCHOOL

KATHARINE E. DOPP, EXTENSION DIVISION, THE UNIVERSITY OF CHICAGO

Handwork for girls in the high school is a subject concerning which there is a great diversity of opinion. This diversity, however, is not a matter of mere opinion, but an expression of the various forces involved in social progress. Institutions are not fixed, but are constantly subject to change. Education, therefore, is not a matter which can be adjusted once for all times. No course of study, no system of training, however excellent it may be, can be guaranteed to meet the needs of any future age. Certain social demands are permanent, to be sure, but their forms change from age to age. Others, tho transient, linger long after social changes have rendered them obsolete. To evaluate the different demands, therefore, it is necessary to place them in their proper perspective and learn their social significance.

To many people, the demand for handwork for girls in the high school means that girls should be provided with an opportunity to learn a few fragments of industrial processes which still survive in many homes, in spite of the inroads which are continually being made by the modern industrial system. To learn in an amateur way how to cook and serve a few articles of food, how to cut, fit, and make a few garments, and, possibly, how to make a few kinds of fancy work is assumed by many people to be proper work for girls and the only forms of handwork which it is worth the while to provide for them.

This demand is not a demand of the present, it comes from a remote past. It originated not in the period of house industries, when women were the pioneers, the captains of industry, in all those arts which are now com-

prised in the industrial system; but from a period intervening between that time and the present. It was when the majority of men were compelled to give up the violent work of the hunter and the warrior and take up a large part of the work of women that the latter ceased to carry on the entire process and confined themselves to those phases which could be carried on most easily within the home. The habits of life formed during the Middle Ages are thus the basis of the theory that the chief aim in woman's education is to teach her to cook and to sew. Without questioning the value of these arts, as a small part of the education of both boys and girls, let us pass to another stage in the evolution of the idea that woman's sole work is within the home.

The department of household administration in our universities is a direct response to the changes which have been wrought by the factory system. The organization of labor, the establishment of world markets, and the tendency to sacrifice human welfare to commercial gain are a few of many modern conditions which place upon woman in the home social responsibilities of the greatest importance. As manager of the processes of consumption, woman in the home comes into vital contact with industrial and social processes at many points. The welfare of the home is so closely associated with that of society as a whole, that it is no longer possible to administer the activities of the home in an effective way, without a trained mind, a breadth of view, a wealth of information, and a rational insight into industrial and social conditions. Hence the demand for training in household administration comes, not for girls of the high school, but for college women who combine maturity of mind with a liberal culture.

The demand that girls shall be taught a little music, painting, fancy needlework, and fragments of other kindred arts, which seldom have an economic value, is a survival of ancient theories of woman which survive in certain portions of the leisure class, and, in a modified form, affect the position of woman in all classes. The root idea back of this demand is the fact that woman, even in primitive times, was slightly inferior to man in the activities which depended upon the exercise of violence and extreme muscular force. This inferior fighting capacity, which at an early date was one of the factors which led to woman's subjection, by no means freed her from the necessity of carrying on a great variety of industrial processes, which called for a large expenditure of muscular strength combined with continuity of effort. But with the increase of wealth and power, which resulted in the formation of a leisure class, the women of this privileged class under the social pressure of the age, refrained more and more from useful occupations and devoted themselves to those superficial arts which enabled them to exercise influence over men in indirect ways. And since men of the leisure class esteemed women more for their power to please than for real social service, and since they needed to justify this preference to themselves as well as to the world, they invented the idea that woman is a feeble creature, unfitted for work, and that she must, consequently, be kept under man's tutelage. Under such condi-

tions, the idea that was prevalent during the Middle Ages, regarding woman as a symbol of the sensual element in life and the tempter of man, is a natural consequence. The evil effects of the abnormal relation thus established is evident to one who is able to judge social questions impartially. That this abnormal relation persists in respectable society is partly due to the fact that it is closely associated with the idea that woman is an angel—an object to be worshiped, a being whose function it is to inspire man—and thus it has become so closely bound up with our deepest emotions that it tends to escape rational control. But we have reason to hope that, with the advance in popular intelligence, which is bound to result from the growth of the scientific spirit, all classes will be able to perceive the social degradation involved in demands which find expression in a system of education which tends to enslave both man and woman.

That young women shall take upon themselves the duties of motherhood is a permanent social demand, the importance of which has led not a few to conceive motherhood as the one function of woman. And so blind are many of the adherents of this idea to all but the immediate physiological fact that, as yet, no provision has been made by educational institutions to prepare young women for the responsibilities of this important function. So little has this social demand affected education, except in a negative way, that it would not be necessary to refer to it at this time were it not for the fact that the wise fulfilment of this function is largely dependent upon the character of the education which girls receive during the period of growth. The needs of young people thruout the period of adolescence, as well as during infancy and childhood, together with the necessity for a community of interests between husband and wife, in large as well as in small matters, unite in creating a demand for the largest and wisest education possible as a basis for training in motherhood. The professional, the special training, however, is not for the high school period, but rather for maturer years of later adolescence.

The best spirit of modern times recognizes woman as an individual before it recognizes woman as a mother. This is no detraction from the high place unanimously given to motherhood, but rather, the means for still further exalting one of the noblest functions of life. By recognizing woman as an individual, we recognize human needs, we make provision for normal growth, we insure a high quality of social service in any department of life.

The enlarged conception of motherhood, and the change taking place in regard to household duties are manifestations of the spirit of the age and expressions of a new social ethics. The primitive principle that *might makes right* is by no means obsolete; yet this principle, together with that of the Middle Ages which substituted *generosity* for *force*, within narrow limits, is gradually giving way to the higher standard involved in the idea of *justice*. The idea that an individual is born to a fixed social position is no longer accepted in our own land. "Freedom of opportunity," "freedom to rise," are familiar expressions of the spirit of the age. To be sure, many who voice

these sentiments do not appreciate their full force. Meanwhile, women are finding a place in the larger world. In this larger world their case will be tried, and all must abide by the facts.

Those most vitally interested in human welfare today should desire to see all girls educated to be able to be economically independent. Theoretically, to be sure, women marry and depend upon their husbands. But in actual life, husbands frequently take sick and die and leave their wives with children to support. The frequency of divorce is another factor with which we shall have to reckon, and when we add to this list the number of women who have worthless husbands and are obliged to take the full responsibility of supporting the family, to say nothing of the number of women who for various reasons do not marry, it is evident that the woman who is not trained to be economically independent will be crushed in the machinery of modern life. Under such conditions, what sane woman would not seek to be economically independent? Under such conditions, what mental aberration could lead man to call her "a greedy money-taker?"

In order to determine the character of the education to be provided for a given stage of development, we must reckon not merely with social demands, but with individual interests, aptitudes, and needs. If the specialists who have given most attention to early adolescence are correct, there is no place in the high school for specialization of any kind. The physical basis for safe specialization is not yet made. The "switch-board" connection of nerve fibers, upon which basis alone specialization can be carried on without danger, is not yet completed. The high-school period is, therefore, a period for carrying on activities which will foster the growth of the nervous system and not a time for activity which arrests development by premature specialization. On purely physiological grounds, there is no place in the high school for the study of cooking as mere cooking, or for a *special* study of any of the arts which belong to the vocations of life. Physical, intellectual, and moral needs are more pressing, at this time, than the arts which belong to mature years.

But, when instead of one art or craft, we consider the place of many typical arts and crafts, the situation assumes a different aspect. The exercise afforded in *acquiring* skill in any art or craft is the very exercise which is necessary to secure the growth of certain nerves and muscles. And if, while this skill is being acquired, attention is given to developing other physical co-ordinations, thru the exercise of other crafts, a more complete development of the nervous system will be insured than could come from less varied activity. But the arts and crafts must meet other needs, if they are to have a large place in education. It is clear that they embody specific interests which are appropriate to childhood, but do they embody or lead up to the large interests, the comprehensive truths formulated in literature, history, and science? These questions are fundamental ones, for the intellectual demands of the period require the presentation of large subjects embodying fundamental truths,

which, tho dimly apprehended at first, have the power to set the mind in quest of particular facts necessary to illumine them. The emotions, too, which tend to become morbid when introspection occupies a large part of life, need the tonic of objective interests to direct them into wholesome channels.

Formal education, by divorcing the symbols of knowledge from the vital experiences of life, has become an instrument very poorly adapted to meet the needs of the age. The arts and crafts are needed in education in order to maintain the integrity of life. The great subjects of study in the schools are merely generalized statements of what has been taking place in the world. When we understand this, and when we understand that the typical forms of handwork are means of giving young people a first-hand experience, which will enable them to translate the abstract statements of textbooks into terms of real life, we shall be in a position to grapple more effectively, than at present, with all educational problems.

Handwork may be classified in as many ways as there are interests in human life. Differences to be found among such great departments of human knowledge as industry, science, and art are not differences in materials, but differences in purpose and method. Where the arts and crafts are introduced into the schools for their educational rather than for their narrow utilitarian value, the lines of demarkation between industry, science, and art, become exceedingly faint. For present purposes, then, we may treat the occupations underlying the three great departments of knowledge with reference to the interests which become well differentiated during the high-school period.

Interest in tangible products requires that place be given to occupations allied to the industrial processes of life. Such occupations serve to establish connections between the school and the industrial life of the community, and they present the opportunity for a valuable study of typical industries and industrial and social conditions in the larger world. But, if these occupations are treated as ends in themselves, if they are not related to the fundamental truths embodied in such subjects as industrial and social history, commercial geography, and elementary treatises on economics, the value of the experiences gained will be limited to personal and local affairs.

As interest in the discovery and formulation of general truths becomes more and more manifest, those phases of occupations which are capable of yielding an experience rich in scientific content should receive especial attention. Under such circumstances, there is a tendency to conceive certain phases of occupations as experiments for the ascertainment of scientific truth. And as interests become differentiated, it is desirable to have occupations classified with reference to such subjects as mechanics, physics, physiography, biology, and chemistry.

The laboratory work, now given in the high schools, is a great advance upon the study of mere books. But it falls far short of a kind of work it ought to be possible to substitute for it. At present, it partakes too much

of the nature of sets of dictation exercises. And, altho these exercises serve to exemplify scientific truths, in a majority of cases, the student is left without any appreciation of their real meaning. Could great scientists, who combine special knowledge and skill with broad sympathies and a liberal culture, select and present those phases of typical industrial processes which best illustrate fundamental scientific truths, they would render a social service of inestimable value.

Girls as well as boys need the physical development as well as the insight which comes from the use of tools and simple machines. The mechanical principles, since they are of such wide application as to be essential ideas in the construction of all modes of shelter, all machinery, all vehicles of transportation, and bridges, to say nothing of the products of the lesser constructive arts, are of too great importance to be treated as lightly as they are in our textbooks and courses of study. A course in mechanics, accompanied by laboratory work of a nature to illustrate mechanical principles as used in simple machines, in architecture, and bridge-building, would be of genuine interest and value to both boys and girls.

Interest in process, interest in technique may require the treatment of occupations, from time to time, from the standpoint of materials. Such materials as food-stuffs, textiles, wood, metal, clay, crayons, and paints may each require special consideration for a time in order that the student may acquire an understanding of the possibilities and limitations of each, and sufficient skill to make a satisfactory use of each in the study of larger subjects. When a student learns from actual experience that each material imposes its own style of treatment, whether it be a vegetable to be cooked as an article of food, wool to be manufactured into clothing, wood to be constructed into a house, clay to be modeled into a cup, or paper and crayons to be used in drawing a landscape, he has become familiar with a principle which is essential to good taste as well as good workmanship.

The manifestation of the tendency to idealize life requires that occupations be conceived as fine arts. In their origin the constructive activities and the fine arts are one; they begin to differentiate with the dawning consciousness of the difference between the real and the ideal. This differentiation begins in early childhood, but no rigid separation is made, except when the individual is compelled to carry on the struggle for existence under hard conditions. In so far as the constructive activities afford an adequate expression for the emotions as well as for the intellect, in so far as they relate themselves to the larger interests of life, they ally themselves with the fine arts. On the side of form, the constructive and the fine arts belong together. On the side of content, they tend to differentiate, the content of the fine arts being more idealized, more permanent, more universal. It is not the work, but the attitude of the worker, which determines whether an activity is artistic. The making of a loaf of bread can lend itself to artistic treatment as well as the painting of a landscape. But if the pleasure be merely in the finished product, in neither case is the worker an artist.

To isolate the fine arts from the fundamental subjects which embody the life of the people, is to divorce them from the sources from which they draw their life. We shall seek in vain for large subjects for art, if we ignore these lowly relations. Tho the freest of arts, its freedom is secured only by a subordination of itself to conditions imposed by the constructive arts.

From the point of view of individual interests, aptitudes, and needs, there is no ground, during the high-school period, for making a distinction between the educational work of boys and girls. Such slight differences as are due to natural causes find ample recognition in elective courses and in a certain margin of optional work within required courses.

In the consideration of social demands, we have already noticed obsolete ideas which tend to limit the education of girls. The social pressure, which is brought to bear upon girls from babyhood onward, is responsible for by far the greater number of differences between boys and girls. And when we consider the serious consequences of maintaining conditions which deprive any portion of the race from an opportunity for full development, we shall certainly refuse to lend assistance to retrogressive movements.

A social limitation, which applies equally to boys and girls, is the fact that our educational practice is still closely allied to an obsolete psychology. Even in our great educational institutions there is not a sufficient recognition of the fact that technical skill should be organically related to the elements of a liberal culture. As long as teachers of history, literature, and science are allowed to make use of formal methods, as long as teachers of the manual arts are permitted to confine their attention to purely technical matters, so long will the individual be cut off from opportunities of development, so long will the individual fail to be equipped for the highest social service. As long as the manual arts are divorced from the achievements of mankind, so long will education fail to connect with the forces which make for progress. An education which gives one class a conceit of knowledge and a distaste for honest work, and an education which gives another class mere skill without the enlightenment of ideas will tend to widen the chasm and increase the hostility between social classes. And, while it may be too much to expect any immediate result from a more organic education, the influence of every effort in this direction is that of the seed which "fell on good ground, and sprang up, and bare fruit an hundredfold."

DISCUSSION

MISS ANNA C. HEDGES, director of department of domestic art, Pratt Institute, Brooklyn, N. Y.—Fortunately for the purpose of this paper discussion, like criticism, may endorse the matter under consideration. I shall attempt to sustain the argument presented by Miss Dopp by recalling and expanding a selection from her topics:

1. That woman's position as an individual, and as a social factor, is progressing from the traditionally dependent state toward one encouraging economic independence.

2. That the high-school period is not favorable to specialization in studies, because of the claim, still made by human nature, for a co-ordinated development, physically, mentally, morally.

3. That handwork as studies, embodying many arts and crafts, and representing the fundamental truths of man's achievement in developing and controlling himself and nature, preserves the integrity of life, and is thus a means of organizing and unifying each one's thought of the world.

4. That a liberal education is one which will ally its methods with the coexisting progressive forces and direct the individual toward that highest social service which is reached through an understanding of the social significance of one's life and work.

The first topic selected presents the tendency toward greater justice in considering woman as a self-respecting and worthy-to-be-respected factor in the economic, as well as in the social, world. This tendency calls for recognition and furtherance in education. Even in this naturally resourceful country, where a few centuries built up a leisure-class idea about and among women, untoward circumstances and general progress interfere with the continuance in fact of the dependent idea. The harmful affect of an unfitting attitude toward life-responsibilities is everywhere apparent in discontent and maladjustments. Each one creates a demand for necessities and a margin of luxuries. These are supplied by labor. The welfare of all depends on an adequate supply of these necessities and luxuries. Hence, this community of interests should make productive labor a matter for general participation, according to individual ability, choice, and preparation. To lead high-school students into this attitude of social helpfulness, thru a more complete self-realization, is the aim of handwork. We believe this attitude is more reasonably furthered by studying the arts and crafts as factors in civilization, than by studying present detached and purely technical occupations. The student who follows the evolution of art and industry, actually realizing and solving the then-existing problems, feels and understands the contribution of manual labor to progress. The truths of science, art, industry, are thus experienced facts, and not mere book statements. Present processes and products will be a systematic growth from roots in past conditions of development. This social background to industry will tend to vitalize, with helpful appreciation, the desire and necessity for woman's economic independence for individual responsibility.

The contribution of the high school, to such a consistent educational foundation, must be planned in accordance with the student's stage of development. It is the period when large masses of light and shade in the world picture ought to be blocked out. Later education in school or life has the opportunity of more completely comprehending and refining these masses with details. If these details are brought in before the masses are well placed, proportion and relationship are lost, and the mental, moral, or physical human beings gets out of drawing. Much valuable time and many mishaps are spared the individual whose high-school period gives a picture of civilization correctly drawn and with proper values. Then follows the period for special enrichment.

The third topic claims that many arts and crafts, illustrating man's achievement down the ages, have a justifiable place in the high school in preserving the unity of life. If experience in these arts and crafts is gained in connection with other contemporaneous aspects of life of the period being studied, a consistent thought of life is made possible. Disregard, in courses of study, for historic grouping plays havoc with the students' grasp of causes, conditions, and consequences, and a patchwork, fragmentary knowledge of life results. But when the arts and crafts are studied as woven into the warp and woof of social life, the inherent correlation of all human endeavor will require no external forcing in the curriculum. The continuity of life and thought will be demonstrated by the existence of the past in the present, the forms having changed, but the content of truth everlasting. Isolation of studies is attributable to the faculty psychology, which justified studies for their power of sectionally disciplining the mind. The mind is now conceived to act as a unit in response to training, but methods still partake of the old formalism.

Handwork shows this isolation in its utilitarian aspect, which trains for immediate ends, or in its educational aspect, which deals with abstracted processes. Manual arts are unquestionably educational only when they reveal, preserve, and actualize the relations between man and progressive forces, when they convert human energy into capacity, then into power for understanding and controlling man and his environment. High-school education, which so incorporates the great events of civilization as to enable the student to have an organized and available review of the past thoroly related to the present, will give a mental flexibility necessary to adequately share this world's work.

The educator's problem is the proper upbuilding of these thought masses, from the range of human achievement in art, science, industry. In this selection, another "committee of ten" or more great artists, scientists, and craftsmen might profitably be asked to contribute the light of their special investigation. The body of fundamental truths thus obtained, when classified and arranged in historic periods by educators, would furnish organically related material to be worked thru by students. The comparison of these ideals and standards of achievement, transmitted by institutions from age to age, should beget humble-mindedness as our debt to the past is appreciated. The self-centering of high-school students will be turned to objective interests in thus viewing world movements and comprehending the interworking of all forces in life. Arts and crafts will then take their rightful place in an education which aims to liberate the individual from fettering restrictions of custom and tradition into a service in which men and women are mutual helpmates, where freedom and equality means economic and social interdependence.

MRS. ANNIE L. JESSUP, director of domestic art, New York city.—Handwork in the high school should be, I believe, specific and vocational. From the view-point of individual interests and aptitudes, there *is* a ground for a division in the education of girls and boys. This difference may be made, I think, without retarding progressive education; and I shall argue this afternoon for the belief in some of the obsolete ideas that are said to limit the education of girls.

What is education but a training for life? Is there not sufficient dignity in the home duties—duties which have in the past, and I hope will still in the future form a large part woman's place in the world—to warrant a training especially for domestic art and science?

The child in the elementary school has had from seven to eight years of manual training. The principles of construction have been taught progressively from the kindergarten thru the grammar grades. In an all-absorbing process, the child has gained a mastery over his movements, and with the development of thought comes the acquisition of skill in the use of his tools. If the thought-value of this work has been realized, if the work has been enriched by the social needs and conditions, there has now come a time for a specialization that will mean greater efficiency.

In this motor education the emphasis has been largely upon the educational value of the handwork. Manual training is in no sense technical training, but it certainly forms a valuable preparation for work in the secondary school—work which, I think, should be largely utilitarian, a word that seems in such disfavor that I hesitate to use it. But why should this utilitarian point of view divorce the subject from thought value? There appears to be a fear that in the development of the brain, so as to give the hand the skill to do, there should be a possibility of the boy or girl gaining a power which will contribute to the world's needs; a fear that some skill should be acquired which will aid in the struggle for bread and butter.

The knowledge gained by girls that should be specific and technical has the advantage of being of immense practical value in after-life. Do we realize, in these days of educational advancement, that the danger to civilization in this generation is the fact that home life and domestic duties are threatening to become things of the past. Do we not know that more and more is expected from the schools in ethical training—training which, in the early days of our country, was the result of the influence in the home.

I make an earnest plea for the teaching of domestic art and science in the high schools, not only in the technical high schools but in all high schools. If girls were better equipped in the knowledge of industrial processes, household arts and sciences—equipped so as to grapple with the economic problems of life—there would be fewer women whose ideal of life is to undertake work which leads them away from the home. Let us give the high-school girls dressmaking, millinery, embroidery, and cooking!

One of the strong arguments in favor of hand training is the respect it inspires for manual labor. Is this reasoning justified by the constant effort made to endow the subject with a dignity borrowed from other subjects? Is there not sufficient richness of content in the courses in domestic arts and sciences to render them of sufficient value in themselves? The study of food stuffs and applied chemistry in cooking; the study of mechanics involving the use of the sewing machine and the loom; the study of textiles with its great field of research; the great question of household economics; and the necessary correlation with art work in the various principles of design, as applied to the particular handicraft, all form a firm background of mental development.

In limiting the work for girls in the high schools to the household arts I am in no way under-rating the value of hand training in the use of metals, wood, and other materials; but, with the amount of academic work required in the curriculum, is it not necessary to choose subjects which will best fit the boy or girl for the environments of future life? There is sufficient space in a high-school course of study, if wisely planned, to give a comparatively thoro knowledge of certain industrial processes, providing the time is not dissipated in gaining a superficial knowledge of many.

In making this plea for household art in the high schools I am in no way conflicting with the curriculum of the trade school. Such a school would mean a purely technical course with the aim in view of a commercial value for the work. Other countries recognize the need for training girls in handicrafts which are especially adapted for a woman's needs. The professional schools in Paris, the Girls' Technical School in Naples, under the patronage of Queen Margherita, continue the academic work from the grades thru a high-school course, and also train the students in feminine handicrafts.

WILLIAM NOYES, Teachers College, Columbia University, New York city.—I wish to say a word in emphasis of the point made by Miss Dopp, that our courses in manual training should not serve a false purpose, by emphasizing what may be merely a reactionary movement. Because, since mediæval and colonial times, our women have been principally engaged in those forms of domestic work which are known as cooking and sewing, it does not follow that those are educationally the best forms of activity for them. The fact is, that these forms of activity are merely the remnants of a much wider field of activity which they once filled. One by one we men have taken these industries out of the home and put them into the factory, until now there only remain a few relics; but there is no intrinsic reason why these and these alone should occupy women's attention, and the attempt to confine our teaching in handwork to them alone may be utterly reactionary. This point may be illustrated by our present attitude toward the arts and crafts movement. The arts and crafts, as they existed in the mediæval age, combined the attention of the artist-artisans both on the side of design and execution. Every great artistic period has been one of great control of material, yet our period, which is characterized by greater mastery of material than any preceding age, is not an artistic period. The reason for this paradox is, that our ability in design has not kept pace with our power of execution. We have arms of steel far stronger than the human arm, and mechanical fingers far more delicate than the human finger, and yet we are not able to produce, from an artistic point of view, the great works of the past. The simple reason is, that our power of execution has outstripped our powers of design. Just so in women's work. We are treating women's work as if what were left of her former activities were the sum of her activities. The fact is, we are passing thru a transition period in industry. Our women at present are divided,

even more definitely than men, into a leisure and a busy class. Many women have little or nothing important to do, and many women are overworked in factory and other employments. But the fact that we are passing thru this transition period should not blind us to the fact that women, as well as men, need to be educated in the whole field of industry. It is not enough to teach this or that disconnected or belated industry. The whole field of industry should be the subject matter of study. We are living in a mechanical age and what we teach in our handwork in school should be according to modern mechanical methods. Not merely handwork or simple tool-work can satisfy the requirements of modern demands. Our boys and girls must be taught to do things according to modern mechanical processes and with the aid of all our modern resources.

DEPARTMENT OF ART EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 5, 1905

The first session of the Department of Art Education was held on Wednesday, July 5, 1905, at 9:30 A. M., in the Young Peoples' Temple, Ocean Grove. In the absence of the president, the vice-president, Mr. Frank H. Collins, presided. The program was as follows:

Vice-President's Address, Frank H. Collins, director of drawing and manual training, Boroughs of Queens and Richmond, New York city.

"Educational Aspects of Art Education," F. Louis Soldan, superintendent of instruction, public schools, St. Louis.

"Lessons to be Drawn From the International Drawing Teachers' Congress at Berne," by Chas. M. Carter, art director in public schools, Denver, Colo.

The vice-president then announced the following committees:

ON NOMINATIONS

Walter S. Goodnough, *Chairman*, New York city. Miss Helen E. Lucas, Rochester, N. Y.
William M. Mason, Philadelphia, Pa. Miss Emma M. Church, Chicago, Ill.
Mrs. Mary E. Van Wagoner, Pittsburg, Pa.

ON RESOLUTIONS

Langdon S. Thompson, *Chairman*, Jersey City, N. J. H. T. Bailey, Worcester, Mass.
James Hall, New York city.

A round-table conference was then held. The general topic was, "The Aims of Drawing as a Subject of Public School Instruction." Leader, Henry T. Bailey, of Massachusetts.

The program was as follows:

a) "In the Primary Grades," by Miss Emma M. Church, director of normal, general art, and design classes, Academy of Fine Arts, Chicago, Ill.

b) "In the Grammar Grades," by James Hall, director of art department, Ethical Culture School, New York city.

c) "In High Schools," by Frank H. Collins, director of drawing and manual training, public schools, Boroughs of Queens and Richmond, New York city.

d) A summary of the foregoing papers, by Henry T. Bailey.

The meeting adjourned.

SECOND SESSION.—THURSDAY, JULY 6

Joint session with the Department of Manual Training.

The second session was held on Thursday, July 6, at 2:30 P. M., at the Young Peoples' Temple, Ocean Grove. The vice-president, Frank H. Collins, presided. The program was as follows:

"Drawing and Constructive Work in Public Schools as Shown at the St. Louis Exposition," by Robert Ashton Kissack, instructor in manual training, Yeatman High School, St. Louis, Mo.

"The Teaching of Applied Design," by James P. Haney, director of drawing and manual training, public schools, Boroughs of Manhattan and The Bronx, New York city.

Discussions followed by Mrs. Ida Hood Clark, director of manual training, public schools, Milwaukee, Wis.; James Hall, director of art department, Ethical Culture School, New York city.

At the completion of this program, business was taken up. The committee on nominations reported the following nominees:

For *President*—Eugene C. Colby, Albany, N. Y.

For *Vice-President*—Miss Clara A. Wilson, Davenport, Iowa.

For *Secretary*—Miss Helen E. Lucas, Rochester, N. Y.

Executive Committee in addition to the officers named:

For the term expiring July, 1908—Mrs. Matilda E. Riley, St. Louis, Mo.

For the term expiring July, 1907—James Frederick Hopkins, Boston, Mass.

For the term expiring July, 1906—Miss Katherine A. Ball, San Francisco, Cal.

The secretary was instructed to cast the unanimous ballot of the department for the aforesaid nominees. The vote being so cast, the nominees were declared elected as officers for the ensuing year.

A resolution was then passed expressing the sympathy of the members of the department with the president of the department, Mrs. Matilda Evans Riley in her illness, which prevented her attending and presiding at the meetings, and also thanks to Mrs. Riley for her efficient work in preparing so excellent a program for the meeting.

There being no other business, the department adjourned *sine die*.

ROBERT A. KISSACK, *Secretary pro tempore*.

PAPERS AND DISCUSSIONS

THE EDUCATIONAL VALUE OF DRAWING

F. LOUIS SOLDAN, SUPERINTENDENT OF INSTRUCTION, PUBLIC SCHOOLS,
ST. LOUIS, MO.

The evolution of the teaching of drawing in the common schools is one of the most interesting problems for the student of practical education. While the study has always been under the direction of experts, the teaching itself has largely been done by grade teachers who, as a rule, knew little about the subject beyond what they needed from day to day. And yet, on the whole, the results have been good.

The leaders in the study at the beginning were artists who looked at the technique to be mastered as the chief aim. There has been an evolution since those days, not only of the study as an important and essential part of popular education, but also of a highly efficient body of supervisors and leaders. They are now teachers as well as artists, and the needs and interests of childhood receive the consideration today which they did not find to the same extent at the beginning. The aim has changed from teaching art to that of educating the child thru art. The ideals, purposes, and methods of instruction, have changed. When Clovis, the Frank, had been converted, and was being baptized, the priest said to him, "Rise, O king! Burn the gods to whom you have prayed and pray to the God whom you have burned."

A similarly radical change has gradually taken place in the ideals of instruction in drawing.

Those among us who are old enough to remember how we taught drawing thirty years ago will recall how instruction began with making the child attempt the drawing of straight lines—a thing which no artist can do or cares to do as long as he has a straight edge within reach. The course of instruction was largely copying from outline, drawings representing objects and ornaments, with shading gradually introduced. At a later stage in the evolution of drawing, stress was laid on drawing from the objects themselves, on the drawing of geometric solids with light and shade. Historic ornament, too, became the center of attention. Again, still later, the study of objects of life, of the human figure and animals, occupied the foreground, and stress was laid on nature study in drawing. More recently the use of color had become prominent, and the study of pictures by famous painters and works of art in general was introduced. Just now it looks as if instruction in “Design” and the making of artistically-planned objects of utility were in culmination.

One would imagine that, with a study so shifting and changing in plans and methods, distrust and doubt as to its proper place in a system of public instruction would be engendered. Just the opposite is the case. The study is more firmly established in public opinion than ever, and it has won more and more, especially in recent years, the confidence and good-will of the teaching profession. It is evident that the changes have brought instruction in drawing into closer touch with general education. The mode of evolution was one of enrichment and shifting of stress, rather than one of elimination and discontinuance. That is to say, the new topics were taken up not as substitutes for, but as additions to the preceding methods and subjects.

The general trend of the evolutionary movement has been in the direction from merely technical to pedagogical aims. In all teaching, the teaching of drawing included, the most important element is not so much the requirements of the subject-matter and the ability of the teacher to present it: the real value of instruction depends on the response on the part of the pupil, which the subject and the skill of the teacher can arouse. Not the teacher's action, but the reaction on the part of the pupil, is the test of the value of all instruction.

This conception of education, which makes its chief aim to elicit a response on the part of the pupils, deserves full consideration. It throws light on a number of important problems. It shows how individual training is being given all the time thru class instruction. The response or reaction on the part of the pupil to skillfully-conducted instruction, depends on the individuality of the child. Each reacts in his own way. When class instruction is so conducted that it designedly calls out the educational reaction and response on the part of the child, it is a better means of developing individuality than private instruction can ever be. Individuality is never developed except thru touch and contact with other individuals. Goethe truly said, that a talent

may grow in silent solitude, but that a character can be formed in no other way except thru touch and intercourse with the world.

Judged by this standard, the evolution of drawing has been very wonderful. It has tried one plan after the other until it has found those subjects which have taken hold of child nature and interests. Its present methods call forth from childhood a vigorous response. The lines along which the experiments in the teaching of drawing of the last twenty years have proceeded have led to the discovery of the subjects and methods to which the response of childhood could most surely and most strongly be obtained. The stress which instruction in drawing now lays on "Design" is full of fine educational possibilities. In "Design" there is more individual freedom of the pupil, there is greater scope for the exercise of choice and æsthetic judgment, than there is in the copying of objects, in the rendering of light and shade, and color values, because in these, imitation must necessarily prevail.

In design, on the contrary, the pupil's individuality is displayed. He is largely self-determined. He selects the motive for his design, and according to his own taste and according to his judgment as to the nature and shape of the object on which he wishes to place it. He selects and studies his unit and composes a harmonious whole. His own ideas and feeling enter largely into the work of his hand. It is true that he takes his motive from the forms of Nature and life, but he expresses, thru his selection and thru the form which he gives to it, his own ideas and his spiritual self. The child's work in "Design" is most closely akin to the general purpose of art, in which the purely spiritual idea is presented thru and to the world of sense.

When we speak of drawing in connection with art, it is proper to remember not only their kinship, but also their differences. There is an element in drawing closely related to art. Architecture, sculpture, and painting, rest ultimately upon drawing as their condition and beginning. But drawing serves other purposes as well, that lie outside of the domain of art. When the engineer sketches part of an engine, his purpose is not at all to produce a form of beauty to be enjoyed by the beholder. Drawing of this kind lies outside of art. When the artisan draws the cupboard he is going to put into your pantry, such drawing does not serve an æsthetic but a commercial or practical purpose.

It is evident that the study of drawing has practical as well as artistic utility, and that the training, which the study gives, is of life-value to the child. No one will doubt the value which the knowledge of writing has. Its place in the curriculum is safe and undoubted, because it gives to the child the power of recording and communicating his thought. Yet, there is a whole range of ideas which cannot be recorded or communicated as clearly and fully in words, as thru means of drawing. Let anyone try to describe the pattern of a carpet or of a wall paper in words, and compare the idea conveyed thru an elaborate essay on such a subject with the idea that can be expressed thru the simplest drawing. Who would build a house on the

basis of a description in words? Invaluable as a knowledge of writing is as a means of conveying thought, there are things which cannot be expressed clearly except thru drawing. In some respects and for some occupations, drawing as a common-school study ranks, in importance, next to writing itself.

In a recent public discussion of the merits of vertical writing, the very common objection was raised, that the average business man did not want vertical writing, because the entries in his books had been made in the past in slant, and furthermore, that vertical writing would take too much space. The reply made was, the total number of persons in the United States who follow some vocation was about twenty-nine millions; that out of this number, the largest number required, by their occupation, to make entries in business or mercantile books was about six-hundred thousand; and that it was not a proper demand that the twenty-nine million people should forego the advantages of clearness, ease and legibility, which vertical writing secures, because of the alleged advantages of slant writing to the six hundred thousand bookkeepers and accountants.

If the table of occupations of persons in the United States were examined, in regard to the question of the number of vocations in which a knowledge of drawing is of value, such inquiry would result in supporting the proposition made before; namely, that, for a surprisingly large number of callings, drawing is of an importance that is second only to writing.

Philosophers claim that language underlies the growth of the mind, which expands in the measure in which it finds means to express itself. Drawing, as it is taught in our schools at present, has become a means for self-expression, since in its latest phases it invites the child to embody in the work of his hands, his own ideas and individuality. In fact, for some kinds of ideas, drawing forms the only adequate means of expression. Instruction in drawing gives to the child a new language. There is connected with the properly conducted work in drawing a growth of the child soul comparable only to the growth which is experienced thru the work with language and literature.

There is no need of limiting the educational usefulness of drawing to the fact that it finds application in numerous practical pursuits of life. Instruction in drawing gives to every child, no matter what his specific life-work is to be, a better sense of form, of proportion and symmetry, of the harmonious grouping of things, and of neatness and cleanliness. It gives deftness and dexterity to the fingers. It trains hand, eye, and mind, in those habits of co-ordinated activity which are a constant advantage to the individual, whether his life is a battle or a pleasure trip.

It is also evident that drawing has an influence on the mental habits of children. When the child draws a flower, an effort at close observation is required which no other process of inspection involves. Bid a class of children look at a flower, then put it away and ask how many petals it has, and you

will be surprised at the variety of opinions. Let the children draw the flower and the number of petals will be fixed in their recollections by the very act of drawing.

The artist who paints a landscape does not present a copy of all the details of the landscape. A photograph does that. The artist does not aim at the mere imitation of nature. What he presents to us is his own idea, embodied in the semblance of nature which he places before us. He gives us the impression which the landscape made on him. He paints the image of his mind rather than the object of nature. It is the artist's province and characteristic that he spiritualizes the sensuous and lifts us, thru the presentation of life or nature, to ideas of truth and grandeur and beauty.

There is just a trace of this process in the drawings made by childhood. They are more than mere imitation. They generalize and express, in no small degree, the child's own thought and his own self.

Limited as the field of drawing is when compared with literary studies, there is a certain fullness of psychological movement in it which is of educational significance. In many other studies, there is but one educational movement; the world of facts flows into the mind of the child, enriches it and builds it up. There is little opportunity for the second educational movement, which is more important even than the first; namely, the self-assertion of the soul, in which it responds to the knowledge acquired, by some activity, and in which the current is not inward but outward: the soul from within acting upon the world without. In drawing, there is this constant play of the two educational movements, of receptivity and spontaneity, of learning and doing, which gives fullness and completeness to educational processes.

Thru instruction in drawing, the mind obtains a more complete mastery over the body. Eye and hand are pressed into the service of will and thought and they learn to give outward expression to the idea which the mind has conceived. This may sound abstract, but it is nevertheless the sum and substance of man's education for life. As drawing is taught today, it has become a training of the mind thru the work of the hand. It is a substitute for manual training in the lower grades and the best preparation for it in the higher.

A word remains to be said of drawing on the side of art. The study of art has the two phases, that of appreciation and production. Instruction may aim at leading to an appreciation of the work of art, or may try to develop the practical skill which may lead to the production of a work of art. As a matter of course, when we speak of art-teaching in the common school, we use it in the former sense only; we propose to open to the child the possibility of enjoyment and profit thru the contemplation of the work of art. When we give a lesson on Milton's "Il Penseroso" in literature, its purpose is appreciation and it has nothing to do with the idea of leading the pupils to write poetry. Similarly, art instruction in the common schools has for its purpose to lead to an appreciation of some great works of art.

The world has slowly accumulated knowledge and culture: each generation

has left its life-work as a gift to its successors. The noblest work which past ages has done for mankind is to be found not only in literature, inventions and science; the best fruits of human genius, the highest thought, the deepest feeling of the race, are embodied in art as well. To bring our children into direct touch with some of the noblest products of art, to make them recognize and appreciate a half a dozen masterpieces in painting, architecture, sculpture, and music, is to give them for the journey of life, a noble and elevating experience and a source of refined and perpetual pleasure.

LESSONS TO BE DRAWN FROM THE INTERNATIONAL DRAWING TEACHERS' CONGRESS AT BERNE

CHARLES M. CARTER, ART DIRECTOR IN PUBLIC SCHOOLS, DENVER, COLORADO,
MEMBER OF THE INTERNATIONAL COMMITTEE FOR THE NEXT
CONGRESS, LONDON, 1908

Before mentioning the detailed work of the congress, an explanation should be made of the preliminary preparations, the most important of which was a document of 480 pages containing papers from experts on the various questions which were to occupy the attention of the congress. These questions were considered by two sections. The first embraced general instruction, the second, special instruction. Most of the papers ended with brief statements of the wishes of the writer which he desired adopted by the congress in the form of resolutions. It will be seen that considerable study of different questions was preliminary to the meetings, as a consequence the time of the meetings was spent in condensed statements by the authors of papers, and in the discussion of matter already known by the members of the congress.

As a result of the consideration of the papers relating to drawing in general instruction, the congress adopted these conclusions:

1. That the instruction should follow the law of natural development in the child. That drawing should be a means of expression of thought and impression; the child should express itself.
2. That the teaching of drawing be included in every course of study, as obligatory, in the same way as other general subjects of study.
3. That in all schools drawing be taught not only for its own sake, but that it be taken in connection with all other subjects of the curriculum where it can be of aid.
4. That in all technical or professional schools, drawing be one of the entrance examination subjects.
5. That the schoolrooms be tastefully decorated so as to influence the pupils æsthetically.
6. That a widespread propaganda of art teaching be undertaken in all nations with a view of aiding reform, by extending the study of drawing in all classes of society.

TEACHING DRAWING IN THE PRIMARY SCHOOL

As discussed, this question referred to what we understand by primary and grammar schools. The general report was presented by Monsieur Guebin, principal inspector of drawing in the schools of Paris, and constituted

a very scholarly and exhaustive presentation. In his introduction he said, in speaking of drawing, "Found and recognized as a language of universal comprehension, the greatest efforts are now attempted in favor of its diffusion."

These points he thinks of great importance:

1. That drawing relate as far as possible to the reality, that the drawings represent a natural object, a thing that the pupils reproduce with interest.
2. That flat copies be used less, and that they be replaced by drawing from nature and exercise in composition. (Designing.)
3. That drawing be put as much as possible *en rapport* with the rest of the teaching.
4. That drawing on the blackboard be employed as much as possible by the teacher during the lessons.

The resolution finally adopted was as follows:

All rational instruction is based on the evolution of the child. The pupil's drawing ought to be influenced by and related to the world in which he lives. Drawing has for its immediate ends the comprehension of the language of drawing as related to form and color, and the ability to use this language as a mode of expression. It has all the characteristics of a living language. Its use should be fluent and natural, the hand swiftly obeying the thought. Drawing ought ultimately to lead to an understanding and an appreciation of the beautiful in nature and art.

SNAPSHOT DRAWING

In connection with the first section of the congress, we should notice "Progressive Snapshot Drawing" as presented by T. R. Ablett, art director of the Royal Drawing Society, London. This society has given special attention to "The Art of Childhood" and to

The development in children, whether at home or in school, of the spontaneous instinct, which is to be found even in the youngest, of giving pictorial expression, in their own way, to whatever may have been exciting their nascent interest in the object world around them.

As to the method this information was given,

By a dumb show or similar scenic machinery, a number of children are given, for some brief time never exceeding one or two minutes, a tableau for their rapid observation, which is then suddenly withdrawn. They are at once called upon to pictorialize what they saw by an effort of memory (reproductive imagination), together with anything suggested by the scene to the creative imagination.

Full information regarding the method is lacking, but in a personal interview Mr. Ablett stated his belief that spontaneity could be retained in the higher grades, and that one of the great secrets of progress was to concentrate the pupil's attention on one point at a time.

DRAWING IN SECONDARY SCHOOLS

The fourth question related to the teaching of drawing in secondary schools, that is to say teaching which would naturally follow and be an outgrowth of that of our primary and grammar schools.

In the several reports presented, there were peculiarities as to methods. One report laid special stress on the study of plaster casts of the head, the same being systemized so as to consider different views, as the profile, three-

fourths, etc., in progressive order. Another professor thought it very important that teachers should always give pupils, when commencing to draw a plaster cast, ideas relating to its artistic and historic character. In this connection it should be said that another professor was of the opinion that the history of art should be taught by the professor of drawing.

Monsieur Steck and other reporters attached great importance to memory drawing.

This kind of exercise causes a methodical observation of the model, at first at least, one cannot retain a form badly analyzed. It is very useful in varied applications, and cultivates the "picturesque memory." At first the exercises should not occupy more than five minutes at the end of the lesson, and should never be forgotten. Later the memory drawing may be made at the commencement of the next lesson, or it may be assigned as a "duty" between two lessons. In this connection attention is called to the great value of tracing in space, with a point, the contours of the model.

The reporters agreed that modeling should have a place in secondary instruction, but had various opinions as to its application.

Mr. W. Egerton Hine of England said,

That each lesson in drawing shall be also a lesson in art. The correlation of drawing in the secondary schools and manual training received some attention. It was thought by some members of the congress that when considering this question the correlation of drawing with other studies should also be considered, that the various branches should assist each other, while "each should preserve its autonomy, its independent doctrine, its distinct pedagogy, its appropriate vocabulary.

With the foregoing ideas in mind the congress adopted these resolutions:

Drawing in the secondary schools should be conducted on the same lines as in primary schools, and should aim at cultivating taste.

That for use in the next congress it be the duty of each nation to study the correlation which can be established between the teaching of drawing, modeling, and manual work in all stages of instruction.

DRAWING IN COLLEGES AND UNIVERSITIES

It is generally understood that drawing is not regarded of very great importance in superior education. Monsieur Steck in a masterly presentation showed in detail the great advantages of drawing in connection with letters, sciences, medicine, pharmacy, and law. President Eliot of Harvard might be quoted as having said,

That he had examined all the courses offered by the university, and could find but one (the course in theology) in which a knowledge of drawing would not be of immediate value.

The congress resolved:

1. That drawing may form a part of a university course.
2. That in examinations, in which demonstrations or graphic explanation is necessary, drawing may be taken into account.

THE TRAINING OF TEACHERS OF DRAWING

The consideration of this subject revealed the fact that there is a wide difference in time devoted to such training, varying from the incomplete instruction of a summer school to a course extending over four or five years.

The importance of a thoro training was insisted on, in order to satisfy the pupils as they become more critical.

One reporter made this very pertinent suggestion in regard to the professional teacher at work, viz.:

It is of the greatest importance that the teacher have sufficient leisure to permit him to continue his studies in painting, sculpture, architecture, or decoration. He will then consecrate himself with a joyful heart to his pupils, who from their side will have more confidence in the man of whom they can appreciate the skill and admire his productions. It is precisely this confidence and this veneration which forms the true base for the success of the teaching.

Think of the respect the professional art students have for their masters, who are always men who have attained eminence by their productions in the art world, and who continue to practice what they teach, never allowing themselves to give up altogether the practice of art, as is too often the case with supervisors of drawing. Indeed, a supervisor might be defined as a person who at one time was an art worker, but who now devotes his entire time to teaching others how to do something with which he is becoming less in touch by lack of practice.

SPECIAL INSTRUCTION

The second section of the congress was devoted to special instruction and in connection therewith were brought out some very interesting and important facts in connection with apprentices and schools for their instruction. Professor Genoud, president of the congress, had made a very exhaustive study of the subject. He gave the laws of various countries, and called attention to the fact that several noted for their progress *oblige* young people to attend the professional schools. He said that Germany was the first in modern times to make obligatory the attendance of courses of instruction. One of the laws is as follows:

The chiefs of industry must give to their workmen of less than eighteen years the time to attend professional schools. Instruction if given on Sunday must be so arranged as not to interfere with the principal church service or the confessional.

In Hungary we find that the apprentice is obliged to receive instruction during the entire time of his apprenticeship. General instruction four hours per week, and three hours each Sunday for drawing. It is stipulated that one hour of Sunday be devoted to religion.

Japan's laws relating to similar instruction is more poetically expressed in this way,

The instruction is given in the season of snows or at the time when the work of the country is suspended.

Further it is stated that in the industrial school drawing must be the principal subject.

The international congress of technical instruction Paris, 1889, passed this resolution:

The congress expresses the wish that courses of professional instruction for day, even-

ing or Sunday be created in as great number as possible by specialties to complete the technical instruction of workmen.

At the congress at Bordeaux, 1895, a resolution stated that,

The courses of instruction for adults are more and more indispensable, and that the results already obtained encourage the increase of their number.

Mr. Genoud summing up the situation says,

We have seen that Austria, Hungary, and in most of the states of Germany the attendance of the professional schools for adults is obligatory during the entire time of apprenticeship.

He calls attention to the book of Georges Blondel entitled *France and the Market of the World*, in which he attributes the immense progress of German industry, which battles today with American industry, to the obligatory attendance of professional instruction which exists in the above countries.

The congress adopted these resolutions:

That the law make obligatory under the control of the state, the written contract of apprenticeship, the frequentation of professional courses during the apprenticeship, and the examination at the end of the apprenticeship.

Further,

That the corporations of patrons and workmen, and the councils establish with the help of the state, and according to their local needs, professional courses and professional schools, essentially practical.

How different all these matters in this country! Professional or trade schools exist in very limited numbers in only a few of our largest cities. True, we have manual training in our schools, special manual-training schools, and technical schools, but they have not the direct bearing on local industries of the trade schools abroad. Then we have the very unsatisfactory attitude of labor organizations toward apprentices, the existence of these organizations, seemingly, being fundamentally for the regulation of their financial interests, with no consideration of educational features which would advance the excellence of their work, or assist young men in learning trades. Indeed, it has been pointed out that in at least one of our states, that the only trade school existing is a reform school, and that attendance is limited to those boys who have committed a crime! While the boy of exemplary habits is absolutely debarred from attending a trade school.

European nations have shown for many years great consideration of all pertaining to industrial-art education. Not only have they established numerous schools, but as well have appointed commissioners who at public expense have studied and reported on the schools, and art museums of other countries. Such a commission has never been appointed by this country, altho an attempt was made last summer to have such a commission appointed to make investigations at the expense of the National Educational Association. As yet this attempt has not been successful.

Several years ago the author of this paper made a special tour of investigation, a report of which was published by the Massachusetts State Board of

Education under the title "Some European Industrial Art Schools." Subsequently limited accounts have been published by Mr. Miller, of Philadelphia and Mr. Bailey, of Boston. In that period, however, European reports have been published which might truly be termed monumental—notably the elaborate works of Monsieur Verchon. Really, it would seem that the educational authorities at Washington should do something in this direction, so that the educators and manufacturers of this country might better understand those educational features which make some of our strongest competitors in the markets of the world.

THE BERNE EXHIBITS

They were of two kinds, first, of various schools and second, of the dealers in materials.

The Paris Congress did not have any exhibition, relying on what could be seen at the Exposition. The Berne Congress therefore was the first to actually unite an exhibition with its sessions. Generally speaking, the exhibits were incomplete and not truly representative of the countries from which they came. As for students' works, some schools of no great importance were enterprising enough to send exhibits, while other and much more important schools were not represented at all. As usual, the cranky specialist was in evidence. As a whole, however, the exhibits were interesting and undoubtedly caused the representatives of various nations to realize that there is more than one way to develop drawing. System, however, was lacking, particularly in the individual exhibits, making it difficult to understand what the works represented. Happily the Americans showed superiority in this direction, proper labeling making it possible to understand details.

Some of the exhibits were meager, some extended. Undoubtedly this department of the next congress will be greatly improved.

The American exhibits attracted much attention, the largest of which was a very complete representation of public-school work from Springfield, Massachusetts. Both English and German reporters have made full reports concerning it, and generally praise the work. In no country has cultivating the spontaneous drawings of young children been more fully developed. This kind of work greatly interested our foreign friends. They say, however, that we do not gradually develop it in the higher grades, that the work of the latter is about as crude as in the lower grades, but as Monsieur Guebin of Paris says, it is regarded as a movement in "the right direction."

An English reporter makes this criticism of the American exhibit:

Too much is expected to follow with practice in the matter of accurate drawing. The circle is perspective, for instance, is often badly done. They say, "We know, but place little value on that. There are other things of more importance. The detail will follow. As a matter of fact it does not follow. In the more advanced studies, where the *tout ensemble* is excellent, errors in drawing are common."

CONCLUSIONS, LESSONS

Briefly stated the following are among the most important lessons we may derive from the Berne congress:

1. The value of previously printed papers.
2. Laws of natural development should be followed.
3. Drawing should be *en rapport* with other teaching.
4. The blackboard should be used as much as possible.
5. Drawings should be "fluent and natural," and correlated with other studies.
6. Memory drawing should be more fully cultivated.
7. In presenting subjects of study, information should be given regarding their artistic character.
8. Drawing should have a definite connection with colleges and universities.
9. Teachers should be allowed time for personal art work.
10. Exhibits should be condensed, systematic, and explanatory.
11. Special art instruction with direct reference to industries is of the greatest importance, and should be developed.
12. In the United States more attention should be given to accurate drawing.

The Berne congress showed a distinct advance over that of Paris. We can reasonably expect that the next congress in London in 1908 will show still greater advancement.

This Congress is so far in the distance that no definite announcements can be made at the present time, except to state that the American members of the international committee are quite agreed that the exhibits and speakers from this side of the water should be as representative as possible of the varied directions in which drawing is taught in this country. Probably matters will be definitely shaped at the meeting of the international committee which will take place in 1906, two years before the next congress.

The international committee confidently hope that the drawing teachers of the United States will give it their hearty co-operation.

ROUND TABLE CONFERENCE

AIMS OF DRAWING AS A SUBJECT OF INSTRUCTION IN THE PRIMARY GRADES

MISS EMMA M. CHURCH, DIRECTOR OF NORMAL ART DEPARTMENT, CHICAGO ACADEMY OF FINE ARTS

In reflecting upon the aims of drawing as a subject of instruction in the primary grades and, incidentally, drifting to the seeming aimlessness of much of the work, the conclusion seems inevitable that much of this aimlessness comes about by reason of the thinking and directing being done by one class of educators, while the actual contact with the children and the application of their theories is left to the teacher, who, too often, accepts them blindly and unthinkingly, as they do also the venerated traditions of a former time, some system or method of work, or anything that comes in the name of help and novelty and administers them, without any adaptation to conditions peculiar to her particular work, as so many mental doses, trusting to some mysterious alchemy to transform them into mind, heart, and noble life.

The drawing teacher or supervisor, who does not bring to her professional work a thoro knowledge of the purposes and aims of education in general, and who has not the

executive ability to make practical use of this knowledge; who does not know how to make her special subject subserve these aims and purposes, who does not know much more about education than merely how to draw and to criticise drawings, would better seek another work, for she will always be a dead weight and heavy detriment to the cause she has entered. The efficient drawing teacher must know children, and know how to learn from them how to teach. Her best apprenticeship will be experience in the general teaching of the grades in which she teaches drawing or supervises.

The normal schools should do just as much to prepare the grade teacher to teach drawing as they do to prepare her to teach any of the other subjects in the curriculum.

Drawing has long been too narrow a term for the work done in that name, because it not only gives another means of expression, but it also cultivates and develops a love of beauty and inspires creating it thru the fancy.

It should not be the aim of drawing in the public schools to develop artists or to strive much in the direction of technique. Its largest purposes should be to counter-balance the strong intellectual tendencies of the education that is just now being revolutionized, and so to train the taste of the children that the coming generation of all classes of people shall so love beauty, that it will demand something far lovelier than the cheap tawdriness that characterizes so many homes and so much of the dress of the present time; that it will stifle the voracious commercialism that persists in offending good taste and in making hideous our streets with its noisy posters, and that desecrates our most beautiful natural scenery with its barbarously ugly signboards.

Its other and narrower aim, like that of any subject of instruction at any period of the school life, should be that of giving just the right amount of development to some bodily, mental, moral, or spiritual tendency at just the time that tendency is of paramount interest to the child. Interest is the great digestive and assimilative force that makes knowledge over into the fiber and tissue of life and character. Anything that is forced upon the child without his interest is worse than useless.

If he is interested in merely copying form, in drawing from the object, it is probably an interest derived from his teacher. He would naturally prefer to draw from his mental images and a characteristic symbol, especially in the first two grades, would please him more than the most perfect representation. Apollo's Chariot of the Sun may be either a milk wagon or horse car to the city child. Its rolling across the sky will give him more pleasure than the most perfectly drawn chariot and steeds.

All thru the primary grades, the child is intensely interested in action, in human and animal life. Calm, placid repose interests him no more than going to bed does. Drawing from the posed figure will bore him generally, whereas, he will put his whole soul into drawing children at play, grown people at their work, and birds, animals, and insects doing something. The landscape *per se* does not appeal to him until much later. When he uses it, it is in a very crude symbolic way as a setting for his drama of action. It is far too wide for his comprehension. The center of interest is still deep within his consciousness, and his narrow personal experiences. We may call his attention to it and enlist his observation, but we should never insist upon his seeing it as we do, and we should always direct his observation only after he has seen where he has failed, not before he has failed. The games that he plays will be a source of a new delight, when he is asked to draw them, because they afford him a chance to live them. He will love nature the more for having been introduced to it thru nature myths and fairy tales, because he thus approaches her with a human interest. If they are dramatized, so much the better for they are made his very own by living them. He will revel in symbolic nature stories of his own, told first in words, then in song, drama, and pictures. Stories of home life, and the industries among which he lives, treated in the same way often become new poetry in his hands, if we can but get far enough away from our conventionality to see them as he does.

By the time the child has entered the third grade, probably he has discovered for

himself that he cannot draw, and when that discovery has been made, and when the desire to draw better has come naturally, it is time to make the work more objective, to train the eye in observation and the hand in execution. Notwithstanding all the inconveniences of clay, and the numerous arguments in its disfavor, it seems a retrogressive step to relegate it to the past. It is the child's own medium for representing form, because it permits him to experience and express it by means of the two senses of touch and sight, the latter being so dependent on the former for its appreciation of distance and the third dimension.

Modeling is much less abstract than drawing, for the reason that modeling permits reproducing form in three dimensions as it really is in space, while drawing represents such form on a surface of two dimensions. The smaller the child, the larger the work should be. He will naturally work large enough to use his whole arm instead of his fingers, unless he has been taught to write too early, in which case he will pinch his brush as he does his pencil, close to the point and fairly write his pictures. Who has not seen the painful tongue-chewing accompanying some cutting or pencil exercises in the lower grades? All because of the tremendous effort required to use an unnatural medium, that demands the use of a set of muscles not yet under control. The brush, and color, as well as charcoal, used in tones instead of lines, are plastic enough for this early period.

The selection of mediums and just how much improvement in execution to demand as growth and development progress, are among the teacher's most serious problems. Precocity is always to be avoided, but best effort must be always striven for. The teacher must measure her efficiency by the result in child development and not by results in the child's work.

So much of the primary drawing and industrial work, in our exhibitions, as well as writing and arithmetic and other studies in these grades, is pitifully the work of the teacher—done more for the sake of result, than for the sake of the child, and done at the expense of overwrought nerves and body.

In the primary grades, there should be much less instruction, much more and better stimulus to live this precious period of life in a natural, simple way, and to see and express it in a manner that is truly childish.

To summarize briefly; the aim of drawing in the primary grades should be to take the initial step in artistic creation, to foster the love of beauty, that may grow into an abiding good taste, to train the senses to a nice perception of form and color, to give the power of expressing one's self in another way, and to accomplish all this in accordance with the laws and sequence of natural development.

THE AIMS OF DRAWING AS A SUBJECT OF PUBLIC SCHOOL INSTRUCTION IN GRAMMAR GRADES

JAMES HALL, DIRECTOR OF ART DEPARTMENT, ETHICAL CULTURE SCHOOL, NEW YORK CITY

Our subject is not new. The aims of drawing in the public schools have many times been considered in American educational gatherings during the last three decades, and yet today, the subject demands consideration no less than in times past, lest we teachers and supervisors of drawing forget our chief aims in our zealous pursuit of subject-matter, of methods and devices. It is well, at the end of a busy year's teaching, to remove our thoughts from the details of the schoolroom, to rise above all petty failures and limitations, and to clear our vision. It is only with the larger view of the aims of our teaching before us, that we should plan for another year. Methods must and should vary, according to the individuality of the instructor, and with the special conditions of the school. The larger aims should be common to all.

Consideration of the aims of drawing instruction in the grammar grades involves a consideration of the problem of public-school drawing instruction as a whole. Important as is the work of the primary grades, it must be regarded chiefly as the foundation for work in later years. On the other hand, the vast majority of the pupils of grammar schools do not enter high schools at all, while of those who do, by no means all continue drawing. The central field, the great opportunity for instruction in drawing in the public school, lies in the grammar grades.

Hence, if we aim to give the American people a common understanding of drawing, as we do a common understanding of the so-called regular branches of education, we must plan to do it in the grammar school. Grammar-school drawing cannot be considered chiefly as a preparation for high-school drawing.

Before attempting to set forth the aims of drawing in the grammar grades, as I see them today, permit me to take a brief survey of the various arguments for school art instruction that have been advanced since its serious beginning in America.

The argument of the pioneers of industrial drawing was the utilitarian argument. Drawing is the language of the arts, and so must be understood by intelligent workmen. Those trained in foreign countries have a knowledge of drawing that our workmen do not possess. Therefore we *must* teach drawing to keep up in the industrial procession.

Such was the practical argument which served as the entering wedge for public-school art instruction. Tho of a mechanical and lifeless character, the beginning was made.

Later, as a factor in spreading the work, came powerful arguments from the educators. Drawing as an added language was urged as a useful stimulant of observation, and as a valuable means of expression especially in connection with science studies. To learn to draw, one must learn to see—to see straight—and to record in graphic terms, came to be regarded as the most important function of drawing in the school curriculum.

But, as this utilitarian view of the subject became an old story, a plea was heard from the artists. Then the mechanical and copied pencil work in the drawing books of the earlier days gave way to work from nature and from objects in all mediums. Applied design advanced its claims. Mechanical drawing, where not forgotten, was taught with the constructive work. With this incoming of new mediums, the greatest possible variety of work is now attempted. Demands from the educators for correlation and the influence of the new education are constantly leading to experiments. Efforts to follow the interests of the child lead sometimes into blind alleys, and sometimes, under wiser guidance, into flowering fields of genuine child art.

Fleeting fads of the art world invert their dim reflections in our children's art, like strange flowers in a murky lake, whose mirrorings are further distorted by misguided pilgrims from widely separated parts. It is easy to mistake change for progress. Work that proves popular does not invite too serious questions as to its aim. And so it is well that we pause and ask: What should be our ultimate aim?

Is it not, firstly, the cultivation of the sense of beauty, the power for the wise enjoyment of nature and of such master works of man as a fine building, a beautiful picture, a vase, a textile, or any noble piece of craftsmanship? With this should be placed the power to express, to create beauty, if not in pencil or paint at least in the arrangement of the home. A few pupils of special ability should discover it in the grammar school. Work here should be a sound beginning for their future professional study. Some others should here take the first step toward becoming intelligent and tasteful amateur practitioners of the artistic crafts. But the result with the vast majority should be the gaining of a sincere respect for the work of the artist and the craftsman, a respect that can only be born of serious personal effort toward excellence of expression, stimulated thru contact with fine examples of the arts.

These two great aims of art instruction can be shown, I believe, to include all claims that have been urged, or that may be urged, whether industrial or educational, howbeit

the industrial and educational drawing, urged in the past, has fallen far short of including the greater purpose of opening the world of art.

Some Americans are at last beginning to awaken to the fact that good taste and art appreciation are part of the equipment of the most effective and prosperous nations. As a nation of manufacturers, as we now are, it is not sufficient to be able to make things. We must be able to make things of beauty, if we are to market them in competition with Germany and France, England and Japan. Realizing that there is money in art, Americans are beginning to want it. But their children, in gaining art appreciation, must inevitably get something better than money; namely, a point of view that sees things in better relation and that values good taste above great wealth.

The words of President Eliot, in his recent speech at the dedication of the Albright Gallery at Buffalo, ought to ring in every schoolman's ears, until he is forced to hear, if not in every case to understand.

The main object in every school should be to show children how to live a happy and worthy life inspired by ideals which exalt and dignify both labor and pleasure. To see beauty and love it, is to possess large securities for such a life. It is monstrous that the common school should give much time to compound numbers, bank discount and stenography, and little to drawing. It is monstrous that the school which prepares for college should give four of five hours a week for two years to Greek and no time to drawing.

Evidently, President Eliot was speaking of drawing as the language of art and of the study of drawing, as the best if not the only means of gaining an appreciation of art.

Instruction in drawing is worthy of the name of art instruction only if from first to last it aims for the creation of order and beauty.

It now remains for me to consider the specific aims of a well-rounded course in drawing, and to show how all the reasonable demands of the business man and of the educator must be met in order to accomplish the larger aims which I have said should guide the drawing course.

Developing the ability to sketch characteristically any simple object is a necessary part of art study. The things that are given the children to draw in the art periods should in every case be worth drawing. They should be things fine in themselves, including leaves, flowers, fruits, birds, butterflies, and other natural objects. Besides these there are the simple vases, some household utensils of today, and many of other times and lands that history and geography lessons suggest.

A knowledge of how to sketch well never comes without the frank study of good examples. Copying has been too long discarded. Copying and even tracing excellent examples, such as the characteristic brush outlines of the Japanese, or the simpler of the pencil and charcoal sketches of western masters, should form a part of the work. The artistic qualities of a drawing are convincingly shown in the effort of copying it, if the teacher presents the lesson aright. Lessons should follow calling for similar original efforts.

The difficult distinction between vital and needless lines is best demonstrated by the teacher's drawing before the class. The aim should not be accuracy for its own sake, but the careful expression of the most important truths in a manner unmistakably clear. The ability, for example, to see and to express the distinctive character of shape, edge, veins, stem, and color that distinguishes an elm leaf from every other kind, makes drawing a language. This language should be turned to other uses than purely artistic ones. Because of this, however, our aim as teachers of drawing is not changed. There is hardly a Japanese drawing but has artistic character, and yet the use of drawing for purely utilitarian purposes the Japanese thoroly understand. Lieut. J. A. Baer,¹ U. S. A., tells of the exactness of questioning, and the careful observation that the Japanese officers displayed in Pekin, in going about among the camps of the nations. Among other things, they were greatly interested in the American cavalry, and they noted and sketched our method of

¹ "Why Japan Wins," *Harper's Weekly*, June 3, 1905.

shoeing the horses. Sketches were used rather than words whenever they served the purpose better. We may be sure that they were true in a way to be absolutely adequate. Have we not here a hint for the use of drawing in all school work?

But shall the art lesson serve as a crutch for teaching the other subjects? Decidedly not. The drawing lesson on the other hand should always be one in which the result is artistically complete in itself. The teacher who cannot arouse interest in the art lesson without fastening it to some other subject is missing the distinctively artistic interest altogether.

The subjects for the art lessons, in the upper grammar grades, should include enough variety to involve the great perspective principles. Is not much of the beauty of nature and of art dependent upon the rhythmic gradations of size and of value resulting from the phenomena of perspective. The beauty of an avenue of trees of forest or of city, of classic colonades and of cathedral interiors is largely a beauty of perspective. Even the ugliest city street seen in perspective gains interest. By the study of pictures and by presenting subjects that obviously gain their beauty thru the effects of perspective, is it not possible to teach foreshortening and convergence without the drudgery that has attached to the ghastly type solids? Possibly something of the ardor and enthusiasm of old Paolo Ucello for perspective might be aroused in some pupils, if we did not station the grim sentinels, cube and cylinder, at the entrance to the study, to allay all possible enthusiasm. Why not teach the pupils, by showing examples of early Italian art, how artists enthusiastically struggled with, and finally overcame, problems of perspective, and how much easier the problem has grown thru their efforts.

It is unreasonable to expect accomplished draughtsmen as a product of grammar-grade teaching. Our aim is but a modest one. The pupils should become able to draw simple subjects adequately and freely, perhaps not accurately, but with character. Thus I have tried to show how representation, rightly taught, not only gives a graphic language, but an artistic language.

Equal in importance, however, is it to give the children an understanding of the simple laws of arrangement, of form and color and to teach habits of working according to these laws, without which order and beauty are impossible. Thru the study of beautiful examples and thru practice under wise guidance, pupils should learn to work according to the laws of composition, long before these laws are presented abstractly.

Familiarity with the *methods* of the leading teachers of design is to be found on every hand, but few supervisors of drawing have yet begun to carry out the *aims* of these teachers. The methods themselves are not always adapted to the instruction of children. Doubtless, the most effective means of teaching design to children is to connect it with some school or home interest. Do not believe, however, that it is necessary or desirable that *every* design be applied, especially in the upper grades. This wastes time that might be made valuable in giving a broader view.

The exercise has its place. An arrangement of form and color that is beautiful in itself, not beautiful because it is to be added to something else, is thoroly worth while. To teach the pupils that "beauty is its own excuse for being," is part of our duty.

At present, there is too little use made of the fine examples of the past. The reaction against the dry-as-dust teaching of the different schools of historic ornament has resulted, in many places, in throwing out all study of classic examples. Studies of fine examples—of their spirit more than of their literal forms, must return, as a vital part of the study of design. The right kind of correlation is here often possible. For example, the fine decorative heraldic devices may be studied and drawn in connection with the study of mediæval history and literature. The beautiful designs of the manuscripts of the same period may serve as an inspiration for design applied to school booklets. The study of the making of a simple booklet has served in one city as the problem for ten weeks' work in design in all the grammar grades. Upon this problem was focused all the interest possible, historic, literary, and artistic, but the aim of excellence was placed paramount.

A simple typical problem may thus often be worth more as a study, than a superficial dash at many problems.

Color teaching should aim to give as much pleasure in harmonious combinations as does musical harmony. A color discord should come to be as quickly felt as a musical one. A logical and comprehensive course of color teaching, suited to the grades and not involving too much time devoted to scaling, has yet to be proven. Nevertheless, progress is being rapidly made. To cultivate the color sense necessarily involves a grasp of the laws of color harmony. The best color examples available for general school use are the recent re-productions in color in magazines like *Harpers*, *Century*, *Scribners*, and the *Studio*. Good Japanese prints are not always too expensive. Study of beautiful examples, reproducing color schemes from them, and applying these color schemes to original designs, is an effective way of developing the color sense. Scaling of color, too, has its place. Moreover, acquiring a taste for good magazine pictures may be made a step toward an interest in the masterpieces.

Teaching structural beauty involves the teaching of geometrical lines and figures, and how to combine them for beauty's sake. This phase of the work is directly related to manual training. It is also related closely to the study of arrangement as last discussed. It is of no less importance than the other subjects. It is, however, more difficult of realization than the others. To lead children to understand the beauty of proportion in a simple rectangular box, or to realize the fitness in the paneling of a door, or in a molding, requires most careful guidance by a teacher who herself understands the value of restraint. Most attempts at teaching structural design are aiming for originality and have not depended enough upon the careful study of good examples, with consideration of why they are good.

The aim in structural design should not be to stimulate pupils to make different forms for originality's sake, but rather, to induce ability to think out independently a good form for the simple constructions they attempt, regardless of how original it may be. Good taste based on study of good examples is better than originality.

The use of the compasses and ruler in working drawings should follow the free-hand sketches by means of which proportions are thought out. A knowledge of working drawings is a part of the language of construction.

It is but a step, if the teacher will take it, to leading the interests of the pupils beyond the petty individual school problems to an interest in the architecture and street structures of their city. Interest in these matters will hasten the coming of more beautiful civic surroundings. The study of fine examples of furniture and architecture, in the light of the basal principles of structural designs, is quite within the province of grammar grades.

To sum up: Vital drawing instruction in the grammar grades, as elsewhere, is dependent upon the teacher's earnest and constant endeavor to realize the highest aims, in truth, a single aim; namely, to unlock for the pupils the gateways to the world of art.

The accomplishment of this purpose is dependent upon teaching representation, design, and structural beauty. Such teaching includes sympathetic study of nature and of the master examples of art, proven by time "the winnowing of the ages."

The true bonds of union between art and the other subjects should be recognized, that all the teaching may be strengthened thereby.

But the teacher should be watchful, and guard herself against influences tending to the subversion of the true aim of drawing instruction—the study of the beautiful. Of these influences, two are especially noticeable at present. One is the urgings of some educators, resulting in ill-advised "correlation," that makes a pack-horse of the art study. The other is effort to force unnatural unions of art and manual training, resulting in misapplied designs, and tortured contours in objects lacking restraint or beauty. These are going as germs of spurious art into myriad homes to breed bad taste.

The work of the true art teacher is needed sorely in the land. America needs to learn the lessons of poise and the power for refined enjoyment that art alone can teach. Let us remember the words of Browning:

If you get simple beauty and naught else,
You get about the best thing God invents.

THE AIMS OF DRAWING AS A SUBJECT OF HIGH-SCHOOL INSTRUCTION

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The aims of drawing as a subject of high-school instruction should not, it seems to me, differ from the aims of drawing as a subject of instruction in the elementary schools.

True, the conditions which prevail in these two departments of public education compel the use of exercises and methods of instruction which differ greatly, yet, unless the study of drawing is to be considered as a complement, rather than a supplement, to the general course of study, I fail to see how the aim should differ save in degree.

It should be remembered, that the main object of the public school should be to develop habits of right living. This is no vague objective point. It is not enough to provide the pupils with a means of earning a livelihood; not enough so to instruct them that they will, when leaving school, be in the closest possible touch with their environment; nor even is it enough to develop their mental faculties to the greatest degree—to make of the pupils, as it were, highly developed machines for clear thinking.

If we, as teachers, having particular interest in but one of the many studies which form the general curriculum, are united on what should be the object of the public schools, how can our aims differ? How can the end in view of instruction be other than to assist in a general endeavor to develop power to provide for immediate physical needs, and to foster the desire to live worthily.

Surely drawing, with all that it implies, should not be taught with the end in view of imparting knowledge only, however valuable such knowledge may be.

Our instruction in drawing, which study includes the graphic expression of ideas, designing, painting, the study of pictures and other works of art and making—which is but another medium of expression, since practice alone in the use of tools cannot be the beginning and end of our work in construction—should be given primarily for the purpose of cultivating a love and appreciation for the beautiful in form and color.

With music and literature, drawing forms a triad, which, as a factor in the scheme for public instruction, makes for culture and refinement, as opposed to coarseness and vulgarity, greed, and selfishness. It should be linked to a higher purpose than mental development alone. Correlate it never so well with the other branches in the course of study; make of it, as far as it is possible to do so, a co-ordinate part of as highly a scientific scheme of education as you will, yet I beg that it be not forgotten that this study, with music and literature, are the only links which connect public-school education with that part of our existence which transcends mortality.

I know that art happens, that it cannot be taught, for it is but the expression of the individual. However, we have in our power the influencing of the individual and we can teach, at least, what art is and what it means; that it is the inheritance of all, be he prince or pauper; and that no dwelling-place is too lowly to give it welcome.

If we agree that behind the instruction in mathematics, English, bookkeeping, type-writing, etc., should be a force that makes for the creation of a desire to live worthily, inspired by aims which elevate and dignify; if we believe that, besides the instruction in those subjects which make for power to earn a livelihood, to make money, to take part

in the every-day affairs of our time, instruction should be given to develop a faith in the glory of the world and existence; that honesty, decency, generosity, and charity, coupled with the belief in immortality and love are essentials to right living, then, as teachers, we cannot be satisfied with instruction in art, which makes for intellectual development only. What becomes of the nobility of our office, if we forget that the heart as well as the mind needs attention?

As a nation, we are today under the curse of a detestable spirit of haste—a haste which throws to the winds ideals and puts a check on conscience. The standard of success appears to be wealth. The dollar seems to be the one desirable thing to struggle for. To prove this, we have but to scan the pages of the daily press, for the spirit of the people is reflected in its news. Haste, with its lure of gold, crushes from the heart of the nation all ideals which make for the glory of American manhood and womanhood.

As teachers, we should remember that we are in the service of the State and, therefore, of society. As teachers of drawing, of the arts, we should not forget that a knowledge of art, a love of and participation in art, makes for the blessings of existence and teaches that wealth will not satisfy every desire.

Therefore, I plead that art in its broadest sense be recognized in the course of study, at least in the high schools, where pupils of mature years are to receive instruction, and I urge that the subjects which make for art, for beauty of expression in any form, drawing, painting, designing, making, music, and literature be classed together. I plead that the aim of our instruction be to foster the pupil's inherent love of and appreciation of the beautiful in form and color, believing that such instruction will aid materially in developing the most effective and desirable human qualities.

It matters not what the details are in our outlines of instruction, it matters not what mediums of expression we may employ, but it does matter that our outlook, as teachers, be broad enough to see the true significance of drawing as a part of the public-school curriculum, and that we be concerned with how and for what purpose our instruction is given.

DISCUSSION

HENRY TURNER BAILEY, editor of the *School Arts Book*, Worcester, Mass.—Both Miss Church and Mr. Hall have used expressions which indicate that we have to consider two distinct phases of this topic; first, the ultimate aims of instruction in drawing, and second, the immediate aims.

Now, the first ultimate aim is to open the mind of the pupil to an appreciation of the beauty and significance of nature and the great space arts, that he may be enriched in his spiritual heritage, and inspired to a larger life. That he should be so inspired becomes increasingly important in America every year. The narrower the daily life becomes thru slavery to machines and corporations and trusts, the less leisure the workman has, the greater becomes the necessity for a vision of the finer things of life to save the soul alive. The "essentials" in American education are fast becoming the "fads" themselves.

The second ultimate aim is skill. Skill implies two elements—an invisible something with ideals and powers of command, and a visible something trained to obey. No body of thought furnishes more inviting and inspiring ideals than that of the space arts, and none furnishes more happy opportunities for securing muscular efficiency of the finer sort. Here drawing, as Dr. Soldan said, takes first place, always first, and manual training, second.

The third ultimate aim is creativeness. We do not want one generation merely to imitate and reproduce the excellence of the previous one; we want each to add excellences of its own—to push the bounds of knowledge farther, to raise the ideals higher, to embody more perfectly human hopes and feelings

These ultimate aims were all suggested in these three papers, and in the comprehensive and admirable paper of Dr. Soldan. They have been stated for us in poetic form by Emerson:

Can rules or tutors educate
The semi-god whom we await?
He must be musical, tremulous, impressional,
Alive to gentle influences of landscape and of sky,
And tender to the spirit touch of man's or maiden's eye—
But to his native center fast
Shall into future fuse the past
And the world's flowing fates
In his own mold recast.

In the light of these ultimate aims, we must determine the immediate aims, the aims of the regular teacher in each grade of the public schools. This is a most important topic, worthy the consideration of the department for an entire session. But for this topic we have no time today. I merely suggest that the sooner we determine the relative importance of color, clay modeling, paper cutting, nature drawing, picture making, picture study, design, geometric drawing, and the various kinds of handicraft so called, in the different grades; and the sooner we can tell the regular teachers when, for example, in pictorial drawing, their immediate aim should be free expression, when guided expression, when the truthful rendering of the exact appearance of a particular object, and when the expression of an effect of color or light; the sooner we shall win their hearty support and the sooner we shall justify our assumptions as teachers of teachers of art.

The three speakers this morning have made some suggestions as to the immediate aims in certain topics which are nothing less than revolutionary; viz., no pose drawing in primary grades; no landscape in primary grades; clay modeling for representations of life; perspective principles taught from pictures showing their historic evolution, not from models; color chords and schemes from copies, not from theories; magazine pictures as preparation for the study of the masterpieces; drawing in high school for its influence on the immediate life of the student. All these suggestions are significant and need free discussion at the next meeting of this department. Meanwhile, let us hold the ultimate aims in mind and scrutinize our own immediate aims and individual practices more sharply than ever.

DRAWING AND CONSTRUCTIVE WORK IN PUBLIC SCHOOLS AS SHOWN BY EXHIBITS AT THE ST. LOUIS EXPOSITION

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It is hoped that no offense will be taken that a St. Louisian is still talking about the late exposition. The educational exhibit marked such a decided advance in certain lines of education, that no apology is necessary, even at this late day. In no branch of work was this advance more strongly marked than in constructive work. No exhibit, however small, or from any country however remote, but had its showing of constructive work and drawing. There was one feature, however, that must have struck everyone who examined the various exhibits. Drawing and design were related to all forms of construction thru all grades until the high school was reached. Here it stopped; to continue again in some instances in the higher educational institutions. There were a few notable exceptions, but even these were generally exhibits

of special work, and not what may be called the regular class-work, So that it may be said in almost every instance, where the course of study of the manual-training school, or manual-training high school was shown, the correlation between design and construction carried out in the grade schools was omitted. There must have been a reason for this apparent discrepancy, and it is this phase of the subject with which this paper will deal. Whatever the practical advantages of such correlation (and there are many) the educational value is so apparent that it needs no comment here.

Back in the sixteenth century one of the world's greatest craftsmen, Benvenuto Cellini, refused to work from any designs but his own, even tho Raphael made them. This, the artist-craftsman's view, has been accepted as the best educationally. Does it not seem reasonable then that, if in the lower grades this idea of the union of design and construction can be successfully carried out, in the higher grades, where a much greater degree of skill can be expected, much better results should also be obtained?

But as stated, we come now to the break in the chain—or, rather, the end of it. A slight inquiry as to the aim of the manual-training school may help to locate the cause of the trouble. In the first place, the manual-training school is not a trade school. Not because that idea may be bad pedagogically, but because, as the school is now constituted, it is an impossibility from lack of time. So the aim has been to teach processes, the use of tools, the solution of the simpler mechanical problems and to secure good workmanship. The educational value of these aims upon the formation of character has not been over estimated, and the mechanical side has been well taught. The results, æsthetically, have been practically nothing.

The reason is that the shop instructor usually has claimed that two things cannot be taught at the same time. He has such decided and definite problems to solve that the larger aspects of the subject are often lost sight of. He might put forth this argument: That as an artist will always prefer a small sketch or fragment that has painter-like qualities to a vast "subject" picture of mediocre execution, so the craftsman will look at a small fragment well executed and will pass by larger pieces of only passable construction, no matter how good the design.

The divergence from the right path begins when it is taken for granted that art and mechanics are necessarily antagonistic. No more striking instance to disprove such an idea could be found than in the recent achievements of the Japanese. All art is closely connected with mechanics.

It is sometimes forgotten that the great artists, like Michael Angelo and Leonardo da Vinci, were the greatest engineers of their day. The works which we admire today are great because their producers were great in other ways. Design and construction are so interwoven, that it seems strange they should ever have been separated. Strange, that is, unless one has taught in the manual-training shop. There the difficulties to be solved, and the short time in which to solve them have usually driven all other ideas out of consideration.

A simple remedy is to put a Benvenuto Cellini in each shop, a man who is a craftsman to the finger tips; an artist always. The supply of Cellinis may be limited, however, so perhaps some other plan may be more feasible; and one fortunate phase of the subject is that, to introduce the æsthetic element, there is no need of any change in apparatus or tools which constitute the equipment of the manual-training school.

In the first place, it is hardly practical for the first year or so, to have the pupils do constructive designing. By this is meant, it is not practical to have the entire class do it. For while no two pupils are alike, and less so in shop-work than in any other study, still all the pupils should have the same opportunity. They will each make different use of it. But without a definite course of study in any branch of knowledge, thoro instruction is impossible with the number of pupils constituting a class. This by no means eliminates individuality of treatment.

There should then be a series of models devised that will embody certain advanced problems in construction. They should be good in form, line and proportion, so that the mere handling of such objects may be productive of good results in the appreciation of beauty. These models should lend themselves to some form of decoration, such as carving or inlaying in the first year. In the second year, where turning, pattern-making, and molding are taught, constructive designing in some degree may be introduced. For instance, push-button plates, door-plates and various other small articles of building hardware can be cast, as well as the usual forms of machine patterns.

The forge shop has always had more freedom in its work than any other shop, but the artistic result has usually been very slight. Because iron can be bent and twisted is no reason why it should be drawn into the entanglement of curves that usually characterize the products of this shop. Here is the best opportunity for the correlation of design and construction within the scope of the manual-training school. The processes are few and quickly learned, but the variety of results can be made very great.

In the machine shop, there can be no design in the usual meaning of the word. Mathematical law is the ruling factor, but there is no manner of doubt that the pupil whose faculties have been aroused and improved by the various forms of designing he has undertaken will do better machine work than the pupil who has had no such training. The two faculties are not incompatible. For the one who can originate a design for wall-paper, furniture or machinery, there can always be found the hundred who can carry it out and the thousand who can and do copy it. Originality cannot be taught, but it is because no opportunity is given for the development of it when it lies dormant that the average manual-training school must plead guilty.

However, the easiest thing to do is to criticise, and this is unpardonable unless some remedy, however slight, is suggested. A visible realization of certain ideas is the best way of presenting the remedy. In one of the manual-

training high schools of St. Louis has been tried for the first year the experiment of uniting the work in drawing and construction. Upon request I have brought some of the more portable objects, and will be greatly honored if any who are interested will inspect them. The forms shown are by no means regarded as final. They are simply the first attempt at the solution of a problem. It may be well to say a word in explanation of them. In the first place, they represent a definite course of study which all pupils accomplish. Secondly, there is a variety and individuality that is limited only by the number of the pupils, and last, and not least, the workmanship is exceptionally good.

THE TEACHING OF APPLIED DESIGN

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In any attempt to describe the practice of an art, the briefest demonstration is of more value than the most elaborate statement. The demonstration may be made concrete and specific, the statement must often be general. Without objective illustration there is a great temptation to elaborate explanation, hence it is that writers, who bravely start to treat of performance, not infrequently stray from the straight road of practice and lose themselves and their readers in the mazes of theory.

Effort will be made to confine the following discussion to the limitations of the title—to the teaching of design. No time will be given to the definition of elementary principles and it will be assumed that the reader is familiar with the subject's terminology.

Essentials to successful practice.—Design is now taught in a large number of elementary and high schools. It is a technical subject and some of the difficulties in its development rise from its technique. Many, however, are born of poor teaching—of a failure on the teacher's part to recognize the factors which in any specific problem determine the steps necessary to its comprehension and solution by the pupil.

A design which is to be applied, must primarily consider both the purpose of its application and the nature of the form it is to decorate. The first question must always be: Is the problem a proper one? Should this form be decorated; and if it should, what shall be the nature of the decoration?

An adequate form of decoration decided upon, one must make the problem plain to the pupil, and set for him the limits within which he is to display his invention and individuality. The greater part of the difficulty experienced by the average teacher rises from her failure to define and definitely limit the problem which the pupil is to undertake. Success lies in such limitation and precise definition.

Ability to design depends in no small measure upon a store of impressions

of decorations seen or made. The young designer has but a scanty fund of such pictures in his mental exchequer, and of the few he has, the greater part are derived from bad examples which everywhere surround him. Hence if he is to do good work, he must be offered many and good illustrations, that these may serve to illuminate the problems he is to undertake.

Lastly, it may be said that she is a wise teacher who carefully divides the steps of procedure, and insists that each be developed in turn. Proceeding in such fashion, she has it in her hands to control progress and to enforce critical consideration of each step by each pupil. Nothing is more conducive to success in class-work.

Included in the above are the four essentials to success in the teaching of design in the elementary schools; summarizing them it may be said that:

1. The problem to be developed must be a proper one, i. e., one in which applied design is appropriate.
2. The limitations of the problem must be clearly seen by the teacher, and there must be a precise and definite statement of the work to be done by the pupil.
3. Abundant illustrative material must be presented to the child.
4. Every problem must be developed in progressive steps and the pupil must be called upon critically to consider his work at each stage.

The propriety of the problem.—When designs are applied to constructed forms, the question of the propriety of the problem will be determined by the purpose for which the form is to be used. Simple forms require simple designs; many constructed objects are better without decoration. The decision in any special case must rest with the teacher and not with the child.

The question of the material used in the form to be decorated, also conditions the problem. The elaborate ornament which might serve satisfactorily as a stamp on a printed page is ill adapted as a problem for leather work and totally unsuited as a decoration for a wooden model; the delicate pattern, pleasing when produced on some smooth surface, is often inadequate when duplicated on a coarse canvas or a heavy burlap.

The definition of the problem.—The problem decided upon, the teacher must define it for the child. As a problem, it should be stated with the precision of a problem in geometry. Much depends on this. The child is not to be simply told to make a design, but must be informed exactly as to its nature and purpose. He must be prepared to understand both its necessity and fitness. As presented to him, the problem should be the development and refinement of certain space relations. He should, in other words, be definitely limited in his work, and only within the limits stated, should he be expected or permitted to make personal variation; unless so advised and restrained, he will not be prepared comprehendingly to undertake individual modification. The greater the opportunity afforded him for specific criticism, the greater the likelihood of his success. Beauty in line is a subtle thing and the beginner will have work enough to secure it in two or three main lines of his pattern. If he attempt this and no more, the teacher can aid

him. Should he assay anything savoring of elaboration, he is foredoomed to failure.

The illustration of the problem.—Adequate illustrative matter was noted as an essential to success. This is not to be offered to be copied, but to assist in clarifying the problem, in making plain just what is to be attempted. Not only should designs illustrating general principles be offered in the form of good prints or patterns, but others should be presented, directly illustrative of the problem which the pupil is to solve.

It is not sufficient that the pupil merely observe these illustrations. He should be skilfully led to make an analysis of them, that he may understand just what principles are shown and what steps have been taken by the maker of the illustration. Design is largely a matter of recombination. An original pattern is only one in which old forms have been used in new and personal ways. The most successful designer is one whose brain is stored with many elements and who is ingenious in their reproduction in novel form. For the child, good examples are necessary that he may see how varied a design may be made within given limitations, but the examples offered should not be hung where they will serve as copies. It is better that they be analyzed and studied, then removed, that, from the immediate background, the child may draw inspiration for personal practice. Thus, good examples are necessary, but more essential still, is the orderly development of the steps or phases thru which every design must pass in its proper evolution. That these steps may be understood, it will be well briefly to consider the nature of design and what makes for its successful application.

Design—"pure" and "applied."—Design defines the relations which maintain between associated masses. The moment any space is divided by a line, or has introduced into it a spot, masses are formed within it—that moment it becomes a design. The relations of the lines and masses used are expressed in terms of balance, and rhythm, variety, and unity. Pure design, so called, concerns itself with these terms and their illustration. As principles, they should be taught to elementary pupils thru practice. They should be presented not as abstractions—as illustrations of theory—but as the grammatical parts of speech of design to be practically learned thru the necessity for their employment.

Definition of applied design.—Applied design concerns itself with a given space which has been divided into masses. The term defines the relations which are developed between the masses so formed. The more harmonious the relation the better the design. Pure design deals with the abstract; applied design involves reality. It offers abstract principles in concrete form. It is objective, and teaches beauty in use. It may, indeed, should be used in beautifying things of service in the daily life of the pupil. So used, it relates itself naturally to the teaching of other subjects of the school curriculum—construction, color, and mechanical drawing—giving to their instruction point and interest.

Structure.—The most important element in applied design is structure. Upon structure—the shape and boundaries of the space in which the pattern is to be developed—the nature of a design depends. In every applied design we look to see the structural elements of the space supported by the decorative. No matter how ingenious the use of conventional forms, no matter how striking the lines and smooth the rhythms, no applied design which is structurally weak can be satisfactory.

Line in design.—The structure of a design is primarily dependent upon the number and movement of the lines which determine the masses. These lines control the observer's eyes. One cannot help looking along them and being directed by them in one way or another. All lines condition movement and, where they parallel one another, they strengthen and hasten it. Each additional line assists the eye to look in the direction indicated. This enables the designer to make, at will, movements fast or slow. No line may be ignored, nor may one be added, without careful consideration of its part in developing rhythmic relations between itself and other lines or spots.

The designer thus has it in his power to make the observer look where he will. He can lead the eye from one line to another; can give strength and simplicity by emphasizing elements that bind together and support the form and interest by felicitous rhythms and smooth transitions. Conversely, he can cause discomfort by forcing the eye to make abrupt changes, and positive dissatisfaction, by leaving it to wander aimlessly in a mass of unrelated forms.

Nature of applied design.—Applied design concerns itself with the development of masses on a given surface. No mass can be introduced in a space without creating other masses more or less related, yet distinct. The simplest of applied designs consists of a single mass introduced within a space. In practice, this mass may take the form of a bit of printing upon a card or page or an ornamental unit placed within a border. In familiar language, such unit is spoken of as "the design," but in itself it has no claim to the title. The design is the relation maintained by all the masses of the pattern.

Each separate mass exerts more or less attraction depending upon its size and nature, and upon the number and variety of the subordinate masses which it creates. Every design, therefore, has one or more centers of interest to which the eye is led by the rhythms among the masses. Unity requires that there be but one principal center, tho sub-centers may be developed. In practice, multiple centers are to be avoided as they tend to distract attention, to weaken structure and to destroy repose.

In the primary division of a space, the masses to be developed will depend upon the nature or use for which the design is planned. If a single spot is introduced in a space and the eye grasps easily all the masses formed by the unit, then but one center of interest is necessary. If, however, one of the related masses appears disproportionately large, the eye finds it empty and displeasing. That it may be adequately filled and the interests of the pattern balanced it then becomes necessary that a second spot be used.

Steps in development of problem.—The first step, in the practical development of any problem, is the creation of the main masses of the pattern. The pupil should be led to see the necessity for this, thru the examination of examples based on simple space relationships. Simple book covers and programs will serve excellently for the purpose, while more elaborate patterns should be analyzed to make plain the fact that, at base, they are mass arrangements.

In some very simple designs, no elaboration of the primary mass arrangement is necessary, but, in most cases, the masses which are introduced to decorate a given space will require further division into spaces, which may be filled by conventionalized natural elements. The second and third steps, therefore, in the making of a design must be the division of the decorating mass or masses and the refinement of the elements so formed, while the fourth step should be the introduction of conventionalized forms, if such are to be used, on the basis of the division already planned.

These four steps are to be developed in the order named. The pupil being required: first, to plan the masses of his design; second, to divide into related elements those which are to serve decoratively; third, to refine all the relations thru the creating of subtle rhythms; and fourth, to adapt and introduce the material elements it may be desired to present. So taught, he will learn to think as he should think—in masses, he will learn to work as the practiced designer works—constructively. His eye will become critical of related forms. He will develop what may be termed the decorative vision, the power to see all forms about him as elements of design. When this sense dawns, both nature and art will appear to him in a new light. He will see design where he has never seen it before; the world will be revealed in pattern.

STEPS IN CLASS-ROOM PRACTICE

The development of masses.—The first step in any design—the planning of masses—should be prefaced by a word of explanation to the pupils. They should be made to understand that this is essential and that in itself, by cutting up the original spaces into forms of various shapes and sizes, it adds interest and results in space relationships. Emphasis is to be laid upon the fact that no matter what the resulting design, it must be characterized by structural qualities which will aid in maintaining the strength of the inclosing form.

Sequence of problems.—The first type of problem should be the simple division of any oblong which fills a given space (as the cover of a small card case), and the next, the introduction of a rectangular mass into a larger oblong (as a book cover) in which, tho much smaller than the inclosing form, it still forms a center of sufficient interest to make necessary no other element to attract the eye.

The third problem may properly be one which requires a balance of interests, to be secured by the introduction of two or more masses of different sizes and shape. This may be followed by one in which the decorating unit

is no longer a simple mass, but takes the form of a strap-like element which extends about the edges of the inclosing form and creates a panel within.

After the pupil has had practice in making designs of the foregoing nature, he will be prepared to solve problems involving varied masses and panels. Each of the problems presented should be illustrated by two or three typical solutions and, if more than one arrangement is satisfactory, those to which the choice is to be limited should be indicated, and the pupils further apprised as to the limitations beyond which they should not proceed in making individual variations. All the emphasis will thus fall upon such variation. This is intentional. It is proper that the beginner in design should have the problem presented to him in a very simple and concrete way, and that he be brought to realize that his critical attention must be focused upon one or two important questions in it.

Structural questions.—In designs in which there are two or more masses, care should be taken to secure the rhythmic relations of these masses. To insure comprehension of this idea, it will be found helpful to have the pupils illustrate their understanding of rhythm by arranging on the blackboard or in at their seats small rectangular blanks of paper within outlines of different size. It is to be noted in this connection, that the constructed forms to which it is at times desired to apply designs may include elements—as binding and corner pieces—which enter into the pattern and must be included in any scheme of decoration.

In general, it may be said that simplicity and strength will be secured by planning but few masses, by emphasizing rhythmic elements, by avoiding weak and uncertain curves, by limiting the size of the decorating units in all large spaces, and contrasting such units with large and simple masses. Thruout, the pupil should constantly be made to understand that it is the relation of the masses which constitutes the design. He must learn to think in masses and must learn to work with an eye intent on securing structural beauty as the first element in his pattern.

In the case of advanced pupils, practice should be given in determining the masses which appear in patterns made by professional designers. These patterns in the form of posters or prints may be presented to the class, and the pupils led to see the mass relationships by closing their eyes until the smaller details are obscured and the basic elements of the design appear.

Thruout the first step in the problem, emphasis should be laid on the principles of balance, rhythm, variety, and unity. The chief errors made by the pupils will be in arrangements which violate these principals and show designs crowded or empty, monotonous or scattered. All possible errors cannot here be named, but by referring the pupils to good examples and by causing them to analyze their own problems in the light of such suggestions, they may be led to detect their own shortcomings.

Division of the mass into decorating elements.—Once the size and placing of the decorating mass has been decided upon, there arises the question of

its division into elements. The purpose of this is to be explained as the giving of additional interest to the mass, the attracting of the eye by pleasing lines and varied spaces.

A rhythmic relation of the elements created within the decorating mass is only next in importance to the relation of the mass itself to the other masses of the design. It must be understood that any movement within the mass should serve to relate the elements so created to one another and to the space which the mass fills; such movements in other words, must make for rhythm and for the structural character of the design as a whole.

In the practical development of minor elements, it will be necessary to illustrate to the pupil the desirability of working on constructive and connected lines, the first supporting the edges of the outline, and the second carrying the eye between opposite elements. Lines of this nature the pupils should plan as tentative divisions. They should appear as mere threads upon the mass. In the more elaborate patterns of the higher grades they may cross one another in various directions and so form what may be called "the net." This is analogous to the square underlay offered by some teachers as a device to suggest possible divisions of the mass.

It will be necessary in this connection to illustrate the principles of growth, or the rising of one mass out of another. This in the form of radiation may first be shown in single units or spots and later in more complicated elements. Growth within a pattern assists in securing both rhythm and unity.

After the mass has been tentatively divided, it should be searched carefully to determine which of the elements that now present themselves are to be retained. These decided upon, the lines which bound them should be strengthened and the unused lines of the net erased.

If carefully followed, the foregoing steps will leave the pupil with decorative elements rhythmically related and exactly occupying the space of the original mass. To lend variety to the problem, it will, as a rule, be better to separate the elements one from another. This may be done by doubling the lines which divide them. Care should be taken in so doing that the spaces or divisions formed are so narrow that no element, which is a part of a mass is left isolated.

In the division noted above, opportunity will offer for refining the lines which bound the elements. Such refinement is to be secured by emphasizing the relations which exist between the separate masses and by here and there altering boundary lines so that more subtle rhythms may be secured. Throughout this procedure, the necessity of securing both harmony and variety of movement must be kept in mind. One of the most frequent errors is a sacrifice of unity on the pupil's part, that he may gain variety; instead of one characteristic line or movement appearing both in major and minor forms, is it not unusual to find in the latter movements quite unrelated to the general nature of the design. This is to be corrected by causing both large and small elements of the design to reflect the spirit common to the whole pattern. There is no mixture of styles in the good design.

Introduction of subject matter.—The introduction into the elements planned of conventional forms or "subject-matter" is the final step to be taken in the development of the more advanced problem. It is a matter of adaptation rather than of conventionalization. Few natural forms can be given to pupils to conventionalize and it is quite sufficient to the purpose that the latter become skilful in the adaptation of those which are presented in charts, already much simplified. Seed vessels, bud, stem, leaf and flower elements are all useful for this purpose; insect and animal forms may also be employed.

The adaptation of any of these requires that the specific form to be used, be introduced into the spaces which offer in the design, without alteration of the general relations of such spaces to the pattern; that is, the mass arrangement may have the conventional elements introduced into it, but such introduction must not interfere to any considerable degree with such arrangement. It is to be noted in this connection that it is possible to introduce subject-matter into a mass arrangement which has not had the elements separate one from the other. When this is done, the design will appear as a solid form, made up of subject-matter, or with such matter superimposed upon the general mass below.

Color.—General considerations of color cannot be here undertaken. It may be stated, however, that success in the use of color in design will depend as much upon a nice sense of color values as upon the laws of color harmony. Applied designs, for the most part, must partake of a mural character, that is, they must appear to be part of the surface on which they are found. This they can do only when the colors of the different parts of the pattern approximate one another in value. If all are identical in value, the most intense will attract attention; intensity alone will scarcely serve to distinguish the design, unless a strong outline is used to separate the decorating mass from the background.

As a rule, the colors of the decorating unit must be approximately of the same value, while as a whole they are higher or lower than the background. If such relation is not maintained, the design will not appear flat, those parts highest in value standing out in contrast to neighboring elements. In practice, a design which lacks harmony thru differences in value, may be bettered by glazing down the highest elements. A skilful designer will sometimes intentionally lay in all parts of his design in intense colors and subsequently glaze them down with repeated washes. This gives a tonal quality to the design, not to be obtained otherwise.

The development of critical power.—Taste, it was noted, is the development of a critical judgment thru repeated discrimination. As one of the principal ends to be secured in the teaching of design is the development of this power, it should be the practice thruout the solution of every problem to require criticism at the completion of each step. This criticism is to be secured from the class by hanging up before it the best and poorest results secured. These

should be reviewed in the light of the principles which have been presented and the pupils should be required to criticise them in terms of such principles. Specific effort should be made to develop power to judge according to definite standards. It is not sufficient for a pupil to say that a design is bad or that he does not like it; he should be called upon to state why it is good or bad, and, if unsatisfactory, how it is to be remedied by alteration in structural nature, in "balance," "rhythm," "variety," or "unity." These terms the pupils should learn to use comprehendingly.

SUMMARY

To summarize briefly, one may say that the foregoing is a plea for the teaching of definite principles and for their definite application. It is not recommended that many problems be solved during the school term. In many cases, all that is possible is the making of one or perhaps two designs. These should if possible be for application to some article of use in the school, for there can be no more significant factor in a lesson in design than a knowledge that such lesson is making for the beauty of a thing which is to form a part of our everyday surroundings. The problem once decided upon, the four steps named should be taken in order, the masses introduced, broken up, refined, and filled with subject matter. These steps will take several lessons, and the development and application of a color scheme as many more. Far better, however, that one good design be made, than many patterns leading to no specific power of execution or of criticism.

DISCUSSION

MRS. IDA HOOD CLARK, director of manual training, public schools, Milwaukee, Wis.—In the midst of our present wealth of educational theories, the need seems not so much for any addition to them or of any restatement of them as for a little genuine wholesome action in carrying them into effect, and yet, this problem of the education of little children, tho so very old, and so very much discussed is always new and never exhausted.

Since I have been in charge of manual training for a number of years, it would be quite natural to think I might regard manual training and art instruction, for they are one and the same thing, as the salvation of childhood. This is far from the truth, for I think we should only defeat our efforts by advocating any special subject, however commendable in itself. What we are after is culture and the power and perfection that comes thru culture. It is not a new motive, but one that underlies all that the new movements in education, of which art and manual training and the kindergarten form so prominent a part.

We must, then, get this culture by surrounding the child with those influences that make for culture. What we must do, then, in educating our children, is to give full and free play to their emotional life; we must consciously and deliberately encourage feeling and sentiment, and create the greatest possible number of wholesome desires, and this is very easy, because all we have to do is not to suppress it. We should value this emotional side because it all leads to action, and to the very sort of action that is educationally most valuable—to that which is self-prompted.

The children themselves suggest the right method in education. What they want most is to be employed, and with something that interests them. Why do the children

prefer a country farmhouse to the city home? Because there is more to do there. This is the great fact that the new education has seized upon. It attempts to make knowledge real to the children by making it a part of their experience. And to do this, it enlists the life forces on its side, instead of arraying them against it. We ought to use our skill as teachers in directing the wonderful self-activity, that in children is already a reality. We are to provide the place for its exercise, and decide, in a large measure, what shape it is to take. But we ought always to do this with a sympathy and co-operation of the child, and never against his protest. It is a bad practice in education to attempt to control the occupations and activities of children and neglect the motive power back of it all. It is a good practice to accept the desires of children and allow them wholesome expression. A large part of childish instinct is the desire to make things, to construct something; it is only by such experience that the child comes to know the great outer world and finds himself in it. The work of education consists in directing the activities of the children into those channels which will yield the most helpful reactions, by concentrating the wandering attention, by increasing the delicacy of touch, by cultivating the finer and finer discrimination, by training the observation, by developing, as far as may be, each and all of the faculties, we make possible that unfolding and perfecting of the human spirit, that evolution of human nature, which is in the end—education.

Our schools have an economic, an educational, and an ethical purpose; while we seek to develop the mind, and thereby give it knowledge and skill that enables one to be self-supporting, we must at the same time, develop the moral sense as well. So, in this educational scheme, what is the function of handicraft? We have shown its value in economic results; business men, educators, far and wide, all admit the influence of art instruction on the industrial world.

And now we are striving to use art and manual training as a means of expression, that shall have a still larger influence in the educational world, as the means of developing thought, and of expressing this thought in connection with any subject in the curriculum. So we must use this handicraft as we now use language, as a means of developing and imparting ideas—as a medium of expression. Then, if it serves this purpose, no matter what its technical deficiencies are, it has an educational value.

So this is the ideal in modern education; the practical question remains, "Who shall carry it out?"

It would be unfortunate to intrust this most important interest of society to any but the best men and women; not those who know the most, but those who are the strongest, the most beautiful, the most lovable, the most cultured, as well as the most skilful and best informed.

In this newer education, the need for wise and beautiful teachers is especially great; for observe the teaching material that is available—it is difficult to find men and women of broad culture who can also use their hands. The artisan habit of thought does not make for the unfolding and perfecting of a human spirit. His thought is directed solely toward the *product*, and his skill is in handling the dead material. What we want is a teacher whose thought is on the *process*, whose cunning is the handling of the living material—the children—that the proper agents for carrying out this method and gaining this end, are the best men and women that society has produced—the very flower of the race—men and women of large experience and broad culture, men and women to whom life in general has been kind, those who have caught sight of the complete life, and those who would have this vision of life prevail.

JAMES HALL, director of art department, Ethical Culture School, New York city.—In saying that a problem in design may be stated with the precision of a problem in geometry, Dr. Haney is obviously regarding design as a science. In taking this view he agrees with the other recent authorities upon the subject, but we are immensely indebted to Dr. Haney for the clear and convincing statement that he has given us of his methods of teaching the principles of applied design.

The discovery that these principles can be exactly and scientifically stated is, without doubt, of the greatest value to art education. Moreover, it makes it possible to teach correctness of artistic expression by and to those who may have no great capacity for artistic feeling. It may enlist interest in design and lead later to a feeling for good art.

But does not the science of design bear a similar relation to artistic expression that the science of language does to literary expression? That it is desirable to teach correct speech, no one would gainsay. That formal grammar has its place is generally admitted. But, of course, the teaching of English means far more. It means bringing the children into contact with the classics of the language as an inspiration in themselves, and as a means of developing the ability for forceful and vivid expression on the part of the children.

I know there is danger in reasoning by analogy; but I believe this analogy will hold good in the matter of teaching design. Dr. Haney has said that good illustrative matter must be presented to pupils if they are to evolve good designs. He further tells us, that example counts for much in such practice, and that the illustrations offered should relate specifically to the problems. These statements may be interpreted so that they cover the point I am attempting to make. In practice, however, the examples offered pupils in modern school-teaching of design, fall far short of being classic examples. They are much more apt to be examples worked out to order by the staff of supervisors. Let us be thankful that they can make as good designs. That these are not frequently of unusual merit I do not wish to imply, but would the local teacher of English offer his own productions for the sole study of his pupils? Does he not rely largely on those things that time has proved? In truth, the study of the classics is fundamental, is it not? So it seems to me in the teaching of design, the rich heritage of the past should be made to yield up its wealth of suggestion and inspiration. The reaction against copying lifeless and unrelated scraps of historic ornament has almost swept away any study of the classics of design in public schools. There is need of a revival of the teaching of the master examples of design. This teaching, however, should be vitalized by considering the ornament in relation to its environment, and to the material in which it appears, and by leading the pupils to see how beautifully the past artists solved their problems of applied design. It should give them insight into the creative impulse. It should be our aim, in design teaching, to lead the pupils to appreciate a beautiful style in design. This style is the *art* and is largely outside the pale of the science of design.

There are, then, two things to teach—the one which Dr. Haney has so admirably elucidated, the making of a correct design, the other, the appreciation of the real beauty of design, which requires study of the finest examples. These two thoughts must be kept in mind thruout the teaching.

DEPARTMENT OF MUSIC EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY MORNING, JULY 5, 1905

The department was called to order in the First M. E. Church, Asbury Park, N. J., at 9:30 A. M., by President W. A. Wetzell, who announced that he would not read his address as announced on the program. The program was then presented as follows:

Music—organ solo—by Mrs. Bruce S. Keator, Asbury Park, N. J.

"The Mission of Public-School Music," by A. E. Winship, editor of *Journal of Education*, Boston, Mass.

Music—vocal solo—by Miss Laura Minturn, supervisor of music, Asbury Park, N. J.

"Some Questions Involved in Making Music a Major Study in Public Education," by W. Scott, secretary, N. E. E. League, Boston, Mass.

At the conclusion of Mr. Scott's paper, the president announced that there would be two sessions on Thursday, the first one to be devoted to the topic of "Children's Songs;" and that Miss Eleanor Smith, Mrs. Jessie L. Gaynor, and Mrs. Marie Burt Parr would give talks on the subject, illustrating them by singing some typical songs for children. He also announced that in the afternoon of Thursday a class of children from New York city to illustrate the paper read by Dr. Frank R. Rix would be present, and that certain phases of rhythm work would be presented by Philip C. Hayden, Keokuk, Iowa. The completion of the program followed the announcements:

Music—organ solo—by Mrs. Bruce S. Keator.

"The Correlation of Music With Other Branches of the School Curriculum," by Mrs. Elizabeth Casterton, supervisor of music, Bay City, Mich.

Discussion led by W. A. Putt, supervisor of music, Cleveland, Ohio.

Music—vocal solo—by Miss Laura Minturn, Asbury Park, N. J.

President Wetzell appointed as a nominating committee Dr. Frank R. Rix, supervisor of music in Greater New York; Mrs. Constance B. Smith, of Illinois University; and A. J. Gantvoort, of the Cincinnati College of Music.

SECOND SESSION.—WEDNESDAY AFTERNOON, JULY 5

The second session was opened at 2:30 P. M. with a song by Mrs. Mabel Shank, who rendered in a delightful manner Barratt's "The Scent of an English Rose," and in response to an encore, gave "They Say," by Randegger. Later in the program she sang "My Bairnie," by Vannah, and the "Carmenia Waltz," by Wilson, which were listened to with the greatest pleasure. The program was then given, as follows:

"Music as a Factor in Culture," by Charles Edward Locke, D. D., Brooklyn, N. Y.

Music—vocal solo—by Mrs. Mabel Shank.

"Relation of the Grade Teacher to Music Instruction in the Public Schools," by C. A. Fulmer, superintendent of city schools, Beatrice, Neb.

Discussion was led by Miss Julia E. Crane, director of Normal School of Music, Potsdam, N. Y.

Music—vocal solo: "My Love Nell," Fox; "Auf Wiedersehen," Bendix—by Anthony E. Carlson, Boston, Mass.

ROUND TABLE.—THURSDAY MORNING, JULY 6

A called meeting of the Department of Music Education was held at 9:30 Thursday morning, for a symposium on children's songs. The session was opened by Miss Eleanor Smith, of Chicago, who gave an extended talk on the value of a high class of music associated with words of literary excellence in forming the character of a child. The address was scholarly, musical, and thoroly convincing to the large audience present. Miss Smith then illustrated her address by singing a number of beautiful child's songs.

She was followed by Mrs. Jessie L. Gaynor, the well-known composer of children's songs, St. Joseph, Mo. In opening her address, Mrs. Gaynor referred most gracefully to the work of Miss Smith, calling attention to some of her most effective compositions for children.

Mrs. Gaynor was followed by Mrs. Fanny Snow Knowlton, Cleveland, Ohio. After an introductory talk, Mrs. Knowlton sang several beautiful songs from her own collection, *Nature Songs for Children*, the songs and the singing being full of charm.

The last exercise of the morning was given by Mrs. Marie Burt Parr, supervisor in the primary grades, Cleveland, Ohio. Mrs. Parr gave a most excellent talk on the subject of children's songs, and illustrated them by singing several by Mrs. Anna Goedhart.

This session was one of the most inspiring and instructive of the series held by the department.

ROUND TABLE.—THURSDAY AFTERNOON, JULY 6

A second called meeting of the department was held at 2 o'clock in the afternoon to hear demonstration work by a class of children from Flushing, Borough of Queens, L. I., under the direction of Dr. Frank R. Rix, director of music, public schools, Boroughs of Queens and Richmond, New York city, and Miss Bowman, special teacher; and by a class of eight children from the schools of Paterson, N. J., under the direction of W. Seymour Twitchell. A demonstration on the subject of ear-training and rhythm form was given by Mr. Philip C. Hayden, Keokuk, Iowa, by one pupil, whom he had brought with him for that purpose.

At the conclusion of the exercises the following resolution was offered by Mr. Philip C. Hayden, and was passed by unanimous vote:

Resolved, That the exhibition of excellent tone, and the splendid sight-reading of music, made by the class from New York, deserve the hearty commendation of this department.

That the company here assembled thank Mr. Rix and Miss Bowman for the convincing demonstration, and heartily congratulate them; and be it further

Resolved, That we extend a cordial vote of thanks to the children who gave the demonstration.

Mr. Hayden's demonstration of ear-training and rhythm work consisted of an informal talk in which he illustrated the principles of pedagogy as applied to music teaching. Owing to the late hour at which the program was finished, there was no discussion of this demonstration work.

THIRD SESSION.—FRIDAY MORNING, JULY 7

The program was opened at 9:30 A. M. by a violin solo played by Miss Olive Whitely, of Boston, who very beautifully rendered "Adoration" by Borowski. The program as printed followed:

"Some Type Studies That Have Been Found Helpful in the Teaching of Music in the Schools," by Walter H. Aiken, supervisor of music, public schools, Cincinnati, Ohio.

Discussion led by W. A. Putt, supervisor of music, Cleveland, Ohio.

Report of the Committee on the Proper Literary and Musical Training of the Music Supervisor: His Examination and Certification, by the chairman, Thomas Tapper, editor of *Musician*, Boston, Mass.

Music—"Allah," Chadwick; and "Sweet is Tipperary," Fisher—by Miss Margaret M. Leverick, of Brooklyn, N. Y.

Report of Committee on What Results Should Be Obtained in the Various Grades of the Public Schools, by the chairman, Philip C. Hayden, editor of *School Music Monthly*, Keokuk, Iowa.

Mr. Leo R. Lewis, of Tufts College, offered the following resolution, which was seconded by Mrs. Constance B. Smith, and passed without dissent:

Resolved, That it is the sense of this meeting that, in all future sessions of the Department of Music Education, all papers and discussions should have direct bearing on the equipment and the problems of the supervisor and the grade teacher; and

That the presiding officer, by careful assignment of time to the principal speakers, and by definite restriction of time for others, see to it that there be ample time for discussion.

On motion, the report presented by Thomas Tapper, of Boston, chairman of the committee, was adopted, and the committee was directed to publish the report, adding some supplementary material, and to circulate it among the music supervisors of the country.

On account of lack of time to consider the report represented by Chairman Philip C. Hayden, the committee was continued for another year, with instruction to send out its report at least one month before the next annual meeting, so that supervisors may become familiar with its contents previous to the meeting.

It was moved by A. J. Gantvoort, of Ohio, and passed unanimously, that at the next annual meeting an entire session be given to the discussion of this report.

The following resolution was presented by Dr. F. R. Rix, seconded by Mrs. D. Richardson Lyeth, and unanimously passed by the department:

Resolved, That the thanks of the Department of Music Education be extended to Secretary Hayden for his devotion to the interest of the Department of Music Education, and for his most excellent demonstration on the subject of ear-training and rhythm form given Thursday afternoon.

Mrs. Frances E. Clark presented the following resolution, which was also unanimously adopted:

WHEREAS, Our honored president, Mr. Wetzell, by his untiring labors in our behalf, has brought to our hearing a larger number of the most eminent and accomplished people in various lines of musical activity;

Resolved, That this Department of Music Education of the National Educational Association tender to Mr. Wetzell our most sincere and hearty thanks for this delightful, comprehensive, and instructive series of programs, which have been successfully carried out in the meeting of 1905.

A. J. Gantvoort moved a vote of thanks to all those who had contributed to the pleasure and instruction of the department by taking part in its program, by reading papers, playing, singing, or lending their assistance in other capacities.

The report of the Committee on Nominations was presented by the chairman, Frank R. Rix, as follows:

For *President*—Hamlin E. Cogswell, Mansfield, Pa.

For *Vice-President*—Mrs. Frances E. Clark, Milwaukee, Wis.

For *Secretary*—Philip C. Hayden, Keokuk, Iowa.

On motion, the secretary was instructed to cast the unanimous ballot of the department for the nominees. The ballot was so cast, and they were declared duly elected.

Miss Lucy Cole having presented a memorial in commemoration of the departed Mrs. Emma A. Thomas, it was read by Mr. Gantvoort and unanimously adopted:

WHEREAS, Providence in its wisdom has removed from our midst one of the most faithful and loyal members of this section, one who, in her own personal life, stood for the highest ideals of womanhood, and who was also a devotee to her chosen life-work—school music;

Resolved, That we, the Department of Music Education of the National Educational Association, hereby express our regret at the great loss we have sustained in the death of Mrs. Emma A. Thomas, of Detroit, and that a copy of this resolution be sent to the members of her family.

The motion was made by Mrs. Casterton, and seconded by Mr. Putt, that a committee be appointed by the incoming president to formulate a course of music material to be used in correlating music with other studies in the course, and was unanimously passed.

On motion of Mr. Gantvoort, the department then adjourned.

PHILIP C. HAYDEN, *Secretary*.

PAPERS AND DISCUSSIONS

THE MISSION OF MUSIC IN THE PUBLIC SCHOOLS

A. E. WINSHIP, EDITOR OF THE "JOURNAL OF EDUCATION," BOSTON, MASS.

If the mission of the school is to teach the three R's then music has no mission in the public schools. • With all due regard to the eminent personal success that stands behind some very clever words already spoken in this convention, I hesitate not to say that few arguments are as vague and vicious, trite and tricky, as a spectacular plea for the three R's. It is delightfully refreshing to have at the head of this noble organization at such a time as this a man with the convictions and courage that prompted the notable presidential utterance of the opening meeting. And in making a plea for music I appeal from a great mayor to a greater educator.

If the chief mission of the public school is to teach children how to read, write, and cipher, then it can all be done in two years when the child is eleven and twelve years of age, and the country can reduce its 400,000 teachers to less than 100,000, and turn over three-fourths of the school money to the politicians in the sewer, street, and police departments; but if it is expected that the schools can in eight years teach all children to read fluently and feelingly, to spell all words correctly, perform all examples accurately, and solve all problems promptly for the rest of life, then I beg to submit that it will never be done in eight or in eighteen years, unless the Lord repents of the way he has made man and breathes a new human nature into the children of men.

A little time every day for twelve years is indispensable to the formation of the habit of accuracy and rapidity in the practice of the fundamentals. Without such practice, a little every day, it is impossible for most children to keep step for life in the essentials of learning.

A stupid person will spell his own name, however complicated it may be, because he writes it frequently; but I was once called upon to witness a will when the maker asked me to spell her name because she had not written it for years.

Too much time at fundamentals is almost as bad as none at all; to practice is all right, to drill is to bore—in school or out. One never drills on a piano, but practices; one ought never to drill in the fundamentals, but rather practice.

They will be learned ten times as well if half of the school day is made bright and cheery, appetizing and relishing.

The senseless magnifying of the three R's makes schools that can hold children only by means of a compulsory school law! That expression is an indictment of a school system that drills all life and spirit out of many children. One mission of public-school music is to wipe that word "compulsory" off the school laws. Be careful that you don't drill in music. Have you never seen a teacher who could make music as dry as the multiplication table?

You can never get music into school, nor anything else that is aglow with life, until educators talk of education as a fountain and not as a foundation. That word "foundation" has charged to it more pedagogical crimes than any other one word. Education places one in touch with sources, and is not seeking a place where movement is impossible. In the eighteenth century there was some excuse for it. One hundred years ago things would petrify and make good foundations, but now they putrify. The school must be a fountain of power, of life, of joy.

Is music a fad or has it a mission?

What is the real, vital mission of the public school? Is it not to do for the children as a whole what they will find, all in all, beneficial thru life, not simply in business, not simply in the earning of a living, but at work and at play, in the home and in society, in the using of money as well as in the getting of it, in enjoying life as well as in being able to live, in getting genuine pleasure out of others, in giving pleasure to others, and in keeping youths and adults from going wrong physically, intellectually, and morally?

Music does much for the disposition and for the character. It provides recreation and utilizes leisure; it may be a limitless blessing to the home; the church could hardly exist without it. The child taught to discriminate between music and vulgar noise will not be tempted by the trashy shows that are, perhaps, the worst curse that afflicts the city life of the poor and the weak.

In one city in the West a cheap show settled down in the town. Children's matinee tickets were sold to the stores for two and a half cents, to be given as premiums. The demoralization of the school threatened. The wise and energetic superintendent forced the teaching of school music, introduced chorus work and started an orchestra in every school, openly attacked the cheap music, and literally drove the show out of business. The public schools can revolutionize the entertainments of most cities if they really appreciate the possibilities in good music. Isn't this a mission worth while?

School music must be devotional, patriotic, intellectual, and inspirational.

There is no more perfect mechanism than the mechanics of music, but there is no music in that which is merely mechanical. There is nothing so inspirational as music, but there is no worthy music in anything merely inspirational.

The school music must be devotional—will be this under any reasonable

conditions. It will inevitably breathe a religious spirit into the day. It is the one phase of religious activity that does not tend to be dogmatic, denominational, or sectarian. It is religious naturally as a breath from heaven, as pure as the flake of wafted snow ere it touches the earth, as tonic to the souls as a breath from the Wasatch range. In the present skeptical state of the public mind toward dogmatism, and its almost reverential attitude toward the public school, it is worth all the teaching of music costs and more to breathe into the life of childhood and youth a reverence that need not be dogmatic, a religion that need not be sectarian.

Patriotism is devotion with a human christening. It idealizes, almost deifies, one's country. It enkindles the worshipful side of our being humanward. The only thing that will keep Canada from joining the United States is the fact that every child has sung "God Save the Queen (or King)" each school day of his life. It has closed every school day ever known by a Canadian. This will make "America" impossible to them, even tho the tune be the same. We do not sing "America," "The Star-Spangled Banner," "Dixie," and the state hymns as much as we ought, but every child learns them in the schools and sings them on every star occasion. Sometime he will do this daily. The schools of Canada make any anti-British sentiment impossible; "America" in the schools makes any anti-American sentiment impossible. No teaching of history will do for patriotic sentiment what a daily school song can do.

Music has an intellectual mission. It makes intellectual activity graceful and refreshing. The old idea was that nothing was intellectual that did not come hard. Friction was an indication of power. The squeak of the mind was supposed to voice activity. Grinding was the characterization of conquest. Drill, a simpler word for boring, was deified.

All that is in the past. Nothing that tires or can tire is power today. Tireless steam, frictionless electricity, even wireless telegraphy are symbolic of mental action. When a mind snaps, when the nerves are prostrate, when the brain fags, there has been a wrong use.

Rhythm is the best mental action. Genius is the power to be carried to limitless height, depth, or breadth without friction in the flight or leap.

Music is one rhythmic art. Its mathematics are more exact than logarithms, its science keener than chemistry, its art richer than that of the sculptor and painter, and yet the mind obeys the laws of mathematics, chemistry, and art in music as easily as sound flies above the ocean more readily than the heavy cable drags it beneath the sea.

Music, rightly taught, does more for mental development than the mystic symbols of algebra or the planting of Greek roots in brain soil.

It is not enough that the school sings. It must know what it sings, why and how. Music is the most exact science, the most nearly fathomless philosophy, the most exhaustless psychology, the most brilliant art.

The public school has as a phase of its mission to teach the possibilities

of music, to teach the Psalms of Israel, of the masters, and the masterpieces. It is a crime against heaven and earth to teach of the warriors and the triumphs thru courage, and not to teach of men like Handel and Haydn, Mendelssohn and Beethoven, Mozart and Wagner, the story of whose lives is more fascinating than that of Xenophon or Cæsar.

Music is the noblest inspiration. It comes nearest crossing the threshold of eternity. For music the very gate of heaven stands ajar.

There is no occasion to be less accurate or rapid in number work, to read less intelligently or write less distinctly in order for public-school music to make us more devout, more patriotic, more intellectual, more inspired in our love for man and our adoration of Jehovah.

SOME QUESTIONS INVOLVED IN MAKING MUSIC A MAJOR STUDY

W. SCOTT, SECRETARY, NEW ENGLAND EDUCATIONAL LEAGUE, BOSTON, MASS.

The conference, whose report on a high-school music course (elective) was adopted by this body at St. Louis in 1904, held frequent meetings during about two years. The report has been extensively printed in the daily and periodical press, in the proceedings of this body, and in separate form. It has received the approval of many institutions and leaders in education. The publication of the report led to an investigation into the status of music in the schools of Massachusetts, and a music teacher's institute, both under the auspices of the state board. Important action of the College Entrance Examination Board for the New England and Middle States (including Maryland) is under consideration, by which music may this year be added to its list of subjects for examination. An arrangement has recently been made by the New England Advisory Board in Music whereby any community may, if desired, credit proper musical instruction, whether in public schools or by private teachers, on a basis somewhat similar to other studies. These matters are explained in print and are easily accessible. We need not at this time do more than refer to them.

In this campaign to secure for music, when pursued with a serious purpose, its proper rank in the group of major studies, various questions have arisen. These have special interest for teachers of music, and are worthy of consideration, also, by friends of popular education. To some of these your attention is invited.

First, a word as to the attitude of teachers of music toward their own subject.

Not infrequently the teacher of music thinks less of music than he ought. He may take a lower or narrower view of the study than its character requires, and, therefore, fail to gain for it the high place it justly claims. The argument for music as one of the major electives is believed to be a strong one, and,

I think, it is generally conceded when properly presented. Music has value on the physical, intellectual, and moral sides, if, for convenience of statement, we may speak of these aspects of life as separate. They are in reality correlated or interpenetrative. It has value also as a cultural and vocational study, altho here again the distinction cannot be as sharply drawn as has been supposed possible. Music touches personal, family, social, and natural life, and probably no other single study has a broader appeal for recognition among the leading educational subjects. The relation of music to literature in prose and verse, and the necessity of a closed union of these two great arts in education, have both been pointed out. The teacher of music should bear in mind that his subject is related to life in a profound and many-sided fashion. The songs of home and friendship, of religion and patriotism, have no small place in the higher life of humanity. To cite one example: I have been present at a Phi Beta Kappa dinner at Harvard when, at the close, the company of scholars joined hands and sang together Burns' song of "Auld Lang Syne." I have heard the same song at a company of ministers at a theological seminary reunion. After the battle of Manila Bay, where the British and American marines fraternized, as the British men-of-war left the harbor, the marines of both nations sang the same song. It was the music of the plowman-poet that best fitted as a parting-song of friendship for the scholar, the theologian, and the marines of two great modern nations. Read the tributes to music of noted men of letters like Carlyle and Newman. See how they have been impressed by this art, which opens into the world of the ear or sound—a world which has its artists and poets, its historians and dramatists, its architects and builders, as the world of letters or of space. Music teachers, however, are not alone in an undervaluation of their subject. Teachers in other fields of education often go much farther in their low estimate of music as an educational subject. At one of the American colleges a few years ago, the introductory question to the prospective student was: "Do you come to study or to take music?" In another college of high rank, the professor of pedagogy hesitated to accept a thesis on music, offered for a degree, on the ground that the subject had too slight an educational status; but he was finally convinced of his error. In the advancement in the character and scope of music instruction, much rests on the attitude of teachers of music to their own subject.

Again, the recognition of music as a major elective involves the question of educational relief. It is said that the progress of legislation is not so much a development of great principles of equity and wise public policy as an effort to secure relief from grievances. The governmental shoe pinches somewhere, and there is complaint which grows into agitation and ultimately leads to legislative measures of relief. In the educational world a similar method obtains. A large number of youths suffer unjustly and needlessly, as things are, because, while to them music is an important study, as shown by personal aptitude and preference, and the judgment of parents and advisors, the

school system is such that they cannot adequately pursue the study. Everyone who has had to do with education has probably met some, perhaps many, such cases. A leading high-school man in New England declared that all pupils of marked musical ability whom he has known in many years' experience dropped out of the high school, because unable to carry high-school studies and outside music at the same time. Doubtless the country over, many thousands of pupils have a grievance at this point, and should have immediate relief. It has been shown that such relief is not necessarily complicated with questions of public cost, increased taxation, or school appliances, but is a simple matter of relief from a grievance. All items involved are capable of adjustment everywhere. Such adjustment will bring benefit both to the pupil and the school system.

Another question connected with the proper recognition of music in education is that of educational freedom. It is conceded that education has been unduly controlled by what are called the governing classes. The scope and kind of training have been largely shaped by their will. With the growth of the democratic idea and the rise of the people, the necessity and wisdom of placing an educational opportunity within everybody's reach are apparent. To fit that opportunity to the training of a people, the educational scheme must be comprehensive and adaptive; that is, it must not only teach everybody, but it must teach everything in reason. The system of public instruction, therefore, approached Dr. Johnson's definition of a university, "a place where everything may be learned." While there must be certain studies common to all, in order that the school as a social force may hold men together in intelligent bonds, splendid provisions are required whereby every man may come to know and develop his special power. The mechanic, the engineer, the farmer, the teacher, the man of letters, the artist, the musician, all great pursuits may thus render their due share to the development and enrichment of human society, and the individual may grow in happiness and power. The claim set up in behalf of music is also a claim for educational freedom. It affects the treatment of every unrecognized or neglected subject. Let the youth be free to follow what for him is the best educational path, along which he may develop according to the law of his nature. Otherwise, the system of education is, at some points, unwisely repressive and self-condemnatory, and strangely out of tune with the great doctrine of personal and intellectual freedom.

The idea of educational valuation is also implied in this connection. Mr. Lowell, at the 250th anniversary of Harvard, said: "I would found a university where nothing useful is taught." That is probably the extreme statement of the cultural type of education, a reaction against the ultra-practical. Mr. Coudert, at the 150th anniversary of Columbia, replied: "I would found a university where nothing is taught which is not useful." Here is a hint that every study has its use. Mr. Cornell, founder of Cornell University, said: "I will found a university where a man may learn

everything." These eminent men are not necessarily in conflict. Every study may be taught so that it shall be both liberal and useful. President Hall says that, when he was entered at a German university, he was set to work for six months on the study of a frog's leg. He thought the subject insignificant at the start, but, as he proceeded, it led him forth into a large place. Problems of animal nutrition, circulation, organism—questions of nervous, muscular, and mechanical energy, of creation and Creator, the mystery of life and death—confronted him in his research. That humble object paved the way to the study of planetary and cosmical life! The true valuation of studies will adjust the differences which have divided the schools, just as a true valuation of things will tend to harmony in all human affairs. The proper treatment of music in education is part of a still larger idea, which will recognize that every subject may be put in pedagogic form, and, if rightly taught, invested with dignity, interest, and value. The history of education reveals the ceaseless struggle of new subjects to find their place and to achieve a true valuation. The effort to lift music to its proper rank cannot fail to advance the cause of education both in the musical area and as a whole.

How the organization of music teachers may best promote the improvement and diffusion of musical instruction is also a question worthy of consideration. It is impossible to discuss the question adequately in this paper; the aim is simply to suggest the importance and necessity of effective organization. Dr. Waldo S. Pratt, at the recent meeting of the Music Teachers' National Association (as reported in the press), emphasized state musical associations, and spoke also of the kind of work to be done by such associations. I assume the conduct of associations formed may be left to the wisdom of the membership, but urge that the unit of organization receive more attention than has been given to it. There is a relation between the physical area and population and the unit of educational organization which is favorable to the best results, as in other enterprises. A manager of a Boston steamship agency said to his clerk in my hearing: "Remember our field is the New England states and the maritime provinces." Since then the center of that particular business has changed to New York city. The United States Commissioner of Education starts with the North Atlantic Division of states in his reports, which comprises the states from Maine to Pennsylvania inclusive. The National Educational Association uses the same unit. The College Entrance Examination Board adds Delaware and Maryland to the above, and operates from Maine to Maryland inclusive. A number of teachers' associations use New England as a unit, as the teachers of science, modern languages, history, etc. Religious bodies follow a similar line of organization, and trade associations likewise. In musical organization local, county, state, and national units have been used. It is suggested that between the state and national associations a state group may be found effective and advantageous; for example, a state group like New England (the "maritime provinces" may be added), an area of which Boston is the metropolitan center; or a

larger group embracing the above, of which New York might be the chief center. Such a unit might be suitable for the northwest Atlantic region. Similar organizations might apply thruout the entire country. Time does not allow us even to name certain arguments for such areas of organization intermediate between the state and the nation, each containing a metropolis, or city of the first rank of half a million population or more. An international association of music might serve as another unit beyond the national association. Let the state and state groups meet annually, the national group once in two or three years, and the international group once in five years.

In conclusion, the usefulness of a fund, limited in amount, might readily be demonstrated. For example, the New England Advisory Board in Music is, at this moment, facing the question of the cost of introduction of a high-school music course (elective) into public education. The inquiry necessitates investigation, collation of opinions, conference, correspondence, and printing, and seems requisite to complete the work already done. For this object some funds are indispensable. Other items may be suggested as likely to arise in the progress of an effective musical campaign, for which limited funds under competent supervision are necessary.

These are some of the questions which have arisen during the conduct of the music conference and supplementary work referred to in the beginning of this paper. Other issues are discussed in the report itself. They are placed before this body in the hope that they may receive wise consideration and treatment.

CORRELATION OF MUSIC WITH OTHER BRANCHES OF THE SCHOOL CURRICULUM

MRS. ELIZABETH CASTERTON, SUPERVISOR OF MUSIC, BAY CITY, MICH.

It has come to be generally accepted that the purpose of the public school is to create a universal citizenship—not only to take all the human units that present themselves in the schoolroom, and make the most out of them for the sake of a contented and useful society, but to develop the individual souls according to their many interests, for the sake of the units themselves.

To attain this double purpose, there is nothing that touches humanity on as many sides—to develop, to intensify, and to modify—as music. It is one of the greatest means toward the transformation into a beautiful life. It sometimes seems to me that it is the *one* means, to which all the others are subservient. Music is the thing that, deeper far than all others, sinks into the heart of the child and touches it—yes, touches it and molds it as nothing else can. Hidden deep, it finds the flower germs and stimulates them to grow, to bud, and to unfold into a beautiful blossom, whose fragrance and beauty enrich the child's life forever.

No one denies the influence of music for good. A teacher told me of a

boy, an incorrigible little fellow, who was almost entirely cured of his bad traits by a violet song.

Down in a green and mossy bed
A modest violet grew;
Its stalk was bent; it hung its head,
As if to hide from view.
And tho' it was a lovely flower,
Its colors bright and fair,
It might have graced a rosy bower,
Instead of hiding there.

He sang the violet song at home, on the street, on the playground, and in school. He loved and believed it; and its tender thought has helped him to become a noble young man.

By demanding and preserving a perfect equilibrium and harmony in body and mind, and filling the heart with tender sentiments, music subdues, purifies, and ennobles even the most rebellious natures.

The ancient philosophers taught that music was the essence of all that was good, just, and beautiful; that it was the very foundation of all moral and religious culture. It is not only the handmaid of morality and religion, but of history, poetry, biography, philosophy, science, and ethics.

Martin Luther wished the youth to become accustomed to music, for he claimed that it made good and virtuous citizens.

If our two propositions are true—first, that the purpose of a public school is to equip the youth to face life in any direction; and, second, that music is the most universal element in such education—does it not follow that a proper adjustment of the school curriculum calls for a recognition of the spirit, purposes, and interests that music has in common with other branches, whether we call such adjustment by the term “correlation,” or some other? Not, indeed, that music can be related to another subject in the same way that language can be correlated with history, so that a child can profit at the same time, both in historical knowledge and in language, by preparing a composition on some historical theme; but, because music and another subject may have a common interest, one can be made to stimulate the other. Music does not correlate with the other branches in the sense of reinforcing a knowledge of the elements that go to make them up, and it would be a great mistake to force a relationship. The relation should be only such as exists in the very nature of the subjects. Music has its own province and its own mission, which are essentially artistic.

And yet, fellow-teachers, is the pupil getting all the benefit that might be obtained from music, relegated as it is to a separate class period, with the poetry and melody as far removed from the other school subjects, that are occupying his attention, as one study can be from another? While our music course is good in itself, and the course in each of the other branches is good, would not each be enhanced and rendered more fascinating if they were more intimately associated with each other?

Education consists, not in learning facts, but in understanding the relations between them. The discovery and application of this truth are the most characteristic element of the new education. This is especially apparent when we consider the evolution in public-school music. Formerly, the first, and about the only, questions were, how best to teach note reading, and whether the pupils were expert sight-readers. Not until recently has the value of the artistic song, artistically rendered, and filled with child-interests, been recognized.

I cannot do better than to use the language of another who says:

The wise teacher has learned that a beautiful song, when related to a lesson in history, ethics, or nature, will often clinch a point most effectively, the beautiful and artistic setting of the words and melody illuminating a dry fact and arousing interest and enthusiasm. In like way, music itself will gain, because of its correlation with other branches. Pupils will doubly enjoy a song which touches upon a subject of recent research or discussion, and the teacher will see a twofold gain—gain to music and gain by music.

Time limitations forbid the consideration here of all the school subjects with which a teacher can profitably associate her music. I will, therefore, speak in a general way of those subjects which I deem most important for our purpose, and those which offer the most immediate opportunity for correlation with music; namely, nature study, geography, history (including biography), and literature.

Nature study and music should be started hand in hand in the kindergarten, and continued thruout the school course. As new subjects are introduced into the grades, the music may relate to them, but never to the utter exclusion of the nature songs. The rustling leaf, the bursting of bud and blossom, the fragrant breath of the flower, the song of the bird, the babbling brook, the sighing breeze, the roaring storm, snow and rain and sunshine, all have their messages for the child. They should touch and sweeten his heart with the love and care of the Great Creator, until it bursts into glad and glorious song.

The songs should be planned as the nature work is planned, according to the season. The fall songs and nature work should relate to the harvest and its completion, autumn and its colorings, preparation for winter, and so on. In winter the songs of the snow and the bells, Jack Frost, the Christmas story, and the like, can be obtained with nature work. In the spring and early summer we have the songs of the return of the birds, spring flowers, the leafing trees, rain, and sunshine.

In the intermediate grammar grades there is a vast chance for correlation in geography. In connection with the study of various peoples, an almost inexhaustible mine of music can be opened up by the use of the folk-song, which furnishes a splendid opportunity for the study of good music.

We can find no better source for good educational material for songs; for phrases for the study and writing of melody and rhythm; for development of poetical, musical, and "musicianly" singing. And there is such an abundance of material, when one begins to look about, that one need never take

a poor folk-song simply because he feels that he would like a song to use in connection with the subject under treatment. I was surprised to find in a reference book some forty compilers of folk-songs, each publishing from one to thirteen books of the same. Franz Abt has a collection of thirty folk-songs for children; and Brahms, who enters more deeply into the heart of the folk-song than any other composer, has six books of German folk-songs; while Heinrich Reimann has thirteen books. This makes twenty collections relating to the same country.

Other countries contribute liberally. There are, so far as I know, three collections of English folk songs. Even the Isle of Man has an entire collection of folk-songs, prefaced by an article on Manx music. There is a book of songs of Scandinavia and northern Europe, containing popular and national songs of Russia, Poland, Finland, Sweden, Norway, Denmark and Holland; and still another, called *One Hundred Folk Songs*, containing French, English, Russian, and Welsh songs. So you see we need not lack for material.

What could be more interesting in geography or history than a few folk-songs of the countries being studied? Each country has its own style of folk and national music, which serves as a reflex of the manners of the people and their mode of thought. Side by side with the political history of a country runs collateral music, dealing with the home-life, science, ethics, literature, history, or some one of the many things that go to make up its general civilization. So, a song properly studied should give to the child interest and information in regard to some one of the many features of a nation's life.

Scotland takes the front rank in characteristic folk-music, which is so pronounced that it has exerted a wider influence upon composers than the folk-music of any other country. Her poetry is remarkably tender and expressive. Her music sounds every note in the gamut of human emotion, from the deepest gloom to the wildest merriment. Mendelssohn's tender little duet, "O Wert Thou in the Cauld, Cauld Blast!" with its falling cadences, indicative of its tender pathos and sorrow, stands out in direct contrast to the song, "My Heart's in the Highlands," and the two are equally fascinating to the pupil. The words of both are by Robert Burns, and the child's liking for them prompts a desire to know more of the author's life, and so lays a proper foundation for biography and composition work.

The songs of Switzerland are beautiful, presenting exquisite rhythm, and requiring light singing-tones in the medium and upper voice. The Swiss valleys are ever so much more vivid to the child after he has sung a Swiss shepherd song.

Russia presents an almost unbounded wealth of material in folk-music, and some have predicted that she will yet wrest the scepter of musical supremacy from Germany.

The peculiar flavor of the French songs not only appeals to the child musically, but presents tonality and rhythm in a way entirely individual and unique.

Music at all times and in all countries bears the seal of independence or

servitude, joy or sorrow, according to the experience of the people that produce it; so, it is not strange to find among the Poles, Hungarians, and Bohemians a music which seems to have escaped from throbbing hearts and breasts embittered by misfortune and grief. Here, then, would be a good opportunity to weave in bits of history along with music.

In fact, history is so closely interwoven with music, both national and otherwise, that it is hard to separate the two, and it should never be done in the study of national music. How little does the "Marseillaise" hymn mean to a pupil, if he knows nothing of the political history of France and the circumstances surrounding the composition of this famous song, which in less than six months had been adopted by the people, the army, the legislature, and the whole land. Its appeal to liberty and glory voiced the hunger of a popular heart at that time, and never did song so charm and enrapture an entire people. Its title, romantic story, and fervor will touch the heart of a pupil, and inspire in him a respect and admiration for France and her people, which I doubt could be secured without the close association of history and song.

How closely our own history and our songs are connected! One cannot properly teach our "Star-Spangled Banner" without going quite into detail and telling the thrilling incidents surrounding its creation. No wedding of poetry and music has ever been made under more inspiring circumstances. It was caught up in the camps, sung around the bivouac fires, and whistled in the streets. When peace was declared and the soldiers went back to their homes, they carried this song in their hearts, as the most precious souvenir of the War of 1812. Then there are other patriotic songs, all one with our history. Boys, as a rule, prefer these songs, and will sing them with a hearty zest. I think they must appreciate the feeling of the young major in a Confederate uniform, who said: "Boys, if we'd had your songs, we'd have licked you out of your boots! Who couldn't have marched and fought with such songs?"

What has been said of history applies as well to biography, bearing always in mind that it is not for the sake of the biographical knowledge or the practice in language that may be incident, good as these may be in themselves, but for the interest and inspiration which stimulate and make alive.

The story of the little Handel, who made orchestras of toy drums and horns and violins, and who practiced in the attic while the rest of the family slept, is the basis of much language work, and to the older pupils a study in both biography and composition. Handel's life is an especially good one to use, for the children are so interested in it. They love to hear of this child of seven lingering about the great organ and asking to be allowed to play it. Permission being granted, he delighted the listeners with the melodies stealing from his wee finger-tips. The older boys and girls are amazed and charmed to think that a mere boy of seventeen, this same Handel, should have charge of a magnificent organ in a great cathedral, writing almost all

the music that was used from Sunday to Sunday, besides composing one or more difficult compositions each week, and rehearsing twice a week a choir composed of his schoolmates, whom he voluntarily gathered together.

It is certainly just as legitimate to study the life of a Handel, a Mozart, or a Bach, as of a Rembrandt, a Millet, a Corot, a Longfellow, a Whittier, a Tennyson.

Now, as to the correlation of music and literature. Noble actions and high ideas find expression in beautiful words. A song which embodies great ideals and noble sentiments and aspirations must be an effective means toward storing a child's mind with great thoughts of other souls. The poetry learned in song should be as beautiful and artistic as can be found. We cannot afford to put before the child a single unpoetical utterance. How often what would otherwise be a beautiful song is marred by unpoetical word or distorted expression!

Music and sweet poetry agree,
As they must needs, the sister and the brother.

The poems in the songs of the music course should be by such authors as these: Eugene Field and Robert Louis Stevenson, long recognized as the children's poets *par excellence*; Lucy Larcom, Francis Ridley Havergal, Alice and Phœbe Cary, Frank Demster Sherman, Whittier and Longfellow, and others like them. By the time a child has finished his school course, thru the medium of his music, if by no other way, he should have quite an extensive collection and knowledge of the best poems by the best authors.

Music awakens in the child an interest in poetry and the vast field of ideal thought it opens. Because of the beauty he sees in the poetry of the songs he learns, he will wish to investigate other fields of poetical literature. So he becomes familiar with a large number of selections that perhaps would never have come to him thru any other source.

I would close my paper with the plea made by A. Stanley Osborne, at a recent meeting of the National Educational Association:

It remains for someone to develop a historical order of music material related to the life and experiences of the child at each stage of his progress from the kindergarten to the close of his school life. I make a plea for a course of music literature as carefully worked out as a course in English literature, and correlated as nearly as possible with every other branch in the school curriculum.

I believe it would be wise for this department to undertake, thru a committee, to formulate such a course.

DISCUSSION

W. A. PUTT, supervisor of music, Cleveland, Ohio.—The correlation idea is deeply rooted in modern education, and its influence in the development of unity of character is fully recognized by the modern teacher. The purpose of public-school music, as that of all school subjects, is the development of power. Music is one of the means of thought-expression, and the curve of progress increases in the direct ratio of the increase in

the power of thought-expression. In the mind of one to whom they are unintelligible, musical sounds and symbols do not arouse a ripple of thought, but to one who understands them they are animated with thought and become a means of thought-stimulation. School-music supervisors have not fully realized the value of music in increasing the curve of the child's progress when correlated with other school subjects.

The Spear system of education has recognized the value of rhythm in many of the child's activities, but in nature, in history, in literature, there is much more than rhythm. Most teachers, whether consciously or unconsciously, select nature songs as essential to nature study. As Mrs. Casterton has so ably stated, history is incomplete without an intelligent study of the songs of the various periods. Someone has said that its songs represent the heart-throbs of a nation. Without the songs of the Civil War, the study of that period would be a cold mathematical proposition.

The "Star-Spangled Banner" is a more important event in the history of the United States than the bombardment of Fort McHenry. Have any pupils been graduated from our public schools who could tell all about the latter and nothing of the former? Have soldiers ever been inspired to go to certain death in defense of their flag by reciting dates and facts in history? Was the song, "A Hot Time in the Old Town," a factor in the battle of San Juan Hill? Would there be an inspiration to learn more of the Puritans, after singing Miss Browne's setting of Mrs. Heman's poem, "The Landing of the Pilgrims"?

With no other data than its songs a nation's history could be written which would accurately portray the character of its people.

Study the life of the historian, the scientist, the poet, the artist, but neglect not the biography of the master-composer, for in him are combined all of the elements of these.

The "pen and ink" poem becomes a beautiful oil-painting in the hands of the skilled composer. Is not the following beautiful pen-picture intensified by Neidlinger's setting?

The night has a thousand eyes,
And the day but one;
Yet the light of a bright world dies
With the dying sun.
The mind has a thousand eyes,
The heart but one;
Yet the light of a whole life dies,
When love is done.

The cry of supervisors and grade teachers is for "more time." It is not a matter of "time," but of correlation. Music is not a special subject. It is a prominent and essential part of history, geography, literature, nature study, and even of mathematics, manual training, and physical culture. When its correlative use with these subjects is fully recognized and adopted by superintendents, supervisors, and grade teachers, the time problem will be solved.

When the grade teacher recognizes the fact that she is not prepared to teach the so-called essentials until she can also teach the music with which they are so closely allied then will she cease to regard public-school music as a special subject.

There are teachers who would be mortally offended were they told that they could not successfully teach reading, but whose feelings are impervious to the charge that they do not know the diatonic scale.

May a most vigorous protest be entered here against hampering the grade teacher with methods? Give her the benefit of many methods, but remember that she should employ her time and energies in teaching *children* and not method. Her task is tremendous. Of boys and girls she must make men and women. By her genius in organization, she makes one composite individuality out of many, without sacrificing a single one of the many. To carry forth her work, she must fit method to the individual child in such a way as not to conflict with the individuality of the school. Freedom is as necessary as sunshine to a plant. If the teacher is not large enough for freedom, she is doomed to failure.

Music supervisor, assert thyself! We have been too narrow. We have assumed that music is not even the tail of the educational kite, but rather a small piece of extra string to be used when the superintendent wishes the kite to soar a little higher at commencement or on special occasions.

Public-school music is one of the essentials; and if it is not so regarded, the fault is our own. We have it in our power, thru its proper correlation, to place this proposition beyond discussion forever.

MUSIC AS A FACTOR IN CULTURE

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I do not come to you as a reformer, or specialist with any pet theories to promote, but as one who from childhood, in the home, the temple, and the schoolroom has benefited from the influence of this strangely divine power which, for the want of a better name, is called music.

From that moment in the creation when the morning stars sang together, and the brooks went singing down the hillsides of Eden, and the birds made glad the dawn of time with their thrilling melodies, music has had an indisputable place in the world. "There is music in all things, if men had ears."

The study of music is a liberal education. Music, like poetry, makes its appeal to the noblest instincts of the soul. It is said that the inhabitants of Cynette, who slighted music, were the cruelest of all the Greeks, and no other town was so immersed in luxury and debauchery.

Christianity was born with a song on its lips. Mary sang in the thrilling measures of the *Magnificat*; the angels sang in their tumultuous hallelujah chorus; and the shepherds sang in plaintive strains of quiet ecstasy. And the world has been singing ever since. Paganism does not sing; it laments; pagodas and mosques do not lighten their somber interiors with music; but every Christian church, however humble, is a conservatory of sweetest melodies.

Music is both a science and an art. As an art, it does not, as do painting and sculpture, occupy itself in reproducing nature—for it is itself a part of nature, and seeks to reveal itself. The Egyptians first excelled in music, but great strides were made by the Greeks under Pythagoras. The word "music" is derived from a Greek term, which includes all the learning of the Muses. Of all the fine arts, music is the most comprehensive. The majesty of the architect, the pictures of the artist, the rhythm of the poet, and the theme of all these belong to the musician, whether he sits at the instrument or pours out his soul in vocal melodies. The fable tells that Mercury stretched strings of dried skin across a shell, and, striking them with his fingers, invented the lyre. The bow as a musical instrument was probably first used by the warrior, who, as he described his successes in battle, twanged the string of his bow. It was later discovered that the bow, when drawn across certain hollow

objects, produced pleasing sounds—hence the flute and the violin. Music has been called the universal language, and truly it is a means of communication between all souls, whatever clime may have given them birth. It is the most responsive of all the arts—the most human. It more nearly breathes, and sees, and feels. It possesses all the varying hues of the soul. The music of the siren would allure Ulysses to his death, and the monotonous tones of the bell buoy direct the imperiled mariner to safety. Tumultuous music is the completest expression of happy souls of festal days; and tender, somber strains interpret the language of sad hearts when a nation mourns for its martyred heroes. Glad hallelujah and penitential psalm, express the contrasting emotions of the soul.

Music was defined by our own Sidney Lanier as “love in search of a word.” There is an inexpressible something in the heart of a man which seeks to define itself in speech, but, failing in this, music flies to his relief, and in melody man pours out his imprisoned soul. Music is the language of the oversoul; it is the soul prolonging, or projecting, itself. The highest music cannot be expressed in words. This is the explanation of the angel’s advent anthem and of all music in worship. The deeper the soul-life, the more is one conscious of feelings beyond the limitations of articulate utterances. In the attempt of the finite soul to praise and glorify the Infinite, all earthly devices of language utterly fail, and music only, which is an adjunct of the infinities, enables man to sing what he can never express—his adoration and gratitude to his great God and King. Consequently, whenever religion is the sincerest, then music will be the purest. Music is the echo of God’s voice in the soul of man. Without that echo, man’s soul is a cavernous abyss, filled with spectres of despair.

Music is a gift of God. Like all the sciences, it is a radiation of divine truth. Pythagoras taught a close affinity between music and astronomy. He was right so far as he went, but music leads men up to the perpetual throne of glory, of which stars and constellations are but glittering scintillations. St. Cecelia, receiving her music from angel visitants, tells the secret of the musician’s power. Great musicians are born, not made. Their extraordinary genius is an endowment, manifesting itself in phenomenal ways in childhood, as in the cases of Mozart, Liszt, and Christine Nilsson.

The divinity of music further appears in the fact that the greatest musicians have been good men; and to develop the mighty impulses which they have felt in their souls, the great musicians have chosen lofty divine themes. This was true of Jubal and Job, of David with his harp and Solomon with his sweet songs. It was true of Beethoven, whose soulful sonatas have won for him a genuine priesthood of the emotions; and of Bach, whose elaborate fugues have been likened to Gothic temples in their intricate details. It was true of Mendelssohn, who, in thirty-eight years, filled the souls of men with musical pictures; and of Batiste and Schumann; and of Chopin in his nocturnes; and of weird, if not unearthly Paganini, with his miraculous

Stradivarius. It was true of Mozart, whose thirty-five years gave the world such treasures from the Infinite that he is truly exhaustless; and of Liszt, who, dying as late as 1886, seems to belong to us. At eight he was the wonder of Europe, at twelve Beethoven embraced him as a coming master. During the days of his best work, Thomas à Kempis' "Imitation of Christ" was his constant companion. It was true of Wagner, picturesque, unique, once ostracized, now nearly worshiped. "The Holy Grail" is the theme of one of his masterful operas. Most true was it of Haydn, the father of symphony, whose massive oratorio of "The Creation" brings men into the presence of God's colossal creative power; and true, indeed, of Handel, the majestic grandeur of whose masterpieces has remained unequalled for two centuries. There was another incarnation when he produced his divinest work, the oratorio of "The Messiah," which, no doubt, he was right in believing came to him from above.

It is the mission of music to soften and remove the asperities of men. It helps to unify the race and make men homogeneous. Sectarianism slinks into hiding-places of shame, as Charles Wesley, a Methodist, sings "Jesus, Lover of My Soul;" and Toplady, a Calvinist, "Rock of Ages;" and Sarah Adams, a Unitarian, "Nearer, my God, to Thee;" and Whittier, a Quaker, "The Eternal Goodness;" and Faber, a Roman Catholic, "There's a Witness in God's Mercy;" and Doddridge, a Baptist, "O Happy Day." Today these well-known hymns are sung by all and claimed by all. In spite of controversy and unbelief, the music of all the Christian church is saving this world for the Christmas Christ. The hymn and the singer are often a long way in advance of the sermon and hearer in evangelizing influences.

Music refines and ennobles. In the days of chivalry the sir knights studied music because of its elevating and purifying influence. Music brightens life's dark places, and soothes the heart in trouble. Many prison doors have opened and manacles burst asunder when troubled hearts have sung songs in the night. Music was believed by the ancients to have healing power, and was used as a therapeutic. Many a weary soldier, tired and footsore, has leaped on to victory under the magic spell of fife and drum.

That the musical impulse is the beginning of all culture is boldly affirmed by some careful students. Mr. M. J. Donovan, of England, tho confessing that geology affords little encouragement to his theory, yet insists that music "lies at the root of all human culture in the earliest ages." He says:

Of course it may be, at first, a vague, far-off, slow-working motive; it may have taken long periods to become effective in creating during play a demand for rhythmic stimuli—a demand which would impel the playing brutes to bring their movements into rhythmic form. But, no matter how far below the plane of conscious effort the motive worked at first, if a playing brute once moved a muscle—let us say, stamped a foot—and attended to the muscular sensation of it, or the sound of it; if a brute once attended, and stamped again, and attended again to the succession of stamps, at that moment the greatest obstacle to the free output of nerve energy in play would be in some degree removed, and the motive to attend again would be established. Thus would begin that growth of rhythmic

movement and sound which we call the art of music; thus would begin that unique sort of pleasure which is brought into existence while we attend to rhythmic movement and sound.

I am entirely willing to accept the logic of this thoughtful writer. Music is the oldest of all the soul's impulses, but, paradoxically, it is the youngest of all the arts.

Music could not enjoy its best development until man had passed beyond his feudal age and reached the time when the lion and the tiger were being eliminated from his nature. My little boy says: "O daddy, dear, I don't want to take piano lessons! music is for girls!" Men had to pass beyond their barbaric, belligerent, and boisterous eras before they could realize that the highest expression of mind and spirit is in music. There is a quaint belief that singing preceded speaking. Alas! perhaps one of the entailments of sin is that singing has degenerated into discordant, rasping speech. Perhaps, when man shall have reached his highest earthly estate, the means of communication will be in the soft tones of chastest music.

Music, if not more perfectly than printing the art preservative of all art, is surely the best interpreter of all art and science. The mystery and miracle of truth reveal their open sesame when studied thru the atmosphere of music.

I should say that Goethe is not quite right when he speaks of "a level road leading out from music to all the other great arts;" it is an upward pathway which leads from architecture, sculpture, painting, and poetry up to music. The minster graceful with Gothic beauty, or massive with Romanesque magnificence, can be filled to groined arches and spreading dome only by music's swelling tones. Music gives a motif to architecture. The art gallery's corridors, or Belvedere, reveal the master's secret only in marble or canvas, as divinest music fills up all the interstices of finiteness. And poetry never reveals its most exquisite tints of beauty and truth except in the companionship of music, its twin sister. Theology would have none but altars to the unknown God, if music did not dream, and prophesy, and feel, in the priestly office. Music is what Walter Pater called "the great *Anders-Streben*—reaching forward of all art." It is the soul of man endeavoring to come to its own—to express and realize and fulfill itself. It helps Browning's grasp to acquire its reach.

Music is thus an intellectual factor. It is not so much a truth-seeker as it is a truth-finder. It does not delve among the rocks, but it comes down like a dove from above, singing: "This is my Beloved Son!" It dwells in the heights and shouts "Excelsior" from peak to peak, and makes life's dizzy Alpine uplands echo with hope.

Granting that music furnished to culture its initial impulse, and that music more than any other factor sustains the quest of man's nature for the highest and holiest achievements; and not forgetting that:

The man that hath no music in himself

Is fit for treasons, stratagems and spoils,

I dare to submit the deliberate conclusion that instrumental as well as vocal

music should be a part of the public-school curriculum for every child. Alas! that the children whom prosperity affords the opportunity of musical study often so little appreciate these privileges, while many who crave these facilities are deprived of them by poverty. Even the boys and girls who are compelled to leave school to enter upon the problems of making a living, would have a larger and more hopeful life, if their musical instruction has included familiarity with an instrument. A daily half-hour lesson, even if there were no instrument in the home, would give the child its chance, and make the instrument a necessity. A musical instrument in a home is, next to the Bible and the mother's knee, the greatest civilizer. Musical instruments could be placed all over our school buildings, and hours for practice could be adjusted before and after the regular school hours. If music is all we claim for it, let us give our children a knowledge of music in the same proportion as of mathematics and chemistry and biology; remembering always, as a noted musician has said, that "only the best music is good enough for the common people." A few teachers and a little larger appropriation lifts this suggestion out of the realm of impracticability.

'Tis God gives skill,
But not without man's hand.
He could make Antonio Stradivarius violins
Without Antonio.

The more we invest in Antonio, the more fully will he respond to his divine inspiration, find his place, materialize his dreams, fulfill his opportunity, and serve his generation. If instrumental music becomes part of the daily schoolroom program, the boy will see that music has virile qualities, and is for men as well as women, for boys as well as girls. "Send your boy to school and the other boys will educate him," is a philosopher's intimation of the sensitiveness of the American boy to the surroundings of the schoolhouse. If the half-million public-school teachers have the co-operation of musical instruments, the problem of the proper care of their 16,000,000 pupils will be more easily solved; and if a boy or girl wishes to major his way thru the public school with music, his preparation for his life's work will probably be just as thoro as if he were compelled to agonize his hours and become embittered against his books by compulsory attention to studies for which he has no taste and adaptation.

A little child was stolen by the Indians when she was two years old. After six years she was restored to her home, but no impression could be made upon the dazed and frightened child so that she could recognize her parents, until at last, the mother sang a lullaby which she was accustomed to sing to her child when she was a baby. At once the little one recognized her mother and rushed to her arms.

A little seven-year-old boy was badly injured the other day in New York city, and taken to Bellevue Hospital. Upon his arrival, he asked the doctors if he could sing, saying: "It does not hurt so much when I sing." His sweet

voice rang out in the lovely strains of "The Palms," then "The Holy City," and, at last, "Lead, Kindly Light." So, in the struggle of life, and in the desperate contest with the foes of righteousness, by special musical culture we are to fortify our nation's youth for peace and victory. If Orpheus could save the brave Argonauts from peril, by silencing the sirens and putting to sleep the monsters of the sea; and Amphion could lift blocks of granite into the walls of Thebes, with the strains of his lyre, truly our young people, with the miracle-working agency of sublime music, can defend their characters and work out their noblest ideals.

Just here, in passing, I wish to express my appreciation of the contribution made by the public-school instruction in music to the congregational and choir singing in the churches. Probably the general singing of the worshipers was never so excellent as now, and the large chorus choirs, in many of the churches, have been made possible by the elementary training and the early development of musical taste in the public schools.

Music is an element in culture more especially because it makes its directest appeal to man's emotional—his spiritual—nature.

True religion, as true love, is emotional, and music is the most adequate expression of the emotional faculties. Faith sings; unbelief never! Music reveals God. Handel said, when he was writing the "Hallelujah Chorus:" "I saw all heaven open before me and the great God himself." Haydn said: "When I was occupied with 'The Creation,' always before I sat down to the piano I prayed God with earnestness that he would enable me to praise him worthily." All revivals of religion have been accompanied with revivals of sacred songs.

Praise to God is essential to character; it encourages faith, hope, humility, and holiness. In danger, music assures us. Luther used to say: "Come, let us sing the forty-sixth psalm and defy the devil."

God sent his singers upon earth
With songs of sadness and of mirth,
That they might touch the hearts of men,
And bring them back to heaven again.

As is his Maker, so man is a spirit. Muscle and brain are merely temporary expedients by which man, as spirit, shall for a brief season tarry upon the earth. When painting, and sculpture, and architecture, and perhaps even poetry, shall have ended their earthly ministry, music will be revealing the fathomless mysteries of spirit and life. Music is the language of celestial throngs. True eloquence is thought winged with music. The infinite God is more perfectly worshiped with musical accompaniment, because music goes beyond language and logic, and opens up the vistas of faith thru which can be seen the King in his beauty. Do you ask me which is the mightier agency for culture, Bacon or Beethoven, Spencer or Schumann, Kant or Mendelssohn? I will answer that science and philosophy have their own important places in the foundation of intellect and character, and are as

necessary to the soul as food and body. Music, however, not only has its mission side by side with these, but, when the present conclusions of men shall be abandoned for the completer revelations of the All Truth of Him who is the Way, the Truth, and the Life, then music, which was never anything but divine in its nature and influence, shall be our old familiar friend, increasing in divinity as our own evolving souls are permitted to comprehend and participate in that divinity.

RELATION OF THE GRADE TEACHER TO MUSIC INSTRUCTION IN THE PUBLIC SCHOOLS

C. A. FULMER, SUPERINTENDENT OF CITY SCHOOLS, BEATRICE, NEBR.

Music is reputed by its advocates to possess an educational value, but, beyond the vague notion that it refines, people have, in the main, no views as to how it educates, or why. No proposition is more universally established than that young people profit by hearing music and by taking part in it; and on no proposition is any rational or close analysis less often brought to bear.

The singing of songs in the public schools of America is thought by all classes of people to promote the pleasure and happiness of the pupils; incidental instruction in the rudiments of vocal music by the regular teacher is, in most schools, rather reluctantly tolerated as one of the demands of the complex civilization of the day; while the systematic course of study in vocal music, directed by a supervisor who is a specialist, is maintained, as yet, against considerable opposition; in fact, the faint murmurs of acquiescence are scarcely heard amid the cries of "fad," "useless expenditure of public money," and "let such accomplishments be paid for by those who can afford them."

We can derive little encouragement from the fact that the American people appreciate music in such a vague way. We know from written history, and we judge from folklore, that music has always been appreciated after the same manner, and, in some instances, to a greater and higher degree. The Greeks recognized music as a factor in education. Greece stands out prominently in history as a musical nation far in advance of peoples that preceded her, and that came for centuries afterward. During the Dark Ages, when all mankind was groping about in utter bewilderment, chants in the secluded cloister, war-songs, and perhaps the cheap, but ever-popular, wares of the wandering minstrelsy, afforded some cheer, hope, and inspiration in the darkness. Then the Reformation came. Hymns were sung; the church choir was popularized; music became the people's possession, for it could no longer be claimed exclusively by the monastery. Great masters arose, nations caught the fire, and the Old World broke forth into song. But when the echoes of the grand anthem died away, many chided themselves for their unbecoming burst of emotion, and relapsed into silence. The hush was of

short duration, however, for the masters renewed their songs, until civilized Europe was atune; and, for the first time since Greece fell, music was appreciated for its educational value. During centuries now, largely thru the agency of the schools, this high standard has been maintained.

The Puritan brought no music to America, and the colonists, as a rule, on account of the persecution and suffering, had no song in their hearts. Since colonial times, we have been too busy in the scramble after the almighty dollar to pause for much consideration of this question. That progress has been made cannot be denied, when the fact is considered that scarcely three centuries have elapsed since the Puritans exclaimed: "Away with the monkish music; it is all evil!" and now songs are sung every school day by 16,000,000 children in the schools of the United States.

But we are not yet a musical nation as, for example, Germany is, or Greece was. We, as a nation, still consider music a pastime, an accomplishment for the rich or talented. If we ever become a musical nation, it must be accomplished thru the training of the children. Leaders in music must unite in convincing people, with properly trained children as proof, that education, in its fullest sense, is the development of the human being mentally, physically, and psychically; and that the study of music gives this threefold training, and therefore, is entitled to a place in the school curriculum. The magnitude of the undertaking is at once realized when you consider that this commercial age is not overly friendly to culture, and it offers little encouragement to any subject taught in the common schools which does not clearly demonstrate its "bread-and-butter" value.

The begrudged support accorded to music instruction by school authorities and the people in general, and the common doubt of its real educational value, will not be lessened perceptibly as long as music leaders depend upon conservatories, private schools, individual lessons, conventions, and the unaided influence of supervisors to change the current of public opinion. Musicians may talk, sing, and resolve for three centuries more, and their efforts be known not far beyond the circle in which they move, unless they communicate with the people and accomplish their desired ends thru the co-operation of the grade teacher, whom they must first recognize, and then inspire with their own enthusiasm. The grade teacher holds the key to the situation. The grade teacher is the real power in the public-school system.

An army composed of undisciplined, untrained soldiers, even when commanded by a general who is himself an expert in military affairs, can hardly be called a good army. Even moderate achievements cannot be expected under such conditions. The whole army must be trained. The commander must be able to reach the private in the ranks thru the colonels and the captains. He must be able to inspire his soldiery thru those who march and fight shoulder to shoulder; and he who adopts any other course fails. He may issue orders, he may direct, he may organize; but the execution of his plans must be accom-

plished by others. It is said that the success of a leader depends upon his ability to get others to work.

You can apply the illustration. The music supervisor must depend upon the grade teacher for results. She, under competent direction, can teach her pupils to the best advantage because she is more closely in touch with them and understands their individual natures.

I believe the far-reaching influence and value of supervision are overestimated, in comparison with the work of the grade teacher.

It is almost impossible for a music supervisor to pass from grade to grade, now a high one and now a low one, without a break in the continuity of the instruction scheme, and without a failure, partially or wholly, to adapt his language, manner, and teaching to the varying classes and ages. Those who have made a simple announcement in grades from the first to the eighth consecutively understand this difficulty of adaptation. There is a tendency to overestimate the ability of the lower grades and to underestimate the ability of the higher grades. Probably no one can instruct children of all ages with equal and uniform success.

The supervisor, who gives all of the lessons taught in a school, passes thru the rooms in such rapid succession that there is little time to adjust the "sights," and, as a result, there is "overshooting," "under-shooting," or "scatter-shooting." When the supervisor gives a part of the lessons and the regular teacher a part, there is a division of effort that tends to neutralize the influence of both. If, in still larger schools, the supervisor conducts recitations at rare intervals, because of the infrequency of such lessons, little impression is made upon the pupils. There are prominent educators who think that model lessons, given occasionally by specialists, are apt to lower the pupil's estimation of their own teacher's ability to teach the subject. This is specially noticeable if the faults or mistakes of the teacher are criticised or corrected in the presence of the school. Not only this, but the model lesson is, or ought to be, appreciably better than the teacher can give, and the contrast does not strengthen the confidence of pupils in the teacher. The grade teacher is, of necessity, an interpreter to clothe the lessons and directions of the supervisor in language and form suited to the immediate grade she has in charge. The larger the system of schools, the less can a supervisor hope to reach pupils, as a class or as individuals, and the more he must depend upon a "middleman," so to speak.

Again, too often the supervisor has had little or no training in pedagogy or psychology, and is not prepared, theoretically even, to impart instruction to children. Many of the most talented musicians are entirely unqualified to teach in elementary schools, where the simple, easy, yet so important, steps must be taken. Conservatories and schools of music, as a rule, are turning out musicians and are not attempting to train them to teach teachers to teach. It is not their business to do this. A supervisor who lacks the essential characteristics of a teacher can accomplish nothing except thru the agency of others.

In fact, the regular teacher, trained by education and experience to teach school, and who possesses a fair knowledge of music, can handle the subject much more effectively than the skilled musician who knows nothing but music in itself. It often happens, too, that the person who has the finish and polish of the most technical musical education to the highest degree cannot appreciate the necessity for extreme simplicity of instruction in elementary grades.

It may be said here that those who desire to see the gospel of good music and its appreciation propagated, hail with delight the multiplying number of summer schools of methods, and normal schools where teachers learn to teach public-school music.

All this does not imply that the supervisor should not be an expert in his line, should not be a master of the theory of music, but that, in addition to these really essential qualifications, he should be a trained educator, an organizer, a harmonizer, a leader who can inspire teachers to their best efforts. Yes, the supervisor must teach the teachers how to teach music. A betterment of music instruction in public schools will result from a betterment in the music training which grade teachers receive, before entering their profession and afterward, under the tutorage of a skillful supervisor.

If music instruction possesses a high educational value—and we believe it does—is there any valid reason why teachers should not prepare themselves to teach it? Speed the day when a knowledge of at least the rudiments of music shall be a legal requirement for certification. Already certain states have legislated on the subject, as the following statistics, taken from chapter 10 of the report of the Commissioner of Education for 1903, show. Examination in music is required for state certificates in California, Iowa, Kansas, Minnesota, New Hampshire, and North Dakota; for probationary elementary grade certificates, in Massachusetts; for first-grade primary certificates, in Washington; for special county certificates, in New Jersey; while such an examination is optional for state certificates in Missouri, and may be required for county primary certificates in Nevada.

When teachers must pass an examination in music for certification, the subject will cease to be considered an accomplishment, and will be placed upon the same basis as arithmetic and geography. Just as long as teachers are not expected to make themselves competent to impart instruction in this branch of study, and the supervisor attempts to do all or nearly all of the teaching, just so long will music be considered uncommon, the gift of the few, and an unessential part of the curriculum.

But some will say that, when such conditions are realized, supervisors will be needed no more than supervisors of reading and geography. On the contrary, when that time comes, supervision will be in the highest type professional.

So far, nothing has been said of the large majority of schools too small, or financially too weak, to employ a specialist in vocal music. This number

includes small towns, villages, and rural schools, in which are found approximately 50 per cent. of the entire school enrollment of the nation. In all of these schools, music supervision is out of question, and the responsibility lies upon the regular teacher. In reality, only a few of the larger schools in each state have such advantages for all or part time. Eastern and central states, on account of denser population, consolidated districts, and greater revenue for school purposes, fare better in this respect than other states, as a rule. In Nebraska, for example, whose educational system takes high rank, only twenty-six cities and towns have music supervision.

Reflection upon these statements may serve to remind us that, as yet, music instruction has scarcely touched the schools of America, and that, if the nation ever becomes musical, we must enlist the active co-operation of the common-school teacher. Not only this, but we are forced to acknowledge that the grade teacher must be depended upon to teach the children vocal music and, in most cases, without direction.

It is just as patent that supervisors must pin their faith to the same grade teacher. It is she who comes in touch with the real life of the pupils, who understands local conditions. It is she who, day by day, thinks and plans with the children and, thru them, shapes public sentiment and molds public opinion in the district. The leader who does not recognize these facts and direct his influence thru her to the people has his lesson to learn.

It is the grade teacher who arouses a lasting interest in music, and gets boys and girls to want to sing; and not the supervisor, who reaches them so remotely. It is she who will convince the people that music has an educational value, and that it is not an expensive fad.

The influence of the supervisor must flow as an electric current thru the teacher to pupils and people, with a mutual confidence which acts as a faultless conductor. If the grade teacher is omitted in the calculation, the spark will never leap the gap which always exists between a supervising officer and the people themselves. It is the grade teacher who must be depended upon to create a musical spirit in America.

When we concede her overshadowing influence in the schoolroom and community; when supervisors learn to recognize her competency in handling children; when the efforts of the supervisor are directed toward the teaching of teachers how to teach, then music in our schools will be taught much more efficiently than it is now.

The supervisor is much, but the grade teacher is more. "She is the backbone of the teaching force," not excepting superintendent or any other supervising officer.

DISCUSSION

JULIA E. CRANE, director of Normal School of Music, Potsdam, N. Y.—The importance of the work of the grade teacher cannot be overestimated, and her success with the music of her grade depends upon her relation to the supervisor. In many schools this

vital point is so little appreciated that no provision is made for teachers' meetings, and the opportunity for the grade teachers to be really instructed by the supervisor. That this is an absolute necessity must be acknowledged by all.

The supervisor's position, then, should be that of instructor of the grade teachers, and his aim, to make them as efficient as possible. "But," it is said, "if the grade teachers become skillful teachers of music, what will become of the supervisors?" When will the world learn that what is good for the cause and for the people cannot bring evil to any individual? True success comes not from self-seeking, but from truth-seeking. Forget self, and seek the highest good for the cause and all concerned, and true progress results, not alone to the cause, but to its promoters.

So long as public schools are conducted under the present plan, the part of the grade teacher in the music work is a most important one. That supervisor who gives the most efficient instruction to the grade teacher; a supervisor who gives to her true sympathy in understanding her problems and helping to solve them, will secure the most satisfactory results.

There is no reason for discouragement because the grade teachers are untrained in music. Even the great obstacle of what is called "tone deafness" may be overcome. To accomplish such results, the supervisor must recognize the good work of the grade teacher, and so modify his demands as to ask, first, of each teacher the kind of work which she does best, gradually leading her by instruction and encouragement to the more difficult problems. Teachers differ greatly in their talents; the work in music is broad. Be cheerful, and recognize with praise any part of it which is well done. Having done one thing well, the teacher approaches the more difficult problem with more courage.

We all look forward to the ideal condition when every grade teacher shall be able to sing artistically, and to read music as one reads a poem or a bit of beautiful prose. But that condition is not yet; not even all supervisors have reached this high standard. Shall we drop the music in our schools until teachers and supervisors are better prepared for the work? Certainly not, but rather meet the conditions as they are, and be grateful for every step gained, whether or not that step be taken exactly in accord with your own peculiar notion.

Courage to enter upon the study of music is often the only element needed to open the way for excellent results. This courage may be given by the supervisor, who recognized the grade teacher's tact and skill, even before any musical results appear. Active sympathy, consideration, good cheer, and appreciation acknowledged, of even the smallest point gained, will soon work wonders in the music.

MRS. THOMAS, of Washington.—There can be no national music in America thru the efforts of the private schools and private teachers. Any effective musical education must be thru the public schools. The conditions affecting the teaching of music, when the question of tuition enters into the problem, are such that the private teacher cannot insist upon a course of study which is educational in its character.

J. A. FOSHAY, superintendent of schools, Los Angeles, Cal.—There is no question about the value of music in the schools, when it is put upon a proper basis. It is quite possible that the people may see as much of value in the study of music as in any one of the three R's. It cannot be denied that the devotion to the three R's is connected with the old method of education, and that these rudimental studies indicate a process of pouring in, while the standard of education which demands music education in the schools means a growth along all lines. In my opinion, music is one of the most important in the courses of study, and I am sure that the people realize it. In reference to the illustration given by Miss Crane, of the unmusical teacher finally making a success of teaching music, it seems to me it is a very difficult thing for one deficient in music to teach the branch. In our city we examine all the grade teachers in music, and insist that they shall have ability to teach it in their grades.

A. J. GANTVOORT, Cincinnati, Ohio.—It seems to me that the musical proficiency of the supervisor is a vital point which should be insisted upon. It is hard for one to teach to others that in which he is not proficient himself. The supervisor should have high musical attainments in order to guide others aright and inspire in them a love for the best in music.

N. COE STEWART, of New York.—Experience has made me confident that anyone who desires to learn music and to learn to sing can do so at any age. When I was in the Cleveland schools, a teacher forty-five years old, who had never sung a note, wanted a position in the schools, and by application not only became proficient as a teacher of music, but was able to sing in chorus with others quite efficiently. If the child desires to learn to sing, he can learn, and it is the province of the supervisor to awaken in his pupils that desire.

SARAH BRINTON DAVIS, of New York.—The success of the grade teacher depends largely upon the attitude of the supervisor. It is my belief that almost all of the grade teachers can teach music with fair success, if they are properly encouraged to make the effort by the supervisor. I have found a number of teachers who told me that they were absolutely unable to teach music, and yet they have succeeded in doing most acceptable work when, in response to my encouragement, they have put forth proper effort. Supervisors should remember that things which seem perfectly easy to them seem very hard to the inexperienced grade teachers, and should meet them in that spirit.

C. H. CONGDON, of New York.—We never hear of teachers who are incompetent to teach arithmetic, or who are unable to teach reading, being in the schools, and it seems to me the time has come when we should hear less about teachers who are incompetent to teach music being in the schools. If the school superintendents who are attending the meetings of the National Educational Association this year would go home and make a demand that their teachers should be qualified to teach music, this question of the teacher who is incompetent to teach music would soon be settled.

POWELL G. FITHIAN, Camden, N. J.—In our supervising work we find two classes of teachers—those who think they know it all, and those who think they know nothing. I have frequently found the best results were secured from those who thought they knew the least. The best results from school music are secured where the grade teacher reposes the most confidence in the supervisor. We usually find that the results are in direct proportion to the amount of this confidence. One condition which prevents our doing in music all we should like to do is the limited time at our disposal. In Camden this time is ten minutes a day, and the work is further handicapped by teachers who are not prepared to do music work. The supervisor should insist that the grade teachers be required to pass an examination showing proficiency in this branch.

In response to a question regarding the requirements in music in America, Mr. Foshay said that each state had its own requirements, and that the California law provided that all teachers in the public schools should be able to teach music. Mr. Gantvoort stated that the same was true in the state of Ohio. The same law prevails in Iowa, with the addition that every county superintendent is required to employ a teacher of music in the annual county normal institutes.

CHARLES I. RICE, Worcester, Mass.—In the city of Worcester the questions for the examination of all the candidates for positions in the city schools are prepared by the supervisor. Fifteen questions are submitted, two of which must be answered by all, and eight of the remaining thirteen must be answered if the candidate would be successful. All candidates for positions in the schools have to pass this examination. I believe that any supervisor having the confidence of his board might be able to put the same arrangement in force.

HERBERT GRIGGS, of Colorado.—I suppose I shall be classed as a heretic, but years of experience in public-school work show me that a candidate for a teacher's position can

answer any number of questions about the staff, and notes, and the signatures of the different keys, and show knowledge about a lot of other foolish things, and yet not be able really to teach music in the class-room. In my opinion, the essential things are that the teacher shall love music, love the child, and have abundance of tact. These things are of much more value in the schoolroom than the ability to teach the value of the half-note.

SOME FEATURES OF MUSIC INSTRUCTION IN THE SCHOOLS OF NEW YORK CITY

FRANK R. RIX, DIRECTOR OF MUSIC, PUBLIC SCHOOLS, BOROUGH OF QUEENS
AND RICHMOND, NEW YORK CITY

In teaching school music two widely divergent methods are apparent, the realistic and the idealistic. The rigid system of the realist is based on purely disciplinary grounds, and it must be admitted that music enlists the disciplinary and logical faculties to their fullest extent. On the other hand, the idealist, who, on purely ethical grounds, makes song-singing the only means of training, simply goes to the opposite extreme—a dangerous one, since this method, in practice, degenerates into rote-singing pure and simple.

Beyond the just claims of the realist, and of the idealist also, we must admit that musical experience is worth seeking for its own sake, and the æsthetics and technique of music should be rightly united in order to have the best method, which avoids the extreme in either direction and is that of the practical idealist.

The first suggestion of æsthetic feeling comes thru the power of the senses for enjoyment, which is greatest in those which have a specialized organ. The superiority of sight and hearing over the other senses arises from something which the latter do not possess; namely, their capacity to experience a variety of simultaneous impressions, and the power to group and co-ordinate them into a distinct whole. The pleasure which this gives is, in fact, the contemplation of the beautiful.

Beauty is manifested thru form, which is used by spirit as its medium of expression, and to the inner-self sense is its interpreter. The eye and ear, therefore, are the media for æsthetic impression. Hence training in art must be directed to the eye and ear. It is thus that the apparent antagonism between realism and idealism disappears, for the largest culture is possible only thru the mastery of detail. Work, the overcoming of difficulties one by one, and individual effort are the steps that carry us across the bridge.

The basis of musical education is the power of the ear to discriminate musical rhythms and intervals, which leads in turn to the ability to conceive those rhythms and tones from their written symbols. The ear, however, is at a great disadvantage, when compared with the eye, as the latter, aided by touch and the measuring sense of muscular movements, finds objects of permanence in constant variety for contemplation, while the ear must depend

on its unaided judgment of sounds which are of only short duration. The mastery of music requires much practice and frequent performance for its highest development, and, in view of the small amount of time allotted to music in school, the really creditable results seem remarkable. We must remember, however, that we have eight years in which to reach our highest aims.

Fortunately, music is made for intelligent enjoyment thru the hearing of it quite as much as thru mere performance, and, while sight-singing is invaluable as an accomplishment and as a means of mental discipline, it is quite as important to train up a generation of appreciative and discriminating listeners. To this end, definite hearing is necessary, the power to analyze into small forms, and to reconstruct the same into the whole. Sight-reading does this, and, beyond its worth as a means of performance, it is valuable as a measure of the power to hear definitely.

The technique of music study, then, is simply another variety of object-teaching, a matter of educating sense-perception, the objects being musical rhythms and tone progressions.

Singing may be classed as a highly specialized and idealized form of language, and the principles involved in the study of spoken language and singing are practically identical. Music study makes one master of the processes that create the intelligent and independent performer; but, aside from its great value as a means of intellectual discipline, it must be remembered that the ability to read music gives the power to interpret music itself, to give expression to the feelings, and to outpour the real self in sincere helpfulness.

Thru the child's interest the teacher may accomplish his cherished ends. Interest stimulates attention, rouses perception, and fixes that concentration of the mind which is essential to the getting of all knowledge. The play element, therefore, enters largely into modern educational methods. In music, especially, the child should work thru the interest it inspires—the interest especially needed in music, as the child cannot be driven. The subject should be treated attractively, and the materials should be such as appeal strongly to the child's imagination and natural love for the beautiful, the elements in music that most strongly attract the youthful fancy being rhythm and beautiful melody.

The New York course of study was adopted by the Board of Education in May, 1903, and has had a trial of two years. In the contribution which I made to this course of study in music I was guided by my personal experience in class-room work, and in dealing with pupils in all grades and conditions of city life. I obtained an interesting statement of opinion from a large number of supervisors of music thruout the country, to whom I sent a circular containing twenty questions bearing upon their experience, and upon the usefulness of certain methods and the practicability of the same. My idea was to ascertain if supervisors were not in favor of a simplification of methods and a more direct application of them. I received a large number of replies,

carefully written and thoughtfully conceived, and the consensus of opinion agreed with my own ideas in many regards. In the first place, that the work of the first two years should be simple, largely consisting of rote-singing, of voice-training, and of fixing the knowledge of scale relations, and that staff notation and reading from books might very well be entirely omitted in the first year, and very little of it done in the second; that notation might be simplified; that the general practice in the books of presenting the half and eighth note, as well as the quarter, as standing for the beat is unnecessary, and, at the outset at least in a child's music experience, the quarter note should be the only standard. One of the features of our course of study is that it employs the quarter note as the beat-note until all the facts of two-, three-, four-, and six-part rhythm have been presented to the child.

In our work, the importance of the right treatment of the child's voice is the first requirement, and is rigidly insisted upon, following the accepted method of training from above downward in the head quality. A practice that is good pedagogically, and works out well, has been constantly in mind; namely, that all effects in music, whether of interval or of rhythm, should first be presented to the child's understanding thru the medium of song. In this way, the various rhythms are presented. The divided beat, the dotted quarter and eighth, the triplet, and others are shown as occurring in actual songs before the child is expected to analyze them. Having recognized their significance in this form, he is given exercises and drill, and the principle is applied as far as possible in the sight-reading of songs.

Our aim is to lead to sight-reading with words. To this end teachers are directed to use neutral syllables as well as the *sol-fa* singing names, and to train the children to think tones and sing them with the words of songs directly. This part of the process needs careful watching, as it is much easier for both pupil and teacher continually to use singing (*sol-fa*) names.

The complete song, containing as it does all the elements of instruction—namely, breathing, tone production, enunciation, rhythm, musical form, and the expression of æsthetic sentiment—is the aim and end of all singing. To the eventual mastery of songs all our instruction is aimed, since without the inspiration which this gives all the machinery of music instruction is robbed of its chief aim and benefit. The sight-singing of songs into which the elements of musical instruction enter is the object and aim of the New York course of study. Whatever tends toward this is encouraged; whatever detracts from it is discouraged.

At all times simplification of method is sought, and the means of doing work in the easiest, quickest, and surest manner.

Unusual rhythms, vagaries, and exceptional problems are of no particular use in school music. If the child is able to acquire the ability to read ordinary music at sight, he has accomplished all that may reasonably be expected in the elementary course. If our efforts were confined to this and to the interpretation of beautiful songs, I believe that antagonism toward music in the

schools would cease. The tendency of specialists is to expect and to require too much. (Instance, class teachers' comment.)

Recently the course of study and syllabi in all subjects in the city have been undergoing revision, and I am happy so say that, in all the discussions, the only criticisms of the course in music has been that it might be well to simplify still further in the first year, and that the theoretical work in the seventh and eighth years should be omitted, devoting the time in these two years chiefly to the sight-singing of good songs and song interpretation. This seems quite sensible and satisfying.

In all grades great attention is given to correct position, care, and cultivation of the voice, to breathing exercises and breath control, to enunciation and intelligent phrasing, to song interpretation and expression, to rhythm, melody, and the encouragement of individual effort.

Children are taught the habit of concentration, and of solving difficulties on the first trial by fixing the attention until the problem is finished. Success in music-teaching depends entirely upon the ability to secure concentration.

In breathing exercises the endeavor is made to secure correct breathing in a natural manner without creating self-consciousness. (Explanations followed.)

In sight-singing it is asked that the singing names shall not be abused by too constant use, the effort being to read without the use of these names and with words directly applied.

In all grades the so-called head register is called for, and that quality of tone which comes from singing the vowel *oo* on high pitches. The mistake should not be made, however, of overdoing "ooing." Other vowels should be cultivated as well as *oo*, the right quality being obtained by drawing such vowels out of the *oo* quality; for example, *oo-a*, *oo-o*, *oo-e*, *oo-aw*.

The voices of the boys and the girls are treated identically, and it is found that, if sufficient care is exercised, the girls' voices will partake to a considerable extent of the same quality as the boys'. Constant care, however, is needed, as it is very difficult for children to maintain the habit of correct voice-production.

All voices are treated equally up to the end of the fifth year, there being no permanent division into sopranos and altos.

In the seventh and eighth years, and, in some cases, in the sixth year, it seems desirable to make a more permanent change in the disposition of the voices, as it is found that boys begin to prefer to sing in lower range, even if the voice has not already changed. Advantage may be taken of this fact to secure a lower third part, which, being nearly within range of upper tenor voice, may be termed "alto-tenor." Boys with specially trained soprano voices, who wish to continue on the upper part, are allowed to do so until the voice shows signs of changing. The alto-tenor voice affords a convenient means of leading to the study of the bass clef, and the music for these voices may be written either in a lower part of the G clef or the upper part of the F clef, G being the extreme lower limit.

In planning the work, our limitations must be carefully considered. One fact, especially, we have borne in mind; namely, that the subject of school music must be handled from the standpoint of the class teacher. She has to do the work, and can do only such work as she is prepared for.

The chief requirement for the class teacher is a correct ear and the ability to judge the pupils' work. She is required to sing only in teaching rote songs or for ear-training exercises.

We must consider the limited time given, only sixty minutes a week, and out of that subtract the waste in getting books ready and putting them away.

The work of the class teacher is thoroly laid out by the music teacher, and every step is explained. Nothing is left to chance. The fault of most instruction books is that they are made for specialists. Music books should be constructed for the class teacher. They should give her just the work she has to do in black and white, exercises for dictation, for ear-training, for blackboard reproduction; as well as the vocalizes she is to use and the songs she must teach. With such help her work will no longer be haphazard, indefinite, and desultory. Happy the class teacher who receives from the special teacher model lessons that keep to the point, that waste no time or effort, and in which the children are kept thinking with concentrated attention, and with consequent accurate work.

We insist that the model lesson given in the class-room by the special teacher is a lesson to the grade teacher and not to the class. It is, therefore, the grade teacher's duty carefully to observe and follow the model lesson, and not to occupy herself with anything else.

In my own jurisdiction the class teacher has been constantly in mind, and the result of my experience during the last ten years has proved that the very large majority of teachers may do successful work in music. In the Borough of Queens, from the records kept by special teachers, 90 per cent. of the class teachers have done good work, 95 per cent. satisfactory, 5 per cent. unsatisfactory for various reasons, and 25 per cent. have done distinctly excellent work. From the start we entered upon the education of our class teachers. In this we were aided most efficiently by the attitude of the superintendent, who stood firmly for it. The principals, too, were in sympathy and where a music supervisor has the support of the superintendent and the sympathy of principals, he is sure to get the class teachers to work.

We had frequent conferences for the first year, in which practical methods were demonstrated, sometimes with classes of children and sometimes with the teachers themselves as the class. Gradually conferences were held less frequently, until at present we have almost dispensed with general gatherings. In my territory all the special teachers give frequent model lessons in the class-room; all points are demonstrated time and again for the benefit of the class teacher. The class teachers are expected to demonstrate their work for the inspection of the special teacher and the director, while the work both of class teachers and special teachers comes under the critical

eye of the director, who makes frequent visits to class-rooms and keeps in touch with the work in all schools.

Recently candidates for license as grade teachers in the city of New York have been required to pass an examination in vocal music and in the theory of music. These tests, while comparatively simple, have demonstrated at least the ability of the candidates to sing in tune, to sing and recognize the intervals of the scale and rhythms, and to give a practical demonstration of the power to teach.

To the supervising teacher comes the vitalizing of the work of the class teacher and of furnishing the inspiration which will make the songs of the school glow with fervency, with emotional life, and with heart-throbs of feeling. No supervisor should ever neglect this part of the work, which, in truth, is the most important part of it, and without which the rest is insignificant.

As the child studies reading in order to read, and to get in touch with the greatest in literature and with the highest thought, so in music, while the disciplinary effect is of the utmost value, he goes thru the training that is involved in sight-singing in order to sing, to read and understand the master-pieces of music, to be able to express himself nobly, and to voice his highest feelings in sincere accents.

Thus vitalized, music will contribute more fully, perhaps, than any other study, not only to the training and quickening of the mind, but, better than all, to the making of the true democrat, to the altruistic spirit, and to the building of character.

SOME TYPE-FORMS THAT HAVE BEEN FOUND USEFUL IN THE TEACHING OF MUSIC IN THE SCHOOLS

WALTER H. AIKEN, SUPERVISOR OF MUSIC, CINCINNATI SCHOOLS

Perhaps in no study of the school curriculum have such vast changes obtained during the past ten years as in the teaching of public-school music.

Pages of books, which were formerly tasks to be committed, are now utilized as teaching exercises to draw out the mind. A recitation upon the theory of music, which was a repetition of memory work, is now a testing exercise for intelligence. Instruction, which once meant information, imparted in verbal form, now signifies the art of throwing just as much light on a child's difficulties as will stimulate and enable him to overcome them himself. The teacher of today no longer rushes children thru textbooks, but seeks to utilize his energies and those of the children in other ways. It is our firm conviction that the great mass of teachers attempt to teach by far too much.

One of those illustrious professors who formed the glory of the old Italian school; one of those great artists in whom the most profound learning and consummate experience were united with the purest taste and most exalted genius; one of those masters, in short, who are scarce at all times, but whose

race seems now to be extinct, was requested by a pupil to teach him the art of singing. The master, who knew the young applicant beforehand and had already remarked in him a rare combination of natural gifts, inclined to grant his request, but, as a condition of his final consent, demanded that his new pupil should place entire confidence in him, and engage to pursue to the end, and without the slightest deviation, the course of study he would point out, however irksome he might sometimes find it, or however tedious it might sometimes appear. The pupil gave his word, and the master thereupon consented to direct his studies. He took a sheet of blank music paper and wrote upon it a few elementary exercises, followed by some others nearly as simple as the first; on the last lines of the sheet he added some ornaments and passages exemplifying the greatest difficulty of the vocal art. This paper he placed in the hands of his pupil, and to its study the entire labors of the first year were confined; the second year passed like the first; the third year was spent; and yet there was no mention of any lessons. The pupil began to murmur, but was reminded of his promise, and submitted. The fourth and fifth years were consumed in studying the same sheet of paper, which had formed the sole occupation of the three. The sixth year arrived, and still the paper was not changed nor its contents augmented by a single note; to the eternal music lesson, however, instructions in articulation, pronunciation, and declamation were now added. At the end of the sixth year, the pupil, who still believed that he was studying only the elements of the art, was agreeably surprised when his master said: "You are the first singer in Italy, or the whole world!" He said truly. The pupil was Caffarelli; the master, Porpora. If there be grade teachers in this assembly today, to them this anecdote may have all the appearance of fiction, but one well acquainted with the arts, and with the art of singing in particular, will see in it nothing but what is very natural and even probable. The most complicated achievements in any art consist only of a combination more or less diversified of a few simple elementary type-forms, or principles. Let us take, for example, an art most familiar to the generality of mankind, that of writing: a full stroke and a hair stroke, a straight line and a curve, form the sum total of the elements from the combination of which the most beautiful specimens of penmanship, the delight of the connoisseurs, are produced. So with singing: a tone firmly delivered, and a succession of tones well connected with each other and executed with various degrees of slowness or rapidity, form, at least, as far as mechanism is concerned, the whole elements of the art.

Among the points of music study which we deem as essential in our schools is that of "tone direction;" that is, a consciousness of their progression, whether upward or downward, or of the same pitch; of tone relation, scale relation, and rhythm. It is our thought that studies upon these essentials shall not only be presented in one year, but in every year of the child's school life. From these essentials we would allow no deviation. There is, perhaps,

a greater temptation to the music teacher than to those working in the grades, of attempting to cover too wide a range of difficulties. This is oftentimes forced upon us by the nature of the textbook exercises. The rifle, we would remark, is *the* effective weapon. As the whole charge is brought to bear upon the single bullet, it sends it with lightning-like rapidity straight to the mark. Diffusiveness is the enemy of execution. The power of concentration at a single point wins victories. The great general masses his forces against the weak point in the enemy's line. He brings every energy to bear upon that one spot, and finally breaks thru. Fortunate is the music teacher who can find the weak spot in the difficulty that confronts him, and then bring to bear upon it all the forces at his command. Difficulties usually hit the weak spot in the man; man should learn to hit the weak spot in the difficulty. Teachers who make it their business to see to it that every lesson has a point to it, that the child knows the point and all work in the same circle of thought; teachers who put themselves in the child's place, and do not always have the same way of removing difficulties, are at the head everywhere. People stand aside to let them pass up, and then wonder how they managed to get so high. "Concentration," said Emerson, "is the secret of strength in politics, in war, in trade; in short, in all management of human affairs." Thus early did the poet-philosopher realize the trend of human energies. In this age of the world, stores are concentrated into one, factories are centralized under one management, many businesses are absorbed into trusts—all examples of centralization. This is but another name for specialization.

As soon, therefore, as the major scale has been fairly well studied and its parts, we will say, presented in relation to the whole, we must form a decision as to where we will specialize, at all times remembering, in planning our work, that the ear, the eye, the hand in writing, and the voice in executing, must each be treated in turn, and, at the same time, our methods of presentation be governed by the age, capacity, and general advancement of the pupil.

You who have followed the grade teachers, with their modern methods of teaching children how to read, may have noted that word-mastery precedes sentence-reading. So it is our thought that the mastery of some such type-forms as I have placed in your hands must precede the reading of thoughts as they occur in music. A grade teacher knows that it is not possible to read an English sentence made up of unknown words. Therefore we, as music teachers, should exercise equal care that the children be familiar with each of these sentences as wholes before giving to them expression. See to it that they are *conscious* of the progression of their own voices, and of the voice of their teacher. I have emphasized that word "conscious" for its worthiness. This cannot be accomplished, we would add, by the use of *do, re, mi*. As a second step, these short sentences are combined in groups of two, and the children are trained to pass from one, by a synthetic glance, to the next one, and treat the two groups as a whole. So from the first we strive to get away

from the calling of notes by their syllabic names—the spelling-out process by which we learned to read—and compel the children to grasp each thought-unit before giving to it oral expression. This study of the combination of phrases cannot be hurriedly done. The teacher must stay with the problem until the pupil has acquired the art of “taking in” short sentences at a glance, and can interpret the thoughts or render the combinations as called for with some degree of skill and accuracy. This we consider the basis of reading, and the sooner the pupils acquire this, the better. Without a thoro knowledge of these type-forms, it is our thought, there can be no true reading of music.

We are aware that in setting up types as the pivotal point in a recitation we may be met at the threshold with vigorous objections. You will say that we are trying to invent or discover a short-cut from the particular to the general notion. You inform us that induction demands of us a study of individuals one by one, before comparing and deriving the general notion. Are we not doing that? Our method will show that we are. If we were to say that a type is both particular and general, then we have thrown into confusion our whole inductive plan.

According to Dr. McMurry, of the Illinois State Normal School, the study of a type is a short-cut toward a general truth, but he adds: “It is a process which the trained scientific, as well as the uncultured, mind inevitably takes.”

A child first makes the acquaintance of its own father thru a multitude of successive daily experiences, revealing many sides of his character. A little later, in meeting other fathers in the neighborhood, he is inclined to project this familiar notion of his own father into those of other fatherly characters. Certain it is that he does not make a second, third, and fourth elaborate study of neighboring fathers, and then sit down and patiently compare them in order to discover the type-idea. It has been our observation that after No. 1 has been thoroly studied (that is, the child can hear it, see it, write it, and sing it from various pitch attitudes), that after he knows it thru many varied experiences and relationships, even as he knows his own father, he has no trouble in treating similar exercises, which may start from the third or fifth of the scale, etc. It is not, we will add, necessary to compare the movement from the third and fifth degree to discover the type-idea. The pupil will project his experiences upon the first degree of this scale into the other degrees, just as the scientist, in collecting his data for later ultimate comparisons and conclusions, projects his previous experience into every new experiment, thus avoiding errors and adding to his observations by a constant reference to previous knowledge.

The botanist who studies, for example, the pubescence of a plant, to determine its relation to the life-history of the plant, moves up gradually to his final conclusions, comparing that as found in each new specimen, in part at least, with the average of his previous data. We have noted by actual experience, that after giving a careful study to each of these nine type-forms of movements, the pupil has been given power to move or think tones from

any staff degree, and we have further noted that children do not have a clear idea of how music sounds as it appears on paper, unless their attention has been called by comparisons to the differences and similarity of things, and these have been distinctly marked.

You will notice that, instead of spreading our attention over a multitude of excuses, we have picked out a few important centers; around these we would gather other facts; then we trace out the causal relations of the central type to its environment; and, finally, we discover, by comparing it with other movements, as formed on different degrees of the scale, that it is a representative of a law which repeats itself in other cases.

With type-forms as the pivotal point in a lesson, aimless teaching will be avoided. We would have them stand at the entrance of each important avenue to the temple of music, that of tone direction, tone relation, scale relation, and rhythm. They are to be, as Dr. McMurry has said, a short-cut in the inductive thought-movement from particular to general—a short-cut that both children and scientific thinkers alike pursue.

The well-chosen type is a combination of the particular and the general, the graphic elements of the concrete being mingled with the striking features of the general notion. To disengage this general notion and bring it clearly into the light, a comparison of several similar objects with the type is necessary. This is the natural and necessary method of abbreviating the inductive process without confusion; therefore, the type combines the two fundamental elements of all clear thinking: first, the concrete basis, and, second, the outline or index of a general truth.

It behooves us, therefore, in outlining our plan of battle, that we know the strength and weakness of our class, and then select a strategic point (a lesson unit) and, with a definite aim to our lesson, concentrate our full force upon it. Not only must our school-work be educational, but at the same time musical and delightful, cultivating within the child a spiritual power and a power to do—powers that are to remain with the child, for his service, thru life.

In our combined efforts toward the successful carrying out of our work, we must not fear to probe our methods for faults. We generally find them when we probe deeply enough. Let us turn the fiercest search-light upon all of our darling ideas (even type-studies), criticising others keenly, ourselves severely, even savagely. Perhaps, in presenting what we have to say, we might have been wrong; if so, we are not afraid to change or to admit it.

DISCUSSION

W. A. PUTT, supervisor of music, Cleveland, Ohio.—To my mind, the most important feature of Mr. Aiken's paper is his emphasis on individual work. I believe this to be the solution of the problem of sight-reading in the public schools. Concerted work is not a good criterion of the sight-reading work in a schoolroom. I have often wondered

what the result would be if we were to teach literary reading as we often attempt to teach music-reading. Were we to teach reading in concert, as the only means of attaining proficiency in literary reading, I believe results would be quite similar to those obtained by teaching music-reading in this manner. Mr. Aiken's percentage of proficiency as applied to Cincinnati would apply, with equal force, to the Cleveland schools. Children are excellent imitators, and they soon learn to lean upon the leaders, and that which often passes for good work in the schoolroom is really the actual work of a few proficient pupils. Were the child to be required to do individual work from the time he enters school until he graduates from the eighth grade, and were an accurate record kept of each individual pupil's work along reading lines, I believe that the reading problem would be solved. In the Cleveland schools we attempt to keep such a record by monthly examinations in music-reading. The record of each individual child is preserved. Not all children are required to sing alone, because of the fact that occasionally pupils are found who seem to be tone-deaf. Fortunately, the percentage of such children is very small. If individual work is properly conducted, no child need be put in an embarrassing position. The music-reading problem will not be solved until the value of individual work is fully recognized.

*REPORT OF COMMITTEE ON WHAT RESULTS SHOULD BE OBTAINED
IN THE STUDY OF MUSIC IN THE EIGHT GRADES OF THE
PUBLIC SCHOOLS*

PHILIP C. HAYDEN, CHAIRMAN, KEOKUK, IOWA

The committee presents, herewith, a brief statement of the amount of technical musical knowledge which should be acquired by the normal child in the grades.

The course should be enriched in various ways, in accordance with the judgment of the individual supervisors, but at least this standard should be reached in the study of the elements of music.

To avoid confusion, it should be understood that the quarter note is considered the beat-note in this statement.

First grade.—Songs by rote. Without any sort of representation, develop sense of tonality and rhythm thru the use of melodic phrases sung with *sol-fa* syllables and with words. Later in the year, add to this for eye-training the use of the staff with notes to represent melodies, with the keynote in different positions on the staff. Rote-singing should be the most important feature of the year's work.

Second year.—Rote-song work should be prominent thruout the year. Review the work of the first year. Individual and class drill in singing melodic phrases by syllables and words for dictation. The class should acquire great proficiency in this dictation work. Staff work in different keys¹ for eye-training. Reading simple exercises from the music-book.

Third grade.—Rote-singing. Review all previous work in staff drill and dictation. Promote eye-training by a study of staff by lines and spaces in all keys.³ Individual proficiency in perception of the value of the staff degrees, as representing the tones of the scale, should be attained. Review the first section of the music-book quickly, and when doing so, take up the two-tones-to-one-beat movement,² and practice until all can sing two tones to one beat from the notes. Sight-singing and rhythm practice. Special attention should be given to the development of the sense of rhythm these first three years.

Fourth year.—The end of the fourth grade should find the children able to read simple

¹ Mr. A. J. Gantvoort objects to the use of more than one key during the first two years, and would use only part of the keys during the third and fourth years.

² Mr. Gantvoort would have this read "three tones to one beat."

music at sight in any major key. They should be able to sing sharp 4, sharp 5, sharp 2, and sharp 3, and flat 7. They should be able to sing exercises in 2-4, 3-4, and 4-4 measure, and to sing readily groups of tones represented by the dotted quarter and eighth notes. They should also know the names of the notes, the pitch-names, and the degrees of the staff representing the various degrees of pitch. The ability to read music should be utilized by the singing of a large number of songs, wholly or partly at sight, and they should be able to sing suitable two-part songs.

Fifth grade.—At the end of the fifth grade the class should be able to sing all the sharps and flat 7 from the tone above, and some of the flats from the tone below. In rhythm, they should be able to sing at sight exercises containing the dotted eighth and sixteenth¹ and the simple forms of 6-8 measure with two beats to a measure.² They should be able to name the keys from the signature. They should be able to sing two-part exercises at sight.

Sixth grade.—The class should become familiar with all the chromatics, both sharps and flats, and be able to apply syllables to any melody they have in mind, from memory. They should use melodies and exercises in the minor mode and be able to sing the different forms of the minor scales. They should begin three-part singing. They should begin writing the signatures of the major scales from memory. In rhythm, they should study all the forms found in 6-8 measure, two beats to a measure. Simple songs should be sung at sight without the use of the syllables.

Seventh grade.—The class should use chromatics with facility. They should sing readily in three parts. They should become familiar with the different forms of the minor scales and their relation to the major scales. They should be able to write the major scales with their signatures. In rhythm, they should be able to read readily all the forms found in 6-8 measure, two beats to a measure, and to sing four tones to a beat, and should study syncopation.

Eighth grade.—The class should become thoroly familiar with the different forms of the minor scales, and be able to write their signatures and the varying uses of the chromatic tones as they indicate a passing change or modulation. In rhythm work, they should readily sing four tones to one beat and syncopation. They should be so familiar with the different forms of rhythm that the groups of notes give an immediate knowledge of the rhythm represented, whether it be two, three, or four tones to a beat, the unequally divided beat, both tones having two beats; the unequally divided beat, both tones having one beat,³ or syncopation. Bass staff studied.

In all grades the voices of the children should be light in quality, smooth, and free from harshness. All singing should be intelligent, with good phrasing and proper attention to the sentiment of the words. It should be remembered that good singing is one aim of music in the schools, and that love of song, and the desire to express one's self in song, should result from the study.

(Signed) PHILIP C. HAYDEN, Keokuk, Iowa, *Chairman*;
E. B. BIRGE, Indianapolis, Ind.;
H. M. BUTLER, Newport, Ky.;
ESTELLE CARPENTER, San Francisco, Cal.;
JULIA E. CRANE, Potsdam, N. Y.;
B. C. DAVIS, Atlanta, Ga.;
C. A. FULLERTON, Cedar Falls, Iowa;
A. J. GANTVOORT, Cincinnati, Ohio;

Committee.

¹ Mr. Gantvoort would have this read dotted quarter and eighth.

² Mr. Birge would defer 6-8 measure, two beats to the measure, until the Sixth grade.

³ Expressed in terms of representation notes, this would read, eighth notes, triplets (and 6-8 measure, two beats to a measure), sixteenth notes, dotted quarter and eighth, dotted eighth and sixteenth notes.

DEPARTMENT OF BUSINESS EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY AFTERNOON, JULY 5, 1905

The department met in Library Hall, Asbury Park, at 2:30 P. M., and was called to order by Vice-President H. B. Brown, Valparaiso, Ind., who introduced the president, William C. Stevenson, Decatur, Ill. Mr. Stevenson then delivered the president's annual address, taking for his subject "The Qualifications of Commercial Teachers."

This was followed by a paper on "The Essentials of a Proper Education for the Average Business Man," by John Brisben Walker, editor of the *Cosmopolitan* magazine. At the conclusion of the paper, a vote of thanks was extended to Mr. Walker for the address.

The paper was discussed by R. U. Conger, of the Sheldon School, New York, and Dr. H. M. Rowe, Baltimore, Md.

The next topic, "The Science Work of a Four-Year Commercial Course," was presented by Allan Davis, principal of the Business High School, Washington, D. C. The paper was discussed by D. W. Springer, of the Ann Arbor High School.

The last paper of the session, "The Study of Local Industries and Trade," was presented by John L. Tildsley, of the High School of Commerce, New York city. The subject was discussed by William McAndrew, principal of the Girls' Technical High School, New York city.

The president appointed the following committees:

ON NOMINATIONS

D. W. Springer, of Michigan. Enos Spencer, of Kentucky.
Harlow S. Person, of New Hampshire.

ON RESOLUTIONS

Cheesman A. Herrick, of Pennsylvania. John L. Tildsley, of New York.
Templeton P. Twiggs, of Michigan.

The department adjourned until Thursday morning, July 6.

SECOND SESSION.—THURSDAY MORNING, JULY 6

The meeting was called to order by President Stevenson at 9:30 A. M. The topic, "The Value of Government Publications to Teachers of Commerce in Secondary Schools and Colleges," was introduced for general discussion, in which the following named took part: Edward D. Jones, of the University of Michigan; Allan Davis, of the Business High School, Washington, D. C.; Mr. True, of the Department of Agriculture, Washington, D. C.; and W. J. Kinsley, of New York.

"The Essential Elements of Study in a University Course in Commerce, from the View-Point of the University of Michigan," was the subject of the next paper, by Edward D. Jones, director of the course in higher commercial education, University of Michigan.

Harlow S. Person, secretary of the Amos Tuck School of Administration and Finance, Dartmouth College, presented a paper on the same subject from the view-point of Dart-

mouth College. Mr. James T. Young also spoke on the same subject, from the viewpoint of the Wharton School of Finance and Commerce, of Philadelphia, Pa.

"Results of the Organization of Higher Courses in Commerce," was presented by Harlow S. Person, secretary of the Amos Tuck School of Commerce; and from the experience of the University of Pennsylvania, by James T. Young, director of the Wharton School of Finance and Commerce, Philadelphia, Pa.

The Committee on Nominations reported the following:

For *President*—H. M. Rowe, Baltimore, Md.

For *First Vice-President*—James T. Young, Philadelphia, Pa.

For *Second Vice-President*—W. H. Wagner, Los Angeles, Cal.

For *Secretary*—Horace G. Healey, New York, N. Y.

On motion, the nominees of the committee were declared the officers of the department for the coming year.

The Committee on Resolutions next presented its report, as follows:

The Department of Business Education of the National Educational Association at the meeting of 1905 wishes to make a record of its appreciation of the excellence of the program just concluded, and declares its indebtedness to the retiring officers, and to those who have read papers and contributed to the discussions.

We declare anew our belief in the desirability of three forms of commercial education—higher, secondary, and that technical education exemplified by the private business schools; and we pledge our aid in developing all of these so that each may better serve its proper constituency.

We reaffirm our declaration that commercial instruction in our public-school system should be equal in time requirement, and of corresponding educational value, with other forms of instruction to which it is placed parallel.

We note with pleasure the improvements now going on in private commercial schools, and we commend the managers of these schools for lengthening their courses of study and enriching their curricula by introducing new subjects.

The meeting just closing should bring clearly to public notice that commercial schools are not limited or impoverished in educational opportunity; on the contrary, they are developing a broad and necessary field of general education, and this department should insist upon distinctively educational purpose in commercial schools.

This department may properly demand a larger recognition of the form of education for which it stands in our general schemes of instruction. The commercial element in all our education would do more than prepare for individual success and efficiency; the introduction of such an element would contribute to broad public welfare by preparing men to appreciate the meaning of, and to enter into, our economic citizenship. We therefore ask that commercial subjects have a wider introduction than heretofore.

We look upon the preparation of teachers for commercial schools and departments as a pressing problem of commercial education, and we commend this question to our higher schools of commerce and university schools of education, to our normal schools, and to further consideration by this body.

Respectfully submitted,

TEMPLETON P. TWIGGS.

JOHN L. TILDSLEY.

CHEESMAN A. HERRICK.

The following resolution was then presented by D. W. Springer, of Ann Arbor, and adopted by the department:

Resolved, That Messrs. Cheesman A. Herrick, William A. Scott, I. O. Crissy, and H. M. Rowe be appointed a committee, with power to add to their number as they may desire, for the purpose of considering the question of "The Preparation of Commercial Teachers."

The department then adjourned.

JOHN ALFRED WHITE, *Secretary*.

PAPERS AND DISCUSSIONS

QUALIFICATIONS OF COMMERCIAL TEACHERS

WILLIAM C. STEVENSON, DIRECTOR OF SCHOOL OF COMMERCE AND FINANCE,
THE JAMES MILLIKIN UNIVERSITY, DECATUR, ILL.

Time was when the qualifications of the commercial teacher were spoken of in educational circles with bated breath and in tones suggestive of fearful sighs. Those were days when commercial teaching was practically undeveloped, and the teacher of commerce was the possessor of a single idea, and that was ensconced in the mazy recesses of a half-awakened brain.

Twenty years or more have seen the development of a new idea in education. Its growth, along with technical education and practical education of various kinds, was nurtured by the hard horse-sense of the common people. Like the physician with his many remedies, the commercial teacher has never been found wanting in his willingness to serve the people. To train captains of industry—for a consideration—has gradually grown to be as profitable as other lines of teaching, and indications point to a demand so much greater than the supply that it is only a question of a few years when commercial teachers of the various grades will receive a larger compensation than is possible in other departments of educational work.

With the inauguration of the commercial high school and the university schools of commerce, the standing, educationally, of commercial teachers advanced as rapidly as did the recognition of the scientific teachers at the close of the long contest with the classicists. Today the general public and a majority of the educational leaders of the world recognize that culture, sweetness and light may be developed by a course of study that trains the student to hold his own in the world of business endeavor, as well as by the older forms of education. To draw out the innate powers of thought, to develop individuality, to produce men of ability as well as men of character, is no less possible for the teacher of commerce than for the teacher of Greek. With a very few exceptions, "sweetness and light" do not flourish in the soil of poverty. Financial independence, the assurance of a livelihood, is most conducive to the development of the best type of citizenship, and furnishes the necessary leisure for the growth of mind and soul.

The increasing prestige of mercantile pursuits, the large demands for commercial teachers at excellent salaries, the recent recognition by high educational authority of the educational value of business training, the establishment of two higher forms of scientific commercial schools, are all evidences of an emergency that confronts the commercial teachers of today and tomorrow. New conditions and opportunities require of commercial teachers a larger mental and professional equipment. We shall be able to hold our own only by the methods followed by the advocates of natural science in the long

contention with the forces of intrenched conservatism. They strove zealously and unremittingly to make themselves fit exponents of scientific truth, and to be in all points equal in manhood, efficiency, teaching power, and breadth of scholarship to their gracious friends, the advocates of the classics. But be it remembered that, to acquire those results, they at no time found it necessary to leave their own field of labor. And it is the boast of scientists today that their truth, obtained thru scientific methods, is no less *the truth*; that in teaching power, and in the development of a true manhood, and even in culture they are not excelled by the more ancient learning. Having stood the tests of the years, science today is accepted at its own estimate; and, side by side with the classics, the world has almost forgotten Herbert Spencer, the exponent of the new education, and the great victory made possible by his leadership. By following the precedent set by the second great division of educational work, it is possible that scientific commercial education may become recognized as the third division of the educational trinity. There can be no doubt that the number of students engaged in the study of commercial education approximates the number studying the classical or scientific foundations. To continue to merit the public confidence and meet the public demand, it is plainly imperative that commercial teachers must receive an educational preparation, for their important work, equivalent to that demanded of teachers of the classical and scientific foundations.

That commercial education cannot be included in the classics or the natural sciences determines the fact that commercial teachers cannot be trained wholly in or by either of them. In the thoro training of the commercial teachers of the business colleges, of the high schools and colleges and universities, and in state supervision and regulation of that training, rests the hope of their permanency and the public recognition of their educational efficiency and equality.

Let us examine the teachers in commercial schools and determine their fitness to teach. A large majority of the teachers in the business colleges point to a diploma received for a four- to ten-months' course in a business college as their license to teach. Teachers of commerce and other subjects in the courses in commerce in our high schools and universities have usually had training of the same grade as the institutions in which they are employed. Yet the training which they have received is only an indirect training for commercial teaching of high-school or university grade. The point of view, the tastes, ends, and aims of life, and the general treatment of common subjects, must necessarily be very different in a high school or college having the usual literary bent, and a department of commerce in a high school or college, where the utilitarian end is to all intents and purposes paramount. So long as commercial high schools or university courses in commerce have as their directive forces men trained in schools of diametrically opposite ends and aims, so long will they be commercial schools in name only. By such the public is not deceived; nor is it astonished when a teacher of ancient languages

is placed on the salary list of the commercial school until a vacancy is found in the classical school. Who can deny that the reverse condition would be equally wrong?

Trained commercial teachers for the secondary and higher schools of commerce is not only a pressing need of our time, but is entirely possible of realization. The American Commercial Schools Institution now being considered by the independent business schools is a splendid conception, and will make the continuance of those schools a possibility. The supervision of the American Commercial Schools Institution over elementary commercial training will eliminate the fake business colleges and the confidence man who poses as a business educator.

It may readily be seen that the conditions existing with respect to the training of commercial teachers for the high schools and colleges do not exist to the same extent in any other educational field. It is not sufficient for a commercial teacher in a high school, for example, to have completed the high-school course in commerce, and then graduate from the college course in commerce, altho this would give him a greatly improved mental and professional equipment, and would also give a corps of commercial teachers worthy of the name. The education from high school, then from college, may appear to be a sufficient preparation for teaching in the classical or scientific high schools or colleges. But the commercial teacher who today achieves the greatest success, and in the future will be most sought after, must not only graduate from the university school of commerce, but must know business at first hand. To some extent, at least, he must be a business man, for the same reason that the faculty of the law and medical schools is made up, not only of the graduates of law and medical schools, but of men who have practiced their profession to some extent in the field of life.

In addition, the commercial teacher of the high school or college should have studied those professional subjects bearing upon teaching and the laws of human thought. Every course in a college in commerce should permit electives of a pedagogical and professional nature for prospective teachers of commerce in the high school or college. Without training of this character, commercial teachers are blind to the instincts, the passions, the motives, and to all that psychological investigation reveals to the executive and the teacher.

Travel is a great teacher of teachers, and to none is it more necessary than to the commercial teacher. The Japanese and the Germans send their youths to all parts of the world to be educated by travel, by contact with strange peoples in strange lands; and the result is modern commercial Germany, and Japan the wonderful. To visit industrial establishments of all kinds; to find out their work and ways of working; to teach the principles of ethics for use, where ethics is most needed; to teach the use, the getting, and the power of money; to pour a subtle oil on the machinery of life; to prove the fallacy of Kipling's lines,

And little folk of little soul
Rise up to buy and sell;

to be the sociologist of the world's business—these are a few of the possibilities and qualifications of the commercial teacher.

WHAT SHOULD BE THE EDUCATION OF A BUSINESS MAN?

JOHN BRISBEN WALKER, EDITOR OF THE "COSMOPOLITAN" MAGAZINE,
IRVINGTON, N. Y.

If, at the beginning of the twentieth century, education does not accomplish that which may reasonably be expected of it, the indifferent results must be ascribed chiefly to the failure to determine clearly in advance the purposes for which studies are to be pursued. While our great schools are organized in the most complete way for instruction and administration, I have found, by personal examination covering nearly a dozen of our leading universities, that there exists no board or commission of disinterested men whose duty it is to determine what education should be.

One can scarcely expect that the influential professors of Latin and Greek, whose dignity has come down thru three hundred years, will vote to abolish their own offices. Yet to them has been largely committed the task of determining the all-important and fundamental question: "What is education?" Until some university appoints a commission of disinterested scholars and men of wide attainments to consider in formal session this subject, which is preliminary to true education, we may expect prejudice and the customs of the ancient schools still to hold the chief sway.

In attempting, therefore, to outline what should be the education of the modern man who has chosen the business world for his career, I have but little to guide me. The libraries show that small attention has been given to the subject; I base my conclusions upon an experience of thirty-five years in association with, or in handling, men—young and old, in publishing, manufacturing, and in general business—to determine the things which most contribute to the moral and material successes in the business world.

The time allotted any man in which to seek an education in the schools is all too short. No matter whether he has at his disposal two years, four years, or six years, all are insufficient to cover the field of important knowledge. It therefore becomes essential to arrange with the utmost precision the order for the period of time available. But before this can be done so that the result will be without waste, the student must determine: "What do I hope to obtain by education?"

The answer to this must embrace certain things which apply to all students. Every man seeks: first, happiness—not enjoyment merely, not pleasure, but that deeper felicity which can be founded only upon right living—a condition of the soul which is given out as well to those around about us; secondly, the tools with which to accomplish business results.

It goes without saying that the nearer one comes to truth—that is, to a clear understanding of the conditions which surround us—the more certain is he to achieve happiness, the more certain to accomplish results.

If the youth starts out in a fog of deception, his every effort must be hampered. If he comprehends but dimly the causes at work about him, he is likely to deceive himself and to deceive others.

Therefore, in the acquisition of knowledge comes first and fundamentally some comprehension of the universe. As a preliminary and an accompaniment to business training there should be brief studies of the known facts, first concerning the universe itself, and, secondly, of our own globe. If one starts in ignorance of things which concern all life, there will be endless groping in the dark. Having some knowledge of the world in which he exists—astronomy—and of the globe upon which he lives—geology—he must next know something of the things round about him—botany and chemistry. Then comes the even more necessary knowledge concerning his own body—physiology; health stands first and foremost in human acquisitions, and health will not last long without knowledge. Lastly some understanding of his own mind—psychology.

Do not say that these are the advanced studies of the university, and that there is no opportunity for them in a short business course. They must become a part of every education, because they are all-important, all-necessary. Without them the mind of the business man must ever remain confused. They enable one to comprehend; they give the power to see. The time will soon be here when they will be recognized as essentials in every education—as preliminary to all right thinking. To know where we are—upon what; to have some comprehension of the phenomena going on round about us; to understand our own bodies, and so preserve that health which nine scholars out of ten now sacrifice thru ignorance; to have some insight into our own mental processes, and the workings of the minds of those with whom we come into contact—this knowledge belongs at the beginning of all true education, and its assimilation should move concurrently thru all courses.

And parallel to this must be kept a scientific study of human happiness. What is true happiness, and how is it to be attained for one's self and for one's neighbor? In acquiring health and vigor, in aiding good government, in wise business planning, in perfected organization, in economic production? These things concern the problems of happiness, and should be constituent parts of all education. When once their true place of essential preliminaries is recognized, humanity will advance with extraordinary strides. These studies do not mean the use of such numerous text-books as are now employed in our colleges, but of simply written little volumes from such really great minds as have that grasp, that power of bird's-eye view, which enables them to give much in little; which makes clear the greatest subjects; which in simple language, touching only the salient points, conveys that knowledge which so many writers have seemed to delight in making abstruse.

We now come to the tools which education furnishes for the accomplishment of life-work. Of these, certain ones are necessary to all. To mention them in the order of their importance:

1. How to take that physical exercise necessary to the proper care of the body; because if one falls into ill-health, all things else become insignificant.
2. A knowledge of one's own language.
3. Ability to make analysis.
4. A knowledge of the use of figures.
5. An understanding of the principles of classification and organization.

Beyond come the courses of specialization to fit the student for the work he has elected to pursue, and into these it is not necessary to go. If, for instance, he is to become a bookkeeper, he must have already laid the groundwork in his study of analyses and of the principles of classification and organization; for these underlie all successful accounting. That bookkeeper is always a failure, except in the humblest work, who is not grounded in these preliminaries, which are also essential to all education. And oh, the pitiful failures that I have personally witnessed—failures that might so easily have been made successes if their minds had been properly opened in their preliminary training.

Take, for instance, the study of analyses. In whatever business a man may find himself, success or failure depends upon the power to analyze the problems which present themselves during every hour, at every turn in life. Failing to understand the conditions, he can make no real analysis; failing in his analysis, he goes to meet his problem improperly equipped, and only fortunate accident may save him from disaster.

The successful business man makes an analysis on paper of every important problem, before venturing upon action. Tabulating, with brackets against every phase of the undertaking—following each probable result out to its furthest limits—he reaches a point beyond which he cannot go. He has now before him a bird's-eye view of the situation. If failure comes subsequently, it will be because of conditions impossible to foresee.

And this tabulated analysis must be applied to the smallest as well as the largest affairs of business life, if one would act upon premises clearly thought out.

Much of what has been given here as essential to the training of business men is known in the schools as "science." Scientific knowledge comes into play in practically every branch of modern business. Its lack handicaps every man who would accomplish. To the manufacturer, in the use of materials; to the merchant, in the intimate knowledge of goods; to the contractor, in carrying out his work to economic advantage; to the man engaged in transportation; to the investor, seeking opportunities which will bring him fortune; and above all to the young clerk, who would advance himself by becoming useful—to all these science presents itself as necessary, as indeed it is to any career which would rise above the most commonplace.

Knowledge of one's own language is an important factor in business success. The study of grammar and rhetoric, of synonyms, and of the best literature, is essential to that choice of words which brings conviction to the hearer; to that concise style so necessary in modern correspondence; to that clear and exact statement so essential to contracts, either oral or written. But beyond his own tongue, no one should waste upon languages, ancient or modern, the precious minutes of the all-too-short a time which he can give to education. The man seeking a business education is a runner in a race. He has but so many seconds to win his goal: and he must keep constantly in mind the course he has set himself to pursue. If he deviates, he loses.

Modern languages are a thousand times more valuable to the student than the Greek and Latin which for so many centuries were deemed the only education, but to defend which, in this age, is to be ridiculous. But even French and German must be eliminated from the instruction of the young man who desires a mastery of the essentials. Languages may be acquired at any time, by anyone, in spare hours. They are no part of the fundamentals of either a business or a liberal education; so wide is now the field which must be covered in other directions.

In conclusion, I would urge that above all, before beginning actual studies, there should be a carefully matured, well-thought-out plan for the education of each individual. This work is now done in a haphazard way. But at least a week at the beginning of the school year should be given up to the careful consideration of what the young man proposes to accomplish. During this time he should not be rushed. It should be a week of quiet thought, and attendance upon lectures which would show the purposes of the several courses, and their usefulness and their bearing upon the various employments of life. Each student should have, in the preparation of his table of studies, the personal counsel of his professors and instructors. Each should have pointed out to him the purposes and advantages of the proposed courses. No matter how crowded the terms of studies, an entire week is not too much to give to this preliminary; so all-important is a clear comprehension, in advance, of what the student aims at and proposes to accomplish.

Running thruout the course of the business man's education, should be taught organization—its lessons ingeniously contrived to become a part of his daily life—because an understanding of organization is, after the power and knowledge necessary to comprehend things, the secret of all success in business life. The keeping of accounts—everyone should have some knowledge of accounting—the art of filing papers, and, above all, the making of analyses, have to do with that organization which is interwoven with every affair of business life.

One other teaching must run thruout the business course. That institution fails which does not provide for constant lectures upon "Integrity, the First Requisite to a Successful Business Career." Every part of business ethics should be discussed: difficult situations should be presented, and the

temptations of business life shown up. Because these things are neglected, or imperfectly explained, in our schools and colleges, thousands of youths annually wreck themselves upon the sophistries of the business world. Upon every business field lie these wrecks of men, who would very likely have seen the way to honorable fortune had they been instructed in advance concerning the temptations they were to encounter. A love of truth, and the possession of a personal integrity above temptation, constitute the highest capital of the youth who would seek business success.

I am aware that there are many who think differently. But I have followed the careers of a thousand men who have sought success by unscrupulous ways, and have watched their brilliant ability go down to poverty, where honor would have brought prosperity; while in the case of those dishonorably succeeding, fortune was invariably embittered by the contempt both of self and of neighbor. Eventually, "respectable" thieves are always recognized in every community.

Such are the requisites of a business education, as they seem to me after a long and perhaps unusually broad experience in affairs. I am aware that in a measure I am departing from certain accepted standards. But the business world is changing rapidly, and education must be advanced to meet the requirements of the new conditions.

THE SCIENCE WORK OF A FOUR-YEAR COMMERCIAL COURSE

ALLAN DAVIS, PRINCIPAL OF BUSINESS HIGH SCHOOL, WASHINGTON, D. C.

That every high-school course, however specialized, should contain within itself the elements of a good general education, and that a knowledge of the natural sciences is an essential part of a complete general education, are two propositions which will readily gain the assent of all who have considered the matter of the American high-school course. Nevertheless, it is probably true that the natural sciences are not given sufficient time or weight in the average high school. Language is treated liberally; mathematics has a well-established place; history and its allied studies are not neglected; that group which gives character to the course—manual training, business training, literature, the classics—is seldom underrated. But both in time and in organization there is much to be desired in science.

One hour a day thruout the four years, or approximately one-fifth of the student's time, is perhaps an allotment which is sufficient for science, and which does not encroach upon the needs of other studies. This would permit elementary biology, combined with the study of commercial products, to be pursued in the first year, followed by chemistry in the second, and physics in the third, with a final year of application and review thru the study of the scientific phases of typical business organizations.

So far as training and power are concerned, a commercial course in science should not differ materially from the similar work of the ordinary high school. It will teach accurate observation, lead the pupil to experiment with a definite purpose, teach the art of manipulating apparatus, train the eye and the hand to perform their functions skillfully, serve as a course in practical logic both in induction and deduction, tend to accuracy and facility in speech and in recording; above all, it will create the true scientific attitude in the student, and teach him to suspend judgment until he has obtained proof; it will force him to feel that evidence is better than faith, that he must be judge and examiner rather than advocate.

In determining the content of a course, its purpose must be primarily considered. As the commercial high school will not, to any considerable degree, prepare for college, it is freed from the restriction of college-entrance tests and requirements. It does not specifically prepare for engineering or the professions, and therefore need not specialize along these lines. It must, on the other hand, make the student broadly intelligent, so that he may have general information upon a variety of matters of practical knowledge, may know his limitations and when to consult the specialist. It must, in other words, fit him to be a practical man of affairs rather than a specialist. Theoretically, the conclusion follows that the whole field of science should be covered; practically, that those sciences should be selected which most nearly cover the field. The difficulty of such a task, altho great, is measurably lessened thru the aid afforded by correlation of science with related studies of the course.

In the study of general and commercial geography, which will probably be classed with the historical rather than with the natural-science group, lie an excellent introduction and a powerful aid to the sciences. Geography may be defined as a study of the arts and sciences from the view-point of location upon the earth. Whether it be taught by beginning with the universe or with the neighborhood, it gives an idea of those principles of astronomy which are essential to even an elementary knowledge of man's place in nature, points the way to geology and physiography, and constantly uses data drawn from all the sciences. Therefore, the usual science work of a high school where geography is taught will receive aid at many points from this subject, which calls upon science for explanations and illustrations.

Perhaps the best way to approach science in the commercial high school is thru the study of commercial products, which should be based upon elementary biology. This subject does not require any great knowledge of mathematics; the apparatus required is mainly simple and easily obtained; many of the data can be obtained by individual observation outside of regular school hours; it deals largely with phenomena of general interest. I am aware that botany and zoölogy are frequently taught as if their subject-matter were entirely apart from the ordinary experience of the student, and that the teacher, in too many instances, has been lost in the specialist. But

this is an argument for nothing except improvement. It is both scientific and profitable to join the study of the function and structure of the plant with that of the commercial product derived from it. For example, in the case of the wood products, one can study the roots, bark, wood, and leaves of the tree, and proceed directly to the study of oak and pine, and to the methods of sawing, preparing, and marketing. In fact, a knowledge of the wood as a commercial product is imperfect without a knowledge of the botany of the tree; conversely, a knowledge of the commercial wood is an excellent aid to the study of the botany of the tree.

In the second year, after having received some definite training in scientific method, the pupil may begin the study of chemistry. This subject introduces him to a new phase of nature. It continues definite scientific training, and leads to the study of commercial and industrial processes as well as of products. It does not require any great knowledge of mathematics and, like the first-year science, can be taught with apparatus which is comparatively inexpensive both for class-work and for individual use.

By the time the student reaches his third year, he has obtained training in the careful manipulation of apparatus, has mastered perhaps the elements of algebra and geometry, and is prepared to perform simple quantitative experiments. By placing physics in this year, we secure economy of time and sufficient preparation on the part of the pupil to enable the subject to be mastered readily in the four hours a week which are presumably allotted to it.

Thruout the course, the relation of theory to practice, of the science to the art, should be constantly emphasized, and, wherever possible, the industrial and commercial application should be used for illustration and explanation. The fourth year of the high-school course, however, affords an exceptional opportunity for the correlation of science with intelligent study of the arts which make modern business possible. In every large city, and in most of the smaller manufacturing towns, it is not difficult to make a scientific study at first hand of manufacturing plants of various kinds. Similar investigations can also be carried on by other departments with profit. For example, the department of bookkeeping and accounting might examine into the bookkeeping of a large electric-power plant, compare its methods with those of the school bookkeeping class, obtain explanations of its special books and devices for office economy, and perhaps originate, with the aid of a skillful instructor, new methods of business organization. In the department of history and politics, whatever its exact title, the relation of the corporation to the municipality could be considered, and the various questions of vital importance relative to public ownership and regulation of such institutions could be considered. Concurrently, under a different instructor, the same pupils might study the scientific phases of the plant. Geography would naturally consider its relation to coal and water supply, and the advantage of location. Physical and chemical knowledge would be required at almost every stage of the investigation. Similarly, almost any factory would

bring the student into touch with products studied in the first year of the course, and require the application of scientific knowledge for the full understanding of both process and product.

It would be mere surplusage to argue the educational value of such training before an association of teachers. To one engaged in business its practical advantages are equally obvious. While it is true that a man of executive ability and business sense can employ others to do his scientific work for him, it is equally true that he will find difficulty in deciding whom to employ without some general knowledge of the subject-matter. Many a man of good judgment in ordinary business affairs has failed because he accepted the word of the promoter as to a venture, which an elementary knowledge of science would have condemned. Moreover, the average man must draw his own conclusions in ordinary matters without the aid of the expert, and therefore needs a broad, scientific education to fit him for his life-work.

The same line of reasoning will lead to another important conclusion; namely, that election of subjects in science should not be allowed to such a degree that the student may obtain but one or two branches in his high-school career. Disregard of this principle leads many schools to graduate pupils who are one-sided from the development of their likes rather than their needs, and who have chosen their courses along the lines of least resistance. The remedy lies in permitting students freely to choose a business, scientific, technical, or academic course, but in so grouping within each course that the graduate will be educated fully, rather than pampered into an unsymmetrical development. Provision can be made for the intensive training of the bright boy or girl without interfering with the general plan of the course for a broad, scientific education.

Laboratory equipment must be given careful attention in order to secure the best results. In addition to the usual fittings and apparatus, every commercial school should be supplied with a museum exhibit of products and processes, and this can best be arranged by the instructor in science. The first-year exhibit, which should be arranged in the order of the course, would be limited chiefly to natural products—woods, fibers, oils, cereals, etc. An exhibit of products and processes would form a useful and interesting adjunct to chemistry. In fact, the chemical storeroom, if systematized, might well be made a part of the exhibit. In physics it is even possible to show historically the development of such machines as the steam engine and the dynamo, altho the primary purpose should be educational rather than historical.

I am aware of the enormous expenditure of time, labor, and selective power which such a museum requires; but, on the other hand, I believe that the return more than warrants the outlay. Pupils are anxious to give both specimens and labor, the public and school officials are appreciative, and museums and industrial concerns are generally willing to contribute.

That there should be the closest and most carefully wrought-out adaptation of each department to every other in the school will be admitted. Among

the various science departments, this relationship should be particularly close. It is equally true that this interrelation should extend from the departments to the teachers. It is fatal to success to have the teacher of composition and literature ignorant of the aims of the department of technical business training, or, worse yet, hostile to anything that partakes of the nature of utilitarian education. The science teacher should see clearly the relation of his subject to the complete course; he should be acquainted with the standards and methods of other departments, and should be in sympathy with the aims and ideals of the school. On the other hand, it is his duty to see that due consideration and weight are given to science, and that the scientific side of commercial education is recognized by the school, and presented fully and clearly to every student.

THE STUDY OF LOCAL INDUSTRY AND TRADE

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There are three questions which naturally suggest themselves to you when this subject is announced: (1) What is meant by "the study of local industry and trade?" (2) Why should the subject be studied? (3) What is the proper method of study? To answer these three questions is the purpose of my paper.

The first question, then, is: What is meant by "the study of local industry and trade"? One man's conception is that of a series of observations starting from the district where the student lives, and working out in widening circles till the whole city has been observed. With him the field work and the report are all-important.

Another man understands by the subject a series of lectures by men who have been successful in various industrial enterprises, and who will tell the students why they were successful, and what the qualifications for success in that particular field are.

One man makes it a finishing subject. He therefore places the study in the last year of a four-year course, and makes it a laboratory in which is applied and tested all the knowledge that has been gained from all other subjects during the previous years of school life.

Another man considers the study, not as a means of testing previous knowledge and the understanding of principles learned, but rather as a means of learning how to acquire knowledge and how to formulate principles. This man places the subject early in the course and makes it introductory to the systematic study of the social sciences. With this arrangement of the study the writer is most in sympathy, tho he recognizes the great advantages of the subject as a testing-ground.

But, as in the case of most subjects of study, the question of what this study comprises depends, first, upon the aim of the course, and, second,

upon the method of study adopted. People will assent to the general proposition that the content and scope of any study are dependent upon the aim and method adopted; and yet in any concrete case they wish to discuss content; they wish to draw up a syllabus of the subject before they have made up their minds as to aim and method.

The consideration of what the subject is must be postponed, therefore, until after we have decided what is to be the aim; until we have answered that question which many of you are perhaps asking: Why should we add to the already overloaded curriculum a new subject? What should we gain by it? Especially, why should we add another of those subjects which are today the bane of commercial education, informational rather than disciplinary subjects?

My first reason for teaching local industry and trade in our schools is a very practical one; namely, that our students are leaving our schools with so little understanding of, often with so little interest in, local conditions. When we send out boys who know practically nothing of the way in which the city makes its living, who understand little of the workings of the city government, and of the close connection between the city government and the kind of living the average citizen makes, we are certainly not turning out the right stuff of which to make "our masters." There should therefore be in the schools of our large cities a study of local industry and trade, and in this course should be included a study of the administration of the city, in order that the citizen may say with knowledge: "I am a citizen of no mean city."

In the small town every schoolboy is a student of local industry and of local government. He knows the chief industry of the town is machine products; for has he not often carried his father's dinner to the shop, and has he not seen the great pumps put together as he lingered after the one o'clock whistle? He knows about aldermen; for the alderman's son is in his class at school. He knows about taxes; he could not not have a new suit this week—the taxes had to be paid. He knows the taxes were high this year, and that his father will therefore vote the other ticket next April, to see if the other party will not keep the taxes down.

The boy in the large city knows that his father is a machinist and works downtown somewhere; but what a machinist does he has no idea of, since he has never been in a machine shop. His uncle works in the comptroller's office; but where that is, and what the comptroller does, he never even tries to guess. The rent is raised; the agent says it is high taxes; the janitor says it is because of the new subway station at the corner; but which is right he does not know; anyway, his father does not pay taxes; the owner of the flat does that. He has heard of some city officers—yes, of District Attorney Jerome; he is the man who raids gambling-houses.

You who have taught in our large cities know this type of boy. He is not a dull boy; but the city is so big; there is no manufacturing establishment within a mile of his house; the city offices are miles away. By and by he is

going into business. Just what business is, and into what kind he is going, he knows not.

We hear much of the quickness, of the intelligence of the city boy. Along certain lines it is true, but in many ways the magnitude of city activities is crushing, and he does not begin to touch life at so many points as does the boy of the small town. His power to observe and his power to reason are not so well developed. For all such boys the study of local industry and trade, combined with the study of local administration, supplies the means by which the city boy may have an even start with the town boy as a good citizen.

We come now to the second and more important aim of this course, its purely educational or disciplinary aim. It is because of its disciplinary value that we have placed this study in the first year of the High School of Commerce. The boy comes to us from the grammar school information-stuffed. Too often he goes from us merely stuffed still more. He may know what has been told him, but seldom does he know how to find out anything for himself. He may know how to study a text-book, but rarely does he know how to use other books. He has been trained to watch an experiment in the class-room; he has not been trained to use his eyes as he goes about the streets. With sixty boys in charge, it is far easier to pour in information thru a funnel than laboriously to build up in the boy the power to gain this information for himself, the power to draw his own conclusions.

It has been said that "the curse of modern education is information." If this be true of schools in general, much more true is it of commercial schools. With all its deficiencies, the old-time high-school course, with its study of Latin and mathematics, bred in its students mental vigor, the power to work. Dr. Goodwin, that student of secondary education, said to me some years ago: "I don't see how in the commercial schools you are to secure the disciplinary effects of the present studies, for your subjects are all informational." I answered: "By laying the emphasis on a problem type of recitation which shall compel the boy to think, not merely to listen. If the commercial school is to be a success, it must have better teachers than the ordinary school, because, from the nature of the subjects taught, the temptation is great, to pour in a flood of information instead of training the boy." It must be conceded. I fear, that heretofore commercial education has not turned out so good a product as the old-time course of study; the cause being chiefly the methods of teaching, but possibly also the kind of boy who was taught. For the commercial course in the high school has been a sort of Sargasso Sea—an abiding-place for the derelicts of the more strenuous courses.

If the school of commerce is to justify its existence, it must turn out a product which can do and not merely know. And the doing needed is not the mere ability to write a good hand, finger well a typewriter, or keep a set of books; but, in addition to this, there must be the ability to observe accurately the phenomena of the business world, to gauge the causes of these phenomena, and in the light of these, to be able to anticipate the future. Busi-

ness has become a profession. The first requisite of a professional man is mental grasp. To secure this, I urge therefore the study of local industry and trade, because, if properly studied, it will do much to develop those very qualities which the business man must possess.

When is it properly studied? It is properly studied whenever the student himself observes conditions, and thus acquires the information desired, and when, in addition, he is trained to reason. The method of observation and report is not sufficient; the important part is the recitation, in which the student shall be required to give a reason for the statements he makes. It is not sufficient to know that the Italians live together in a center; he ought to be able to give the reason for this racial grouping, and he ought to know what consequences flow from it. It is desirable to know the population of New York city, that it is the greatest manufacturing as well as the greatest commercial city in the country; but this avails little unless he can give the reasons for this. Self-activity on the part of the pupil, "Why?" constantly on the lips of the teacher, are the proofs of good teaching in this subject. We have often been at our wits' ends to answer the questions put to us by our seven-year-old. The boy of that age has been called an interrogation point. Why is it that this thirst for knowledge, this perpetual quest for the cause of everything, seems to be either assuaged or crushed by the time he reaches the high-school stage? It is the experience of many of us that we have to devote our best energies to resurrecting in the fourteen-year-old the seven-year-old spirit of investigation.

In the High School of Commerce our method has been to give the boy, one week in advance of the lesson, a series of connected questions, the answers to which he is to bring in, written, the following week. We begin with questions which can be answered by using his eyes as he goes about his own neighborhood, such as the kind of factories nearest to his home, and the most common nationality in certain retail trades. In the recitation we develop the reasons for the existence of those particular factories in that section of the city—the reasons why delicatessen dealers are Germans, saloonkeepers Irish, and fruit-dealers Italian. Having given them some lessons which train their powers of observation, we then give them some topics which will require them to ask questions. For example, the location of trade centers can hardly be answered in a great city by observation alone. Among such topics we ask the boys to find out the hours of labor, rate of wages, time of apprenticeship, and union regulations of a number of trades. Here we run against a snag.

The city boy, with all his reputation for boldness, is really timid; he fears the janitor, the fireman, the policeman, even the day laborer. When it is suggested to him that he ask these questions of any one of these men whom he chances to meet, he wonders that you can think him so green; for if he should ask such questions, he would expect to be sent about his business. The average boy is likely to stand around and watch the hod-carrier fill his

hod and then, after he has lifted it, begin his set of questions. He soon learns better. It is born of such experiences that he looks imposed upon the first time you ask him to prepare a lesson by asking other people about their private business. As the boy goes from school into business life, he knows little of the new world into which he is plunged. How is he to learn about it? He has been told he must keep his eyes and ears open; but what course in school has given him the seeing eye? Does the study of the crab or the flower? We see, for the most part, that which we are trained to see. But ever seeing with the seeing eye and hearing with the hearing ear is not enough. He must constantly ask questions. What more impresses a man than a question absolutely to the point, put in the fewest words possible, and at the psychic instant! Questioning such as this is an art. Does algebra teach it, or the physical sciences, or even English as now taught? Thruout his business life the boy is constantly to meet men for the first time, constantly to put questions to them. Should we not in school train him to do it? A valuable by-product of this study is the assurance the boy will have that practically all men will give courteous answers to questions courteously and tactfully put.

After giving our boy some exercises in the observation of his immediate neighborhood, some training in asking questions, it would be wise to test his powers by giving him some industry to report upon.

Our next step in training the boy is to teach him the use of the tools of his trade. These tools are the books and papers he as a business man will constantly use. Among these are the trade and telephone directories, the shipping news and advertisements of newspapers, foreign and domestic mails and the regulations of the postal service, almanacs, shipping and custom-house guides, express and freight books, trade journals, reports of various city departments, and commercial forms.

It is evident from the list of tools I have cited that there is a danger lest this course becomes a hodge-podge composed of the things which the teacher finds interesting or easy to work up. To avoid this very real danger there is need of a unifying element, so that there shall be a distinct progression in the course. This unifying force will be found if the characteristic industry of the city be selected, and all the lessons grouped around it. In New York we have grouped our study around the commerce of the city. After a few exercises on the environment of the city, its characteristic industries, trade centers, racial centers and racial occupations, and labor statistics, we study first the foreign commerce of the city, then the domestic.

We note the arrival and departure of vessels during a given week, and we ascertain the cargo they carry. We bring a vessel into port, dock it, and enter it and its cargo at the custom-house, discussing pilots, quarantine, the dock system and charges, lighterage, the duties of the various custom-house officers, the use of bonded-ware houses, and the services performed by custom-house brokers. We compute the duty on goods, and see the goods safely in the hands of the importer. We find out the imports for the past month

and year, and also the exports. We ship goods to foreign cities, and thus make a study of the steamship lines sailing to all parts of the world; and we locate their docks and find out how much they pay for them. We study plans for the improvement of the docks and of the harbor, and learn why the commerce of the city is not growing as it should. We send letters, cablegrams, and packages to foreign countries, and learn how to compute the rates and where to find the times of mails.

We then turn to domestic commerce, studying the different lines of Hudson River, Sound, and other coasting steamers, analyzing the cargoes they carry, partly from observation, partly from the shipping news, and in part reasoning from the products of the regions feeding the ports touched by these steamers. We then study the trade coming by rail, and locate the freight stations.

Before taking up the work of the importer or wholesaler, we discuss that great source of commerce, the supply of food products, finding out where our food comes from and how it reaches us. We investigate the water supply as conditioning the existence of all industry, and we tarry for a lesson or two for an elementary survey of consumption as determining the extent and nature of all kinds of industry. We find out how the families of the students apportion their incomes, and we discuss the effect of improvements in transportation on rent, the connection between rent and prices, the effect of changes of fashion, of seasons of good and bad times on the relative proportion of these expenditures.

We then turn to the study of wholesale trade. We saw the goods in the hands of the wholesaler. Now come the selling of the goods, the terms of sale, the question of credit, the use of commercial agencies. The goods are shipped by freight, express, and mail, the charges determined, the basis of charges in each case being explained. The bills are collected by means of drafts, checks, and promissory notes, and the proper form and use of each are brought out. This naturally necessitates an elementary study of the services rendered by a bank; and, having entered the financial world, we treat briefly and simply those handmaids of commerce, the clearing-house and the stock exchange. This introduces the boy to the world where stocks and bonds are the commodities dealt in, and so he looks up the meaning of corporation and its advantage over a partnership. He learns about common and preferred stock; bonds, dividends, interest, speculation, its benefits and evils; the work of the broker, bulls, bears, and the other terms of the street. For this work we use for the first time a text-book, Cleveland's *Funds and Their Uses*, and Pratt's *Work of Wall Street*.

Believing that there is a close connection between the prosperity of the business man and the sort of government he has, we complete this course with a survey of the city government, studying it from the administrative standpoint and in its actual operation. We emphasize those departments which more directly concern the business man as such, the building and health departments, the bureau of licenses, the water and dock departments. Our aim here is

to show the boy that, as a business man, among the elements he must consider, in estimating the probabilities of success, is the kind of government he has; and we hope to convince him that city government is a business undertaking, and that the business man should see that it is conducted honestly and efficiently by men of business.

Such a program as I have indicated is noticeable for what it omits as well as for what it includes. Of the multitudinous industrial activities of this great city it selects one commerce, and groups around it the training we think a boy ought to have. We give him no details of manufacturing processes. If our school were in Fall River or in Pittsburg, we would. But we feel it is better to have one central theme than several. Thus far our work has been done jointly by teacher and pupil only. One improvement in our plan of work naturally suggests itself to all, namely, to add the interest that is aroused by occasional talks from men prominent in business life. This feature we plan to add. Occasional talks inspire interest; too frequent doses, whether by teacher or outside expert, kill interest.

It may be asked: How successful is such a scheme in practice? I have often been asked by students: "Why don't we have more hours for commercial geography? It is more important than any other subject we have, and more interesting." The boy is, as a rule, interested in the subject. It appeals to him as being practical. There is always some question asked in the class to which possibly he alone knows the answer, and he is proud to contribute. This method does not work so well with large classes. The teacher must come into personal contact with the student, must feel the need of personal preparation; or else he will be tempted to do no observing, do no thinking, but rely upon a classmate for the facts. If the boy is not made to work, or at least to think, in the class-room, the course is hardly worth giving. He cannot be expected to work if he is asked to do impossible tasks. The school should therefore be abundantly supplied with maps, handbooks, almanacs, and reports. One or two copies of each will not do. Unless you make it easy to find the information desired, the boy will inevitably copy.

But, after all, the most important element is the enthusiasm of the teacher. Unless he keep up his enthusiasm by constant association with business activities, the recitation will lose its interest, its life, and become a bore. A colleague of mine once said to me: "If I were doing this work, I would lecture to them one week and quizz them the next." No more effectual method could be devised of destroying the value of the subject. There must be constant team work, the interplay of teacher and pupil, each contributing something. If this be done, the boy will be awakened, and his interest aroused. If he leave at the end of the first year, he will be a more valuable office boy as a result of the course; if he goes on with school work, he will be ready to take up more appreciatively the serious study of commercial geography and economics. The time that has thus been saved in training him how to study can be used to the greatest advantage in those most vital subjects to which entirely too little time is given in our schools at the present time.

THE ESSENTIAL ELEMENTS OF STUDY IN A UNIVERSITY COURSE IN COMMERCE

I. FROM THE POINT OF VIEW OF THE UNIVERSITY OF MICHIGAN

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To determine the essential elements of a university course in commerce is to raise all the important problems connected with that type of education. Account must be taken of the knowledge, mental qualities, and ideals which serve men best in industry. Those who complete courses in commerce for the most part find employment with business concerns in those positions, above the rank of clerks and mechanics, which do not call for professional education in law, chemistry, mining, or engineering. In these places they are engaged either in making sales by advertising and personal interview, choosing and managing men, devising and operating business systems, or conducting financial negotiations. It is a part of the duty of those interested in university education in commerce to observe carefully the bearing of each element of the curriculum upon the successful doing of these kinds of work. Every graduate is, in his business life, a laboratory experiment, bearing upon the completeness or defect of the educational program used.

Again, account must be taken of the state of scientific development of the various branches of business knowledge. The collection and classification of industrial facts were never so rapid as at present. The superior system by which the business experience of individual concerns is recorded, the wider range of government publication, the improved quality of trade papers, and the more general development of the scientific instinct among men of affairs are contributing to the systematization of industrial knowledge, and to the discovery of general principles. The teacher is thus constantly finding a richer subject-matter prepared for his use.

A third condition governing the choice of the elements of a course in commerce is the possibility of devising efficient methods of teaching. Many of the subjects which it is desirable to present have a very scattered literature, no texts, have never been formulated for systematic impartation, and do not permit laboratory methods. Furthermore, in the solution of the problem an entirely free hand is not permitted, for, as a branch of university work, the methods employed must conform to the general traditions and ideals for which the university stands.

Courses in commerce consist of general-culture and technical subjects, the former being dominant in the first years, the latter in the final years of the student's work. The chief problems are connected with the technical courses. To facilitate their consideration we may divide them into three classes.

I. There are the problems of those introductory courses, such as economics and commercial geography, which are intended to give the student a general acquaintance with the present economic order. An entirely satisfactory introductory course has not yet been found.

Economics, which is the gateway thru which most students enter, as usually taught, is so largely composed of general facts, stripped down to abstract principles, that the student who knows little of the structure and processes of industry to which they apply finds them unreal, if not incomprehensible. Again, economics is chiefly pivoted upon the problem of distribution, which the business man finds determined by certain general adjustments of industry over which, as an individual, he has little control, while the problem of production, in which he is equally interested, receives scanty treatment. If the first part of political economy were expanded into a systematic study of the production of wealth, and if this, so enriched with new concrete facts as to give a practical cast to the treatment, were used as an introduction to the remaining parts of the subject, it would render the science more effective, certainly for students of commerce, possibly for all classes of students.

Commercial geography, much used in the *Handelshochschule* of Germany, is being experimented with in American universities. It is at present unsatisfactory because almost exclusively descriptive. As a fact study, the chief purpose of which is to state where various industries are located, it is rapidly being swallowed up by general geography; for this is a task which general geography is rightly taking upon itself. There is a field for commercial geography, however, and it is capable of rendering useful service if it can be reorganized by introducing into it adequate discussion of the principles of industry, by treating of industries rather than of products, and by limiting the study of regions to a few typical countries, so that time may be given for a really effective explanation of industrial conditions and their causes. In short, what this subject needs is to increase emphasis upon the causal connections between economic facts.

II. A second group of technical courses in commerce involves the presentation of subjects, such as commercial law, applied science, and accounting, which are of common interest to many businesses, and so appropriate studies for persons preparing for different occupations.

In *applied science* we have not followed the German lead of elaborating *Waarenkunde* into a thoroughgoing technique of manufacture, but have developed the applications of each science separately, by means of such courses as economic geology, economic botany, and industrial chemistry and physics. Depending for this instruction upon members of science faculties, students in commerce have encountered the tendency to make them specialists in each subject, and this often, too, without a serious attempt to show the applications of science to industry. It is worth while to attempt to state the proper aim of courses in applied science as a part of a general training in commerce, and this statement will hold also for commercial law and accounting. The

typical business man should certainly not be possessed with the ideal: every man his own lawyer, or chemist; but neither should he be helpless in the hands of the expert. Something between the two is wanted. He should be able to detect when his business practice is seriously out of the way; that is, to know when to employ an expert. He should also know the expert's field in its general outlines, and so understand what he ought to be able to do, and be able to advise with him and direct him in a general way. He should be able to understand technical terms, and the explanations and reports of an expert, and check them up rather closely, especially in their practical bearings. Satisfactory training in these subjects can be given only by instructors who have been thoroughly grounded both in science and commerce, and who are hence able to comprehend the point of view of the general business administrator with reference to the work of the expert.

Business organization and management.—There is an important group of subjects, including bookkeeping, auditing, cost accounting, business organization, flotation, and investment, in which some work is being done in most universities. All students of commerce are aware of the rapid improvement which is taking place in the methods of internal organization of business concerns. It is very essential that university men should be given a broader acquaintance with the structure of the individual business than is involved in accounting, and should be familiar with the normal methods of a going business, as well as with matters of flotation and finance, as they are usually presented in courses on corporation finance. There is a decided need of courses in business organization and management which shall display the relationships of the entire internal structure of authority of the typical business unit, explain how to isolate the records of departments and individuals for comparison and study, and detail the best methods to be employed by purchasing, stock, employment, credit, traffic, advertising, and sales departments, in order that definiteness, force, and economy may be given to the management.

III. A third group of technical courses includes subjects each of which concerns a restricted group of industries, and hence appeals chiefly to those who intend to enter an industry to which it applies. In most institutions the elective system permits students, during the latter part of their course, to choose freely those subjects which will be most useful to them in their business career.

Signs are not wanting, however, of a more permanent specialization. Some schools are already grouping certain of the technical courses with reference to the industry which the student intends to enter. There are dangers connected with this movement, if pushed too rapidly, for it is conceivable that training may be given which is more narrowly technical than the conditions of business employment warrant, considering the variety of positions a young man is likely to hold before he secures his permanent place, and the uncertainty during his college years as to what that place will be. Unless restraint is exercised, this specialization may lead to the attempt to

instruct in matters of detail which can be as well or better learned in practice. At all events, if university education for business is rapidly split up into a variety of technical courses, it will tend to confuse the efforts now being put forth to perfect a well-balanced and basic general course of study which will be serviceable as a firm pedestal for further construction.

It is altogether probable that, as time goes on, courses in commerce will become more differentiated than is at present the case. With the introduction of permanent specialization, accompanied, as it will be, by the need of special equipment and increased teaching force, it is to be hoped that universities will give a reasonable respect for each other's specialties, so that a mutually advantageous division of labor will result, and students desiring, for example, to enter insurance will go to one university, and those intending to engage in transportation to another.

II. FROM THE POINT OF VIEW OF DARTMOUTH COLLEGE

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The problem involved in the question of the essential elements of study in a university course in commerce is a more serious one for those institutions in which the commercial courses are given a place in the undergraduate curriculum, than in those institutions in which these courses are offered in a graduate year. In the first class of institutions the effect on the curriculum as a whole must be kept in mind, in order to avoid too early specialization; in the second class of institutions specialization is the chief object. In institutions of the first class a limit is usually placed by the university on the proportion of the number of hours required for a degree that may be occupied by the commercial courses; in the institutions of the second class the whole time of the student may be devoted to commercial work. In institutions of the first class the significance of the bachelor of arts or of the bachelor of science degree must not be violated; in institutions of the second class that question is not an important one. Concretely, institutions of the first class must confine their commercial work to, say, forty of the hundred and twenty hours required for a degree; while institutions of the second class have in addition a graduate year for commercial work. Inasmuch as the commercial school of Dartmouth College is organized on the graduate plan, I shall confine myself to a discussion of this topic from the view-point of an institution of the second class.

Considering Dartmouth College and its commercial school, the Amos Tuck School of Administration and Finance, as a single institution, we may divide the larger Tuck School course into three periods: first, the preparatory period, or the first three years of the college; second, the transitional period, or the senior year of the college, which is the first year of the Tuck

School; and, third, the specialized commercial period, or a graduate year, which is the second year of the Tuck School.

1. The Tuck School has made no request of the faculty of the college to modify for its convenience the work of the first three years of the college. In fact, this period may be considered a preparatory period, only because the Tuck School requires three years of college work for entrance, and because during the three years students intending to enter the school must include in their work certain courses which the school believes desirable for the profitable pursuit of its work. But one new course has been added on account of the Tuck School to the courses which were offered by the college during this period—a course in commercial geography, offered in the junior year. This course is looked upon as a liberal, cultural course, however, rather than as a technical one, and is taken by many students who are not looking forward to Tuck work.

Those courses which the Tuck School requires to be taken during the preparatory period, as necessary to enable the student to pursue profitably the work of the school, are: first, four courses in English, chiefly in the field of composition and rhetoric; second, two courses in history, a high value being placed upon the discipline always given by the early courses in history; third, two years each of two modern languages, to prepare the student to take up advanced commercial German, French, or Spanish in the school; third, elements of economics, commercial geography, and industrial history, as furnishing the foundation for advanced economics and commercial work, the commercial course being looked upon as essentially economic in nature; and, fourth, one course in sociology, or one course in political science, or an additional course in history, this requirement being intended to prevent the student's specializing too early in economics. The principle upon which these requirements are made is obvious: that the student shall lay a solid foundation for the pursuit of the course in commerce without depriving himself of a broad, cultural training in the college.

2. The courses that constitute the transitional period, the first year of the Tuck School, the senior year of the college, may be classified as follows. First, the greater part of the year's work is made up of courses offered by the department of economics in the college, courses that were offered before the Tuck School was organized: money and banking, finance, labor, tariff history and policy, corporations, transportation, statistics, and so on. These courses are intended for college students as well as for Tuck School students. Second, there is a small group of courses, not large enough to dominate the work of the year, but large enough to give it a technical trend. These courses are open only to Tuck School students, and are accounting and auditing, commercial advanced German, French and Spanish, and resources and industries of the United States. Third, Tuck students in this year are encouraged to elect one or two courses in history or political science or sociology. Those students looking forward to specialization in insurance are

required to continue work in mathematics to and including calculus, and those for whom it is desirable are permitted to continue work in chemistry. The principle upon which the work of this year is organized is, that the student shall concentrate his attention upon economics, the foundation of every course of general training for business; and that he also, on the one hand, shall not separate himself entirely from other of the social science studies, and shall, on the other hand, be introduced to the more general of the technical commercial courses, and shall continue such sciences as his prospective line of business will make it necessary for him to apply.

3. The second year of the Tuck School, a graduate year of the college, is the year in which is offered what at Dartmouth is considered the commercial course proper. To be sure, the courses of the preparatory and transitional periods already described do not fall far short of completing the list of courses offered as constituting the essentially commercial work in a large number of the institutions in which the commercial work is made a part of the undergraduate curriculum. The Tuck School has adopted, however, the German attitude toward commercial activity, which considers it the exercise of a profession, and accordingly believes that a commercial course becomes really a commercial course only when it possesses the characteristics of a course which aims at training for a profession—when its constituent courses are practical, technical, and have direct reference to some commercial activity in the concrete.

In this connection it may be well to explain what we mean by the terms "practical" and "technical." A course which has direct reference to some line of business is for that business a practical, technical course. A course is a practical course which acquaints the student with the practice of a business, or with its facts and principles, or which trains him to form judgments on situations which may arise in the pursuit of that business. It is not necessarily a "practice course;" and, except where a student may be compelled to use pen and ink in the study of accounting and auditing, or the comptometer in solving his problems in insurance, or may draw up charts to represent schemes of business organization, or may devise blanks for securing efficient routine in the conduct of an institution, no course of the nature of a practice course is offered in the Tuck School.

The courses offered in the second year of the school may be divided into two general classes: first, those which have a direct reference to all lines of business; and, second, those which have reference to special lines of business. All students take the courses of the first class; a student takes such courses of the second class as have reference to the line of business in which he intends to engage. Among the courses of the first group are advanced accounting and auditing; commercial law; and advanced commercial German, French, or Spanish (the student continuing that language which he will be most likely to use in business intercourse, or which has locked up in it the most information pertaining to the business for which he is preparing himself); corpora-

tion finance, a course which aims at giving the student some skill in "sizing up" business propositions; and business management, a course which considers such subjects as plant and store management, the principles governing the location and conduct of retail, wholesale, and other forms of business, system, and so on. In connection with this group should be mentioned the journal conference, which consists of periodical conferences of students and instructors to discuss events of the business world chronicled in commercial and trade publications.

The courses of the second class divide themselves into a number of subgroups, according to the various lines of business for which special preparation is offered. The subgroups and the most important courses constituting each may be indicated, in a tabular form, as follows:

Foreign commerce.—The student investigates and presents as a thesis some problem related to foreign commerce, say, "The Natural Basis of Trade Relations Between the New England States and Eastern Canada." The central part of his work will consist of a study of the development of world-trade in modern times; of present tendencies, as to commodities and markets, of the development of the foreign commerce of the United States; the procedure governing and the documents used in commercial transactions; foreign exchange; the commercial geography of those regions with which the United States has trade relations; commercial French and commercial Spanish.

Transportation.—The student investigates and presents a thesis upon such a subject as "A Traffic Consideration of the Great Northern Railroad;" while the central part of his work will consist of a study of such topics as the economic function of railroads, railroad operation and administration, railroad accounting, railroad law, and railroad finance.

Banking.—The student investigates and presents a thesis upon such a subject as "The Relative Profitableness of Note Issue and Deposits;" while the central part of his work consists of a study of such subjects as the accounting and auditing of banks, banking methods, banking law, domestic and foreign exchange, and mathematics of annuities and compound interest.

Insurance.—The student investigates and presents a thesis upon a problem involving perhaps the actual construction of a life-table for some state, the central part of his work consisting of a study of such topics as the economics of insurance, the administration of insurance companies, the mathematics of insurance, insurance law, and the investment of insurance funds.

General mercantile or manufacturing business.—The student investigates and presents as a thesis such a subject as "The Efficiency of System in Business Management," or "The Causes of the Present Conditions in the Milling Industry;" the central part of his work consisting of a study of such subjects as the history and development of the business in which he intends to engage, cost accounting, the administration and management of business concerns, system, and the commercial geography of regions furnishing raw

materials or offering markets for the products of the business in which the student intends to engage.

To sum up, it is the Tuck School theory, as indicated by the above description, that the essential elements of a university course in commerce should consist, first, of a broad, general college education, having special regard for English composition, the modern languages, the social sciences, and in some instances applied sciences; second, of a thoro training in economics; and, third, of a special study, of graduate rank and with the professional spirit, of the principles and procedure of business in general, and of the history, principles, and methods of that particular business in which the student intends to engage.

III. FROM THE POINT OF VIEW OF THE UNIVERSITY OF PENNSYLVANIA

JAMES T. YOUNG, DIRECTOR, WHARTON SCHOOL OF FINANCE AND COMMERCE,
UNIVERSITY OF PENNSYLVANIA

Two questions are implied in the title: First, are there certain branches of study which are essential to every college course? Second, are there, in addition, certain subjects which are peculiarly necessary for a course in commerce? In answer to both questions I would say emphatically "Yes."

The following six subjects should, in America today, form part of every college course: English; natural science or mathematics, or both; history; government; economics; sociology.

All will agree on the necessity of the first three. English is essential because it is the means of expression by which a man brings to bear all his other powers. Natural science is necessary because the business man must live in a physical as well as an intellectual world, and his efficiency must oftentimes depend upon his knowledge of nature. History is valuable not only because it is a subject of general culture, but also because it distinctly enhances the value of the other branches studied. Beyond this point there exists the greatest divergence of opinion.

In prescribing as essential an introduction to the three social sciences—government, economics, and sociology—I would consider these studies from the standpoint of both culture and efficiency.

Within the last three decades America has undeniably passed from an *individualistic* to a *social* frame of mind. One of the ideals of the time is the recognition of a common social interest in all that transpires. Our educational system must at least recognize this fact. If the college man is to be a progressive leader of men, he should know that we are passing thru profound social changes of fundamental importance. He should have a grasp of the significance of this development, and should be prepared to play an intelligent part in it. The study of government is required because of our peculiar political institutions. Economics, more than any other subject,

teaches the far-reaching social effects of our commercial and industrial growth. Sociology gives an understanding of the great progressive or reactionary movements of the time, and of their bearing upon individuals, nations, and races. If the graduates of our colleges were required to spend one-half of their existence on the sea, we should not aim to give the college man less breadth and culture, but we should insist upon his making a careful scientific study of the marine environment, with all of its moods and changes. Is it otherwise with the need of a study of that intensely social atmosphere in which the present-day American must live and move?

We are now prepared to attack the second and principal question: Which subjects are essential for a university course in commerce?

To the six studies already named I would add only three required branches: elementary business law, accounting, and the principles of finance; and would make the rest of the curriculum consist of elective subjects, to be chosen according to the maturity, advancement, and prospective career of the individual student. It is this recognition of individual needs and individual capacity which must constitute an important feature of higher business education in our universities. Beyond a certain minimum of *general* culture and efficiency, as described above, we should proceed most carefully in order to develop the peculiar abilities of each man. The methods of individualizing college instruction exert a strong influence on the arrangement of elective studies. At Pennsylvania there has been in quiet but successful operation for several years a system of faculty advisorships, which system is now in process of further extension and development. Each student is referred to a member of the faculty, who assists in the choice of courses, the number of hours to be taken, and other important matters. An advisor in the Wharton School has approximately twenty-five students, on whose welfare and general studying he reports regularly to the faculty. From the regular consultation hours and from numerous informal meetings, opportunity arises for the formation of those close friendships between teacher and student which may be made to count for so much in university life. The connection between this plan and the arrangement of studies is a very close one. We have found that it is not necessary to prescribe a complete course to be followed in detail by all students alike, but we insist rather upon a certain minimum of required work beyond which each student's course is determined by his special circumstances and aims, and after consultation with his advisor.

Finally, in what has been said the case of the undergraduate has been exclusively considered. It is only for the undergraduate that we can speak of a series of "essential elements of study." Entire freedom of selection of courses is necessary for the graduate student. But we must not conclude from this fact that the graduate courses in commerce play an unimportant rôle. It is a sign of the relation of the new courses to the world of practical affairs that a number of the best men in the graduating class at the Wharton School return to take up postgraduate work, often with a view of engaging in practical

business pursuits. The opportunities presented to our large universities to train men for advanced positions in commercial and government work are growing rapidly, and the function of developing this field belongs primarily to the postgraduate department.

Summing up: First, there are certain studies which are essential not only to a course in commerce, but to every college course of high standing; prominent among these subjects are the social sciences.

Second, for the university course in commerce a small number of additional studies should be required of all students, the remaining branches in the course being chosen by each student from a list of electives.

Third, to prevent excessive specialization, and to insure a purposeful and profitable choice, there should be a reasonably close contact between faculty and student; at Pennsylvania the system of faculty advisorships has proved helpful in this and other regards.

Fourth, in the postgraduate department the studies must of course be entirely elective, in order to encourage a high degree of specialization. An important field for university training of this grade is now opening up in financial, commercial, and governmental work.

RESULTS OF THE ORGANIZATION OF HIGHER COURSES IN COMMERCE

I. IN DARTMOUTH COLLEGE

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Three characteristics distinguish the Amos Tuck School of Administration and Finance, of Dartmouth College, from other schools of commercial education in the United States. First, it is organized as a graduate, or professional, school, practically none of the strictly commercial work being offered in the undergraduate curriculum of the college. Second, its requirements for entrance are high, a college education being required as preparation for entrance upon its work. Third, this graduate, or professional-school, organization permits the work to be practical and specialized, the training of an individual student having direct reference, in most cases, to some particular line of business activity. It is my purpose, in reporting to you on this form of organization, which has received the name of the "Dartmouth Plan," to approach the subject from the view-points furnished by these distinguishing characteristics.

In organizing its commercial courses in the manner I have described, Dartmouth College simply carried out a principle which had been long before adopted and applied in the organization of other of its special schools. This

principle is that the College of Arts and Sciences, while growing with the growth of education in general, should preserve its integrity as a college offering a liberal training. Its bachelor's degree should be the evidence of a broad general education; should be the evidence of a preparation for specialization, but not the evidence of specialization itself. Its medical, engineering, and commercial schools, accordingly, were organized as associated professional schools, any one of whose training should be a superstructure of specialized training reared upon the broad and solid substructure of the general education of the college. This idea has been recognized by other institutions in the organization of law and medical schools; Dartmouth has carried the application of the idea into the organization of her commercial school.

1. Leaving on one side for the moment a consideration of college training as a *technical* preparation for the work of the school, the Dartmouth plan of a separate professional school associated with the college aims at two results: the development, on the one hand, thru the medium of the college, of the man of no group or class, of the man of the world, sympathetic, broad-minded, capable of observing and arranging facts, and of analyzing and interpreting tendencies; and the development, on the other hand, thru the medium of the Tuck School, of the same man into the man of a class, of a profession, possessing that power which accompanies professional knowledge and professional enthusiasm. It was the belief of the organizers of the school that there is no experience which so develops the *man*, the individual who is in possession of himself wherever he finds himself, as does the experience afforded by the college. That the college man always lights on his feet has become proverbial. But the development of this broad-minded and open-minded man of the world is, as Mr. Carnegie says, from the point of view of business activity often at a cost; he too frequently loses his "fire" and "energy," loses the ability to project himself with enthusiasm into a chosen life-work. The problem that confronts all of us is to develop the man who is open-minded on the one side, and who is, on the professional side, skilled and enthusiastic. The open-mindedness is the product of the humanizing training of the college; the fire, energy, and professional enthusiasm are the product of the special school with its group *esprit*. This man of the world is, furthermore, the product of the *leisure* of college life, of college associations, as much as of the class-room; the man of professional skill and enthusiasm is the product of *indefatigable application outside the class-room* as well as inside. In a given curriculum you cannot offer leisure outside the class-room, and at the same time compel indefatigable application outside the class-room. These conditions are mutually exclusive. You cannot secure the essential features of professional-school training within the liberal arts curriculum, and *vice versa*. It has been said that technical subject-matter may be taught in such a way as to secure a liberal training, and that a man may be given a liberal and a technical training in one process. In that argument there lurks a double error. In the first place, its premise is a sweeping statement of what

is only in a limited sense true; speaking broadly, the teaching of technical subjects in a way that secures technical efficiency does not afford a training that is liberal in the sense in which we are using the term. In the second place, it ignores the fact that much of the value of the college is in its associations, and that the leisure which makes possible literary, athletic, and personal associations is not permitted by the hard work of a professional school. One essential element of technical, professional instruction is an atmosphere that impels the student to constant attention to technical matters, outside as well as inside the class-room. The ideal method of securing the most efficient, that is the broadest-minded, specialist, is first to develop the man by affording the formal discipline and the associations to be found only in the normal, healthy college life; and then to gather together the elements of capacity so developed, and concentrate them into the channels of indefatigable work and of professional enthusiasm—a concentration possible only in the professional school.

The experience of the Tuck School seems to be confirming this theory. Its students take up the work of the second year, the year of specialization, as men with outlook, with a wide range of sympathies, as men knowing how to study and how to observe and differentiate. They are able to work with their instructors, not merely under them. That is the result of the college discipline. They are also men of a single purpose, men of a class, working in a common field with a common enthusiasm; men of a common ideal—the acquisition of technical efficiency. That is the result of the concentration of the commercial work in a separately organized school.

2. Approaching our subject from the view-point of the high requirement for entrance, two questions present themselves. Is the requirement for entrance greater than is necessary to equip the student technically for the work of the school? and does the necessity of remaining a fifth year at the college deprive men of a commercial training, who would be able to secure it were the commercial courses offered as a part of the undergraduate curriculum?

With regard to the latter of these questions, I think it undeniable that more students would take the commercial work during an undergraduate period than now remain to take it in a graduate year. There is another aspect of the matter than that of mere numbers, however. There is such a thing as cultivating intensively as well as extensively. The intensive cultivation of a given selected area may be as great a social service as the extensive cultivation of a much larger heterogeneous area. It is our experience that the graduate form of organization operates as an instrument of selection, eliminating those who show either incompetency or insincerity in their approach to the commercial training, and selecting those who show competency and sincerity. When the Tuck School was first organized, many of the students who took up the first year's work, as Dartmouth seniors, did it out of curiosity, or with the idea of securing easily a business training, without the necessity of forfeiting the "leisurely contemplation" of which the securing of a liberal

training in part consists. Eighteen hours of hard work during the senior year, however, soon eliminated those without business aptitude or insincere of purpose. I think I may now safely say that Dartmouth juniors who make application to the first year of the school do so because their desire for a training for business is such that they are willing to pay the price of hard work in their senior year—a year when the average student prefers to reduce the number of hours of work. The prospect of still harder pressure in the second year of the school acts in a similar way as a selective force, eliminating those of the first-year students who are insincere of purpose, or who have not a real passion for the life of a business man. Of course, there are worthy students who do not continue the special training, because of financial inability, or because they are not convinced of the value of any special training for a business career. But I am convinced, because of the fact that, in many instances where commercial courses are offered in the undergraduate curriculum, of forty or fifty students beginning the commercial work in the freshman year frequently only ten or a dozen continue it thru the senior year, that in any comparison the feature of numbers must be qualified by the features of aptitude and sincerity of purpose.

With regard to the question whether the Tuck School entrance requirement is higher than is desirable for technical preparation for the work of the school, I am satisfied that it is not. Were it possible to redistribute courses in the curricula of colleges, with the sole object in mind of securing an efficient *technical* preparation for the work of the school, a diminution in the number of years of college work required for entrance would be feasible; but so long as the distribution of courses in college curricula is determined on broader grounds than the securing of efficient preparation for the work of some particular professional school, a diminution in the number of years' study required for entrance is not desirable. Were the commercial courses of the Tuck School offered in the undergraduate curriculum, they could not be of so advanced a grade; and it is the advanced grade of the work that makes it possible for the student so to develop himself that, in addition to the ability to carry on the routine work of an office, he is able to seize those opportunities for advancement that present themselves in the mastering of problems that require the exercise of the ability to make an intelligent analysis of the general policy of his particular business. The Tuck School builds on top of the college training; it does not give training of the same grade over again.

3. The offering by the Tuck School of courses of training for specific careers is a result of experience. At first a general course was offered, believed to be of value to a man whatever the occupation he might take up. The reference to specific careers was only a remote one. As a result of the observation of its men, and of the requirements of certain classes of business, the school has come to the conclusion: first, that, receiving men with a college training, there is no danger of too early specialization; and, second, that many lines of business are either in themselves so complex, or so involve the

application of highly developed sciences, that to devote a graduate year's study to some particular line of business is justifiable. Some manufacturing businesses—for instance, those involving the application of chemistry; foreign commerce; banking—even the special branch of foreign exchange by itself; transportation; insurance: each presents facts and principles worthy of special study. As a result of our experience and observation, we are convinced of the value of special preparation for special lines of business, when an institution's organization is such that there is no danger of too early specialization.

The best concrete test, perhaps, is the observation of the careers of an institution's graduates, the observation centering upon the rate of advancement, as evidenced by wages received and by promotion to positions requiring initiative and responsibility. An investigation of the careers of the graduates of the first four classes of the Tuck School—the first class had been out of the school four years, the fourth class but one year—suggests the following inferences:

Special training does not relieve the average graduate of the necessity of starting at the bottom and serving an apprenticeship. There is the inevitable period of adjustment to actual business methods and conditions, during which he receives apprentice wages. The medium wage of all Tuck graduates has been at the start \$10 per week; at one year out, \$12; at two years out, \$15; at three years out, \$20; at four years out, \$28.50. Comparing this rate of advancement with the rate of advancement evidenced by such other records as have been made public, the Tuck School graduate, from the point of view of wage only, seems to have been able to shorten the period of apprenticeship. The advancement of Tuck graduates, considered from the viewpoint of the responsibility involved in the positions to which they have been advanced, more significant as indicating their future than the wage viewpoint, cannot be presented graphically. I can only say that our expectations have been exceeded. Many of the men have been advanced to positions requiring the exercise of special ability, in many cases managerial ability. It has exceeded our expectations also that the school has already received requests from employers for more men of the caliber of Mr. So-and-so.

I wish to report to you, in conclusion, what our experience has suggested to us regarding training for managerial ability. As I analyze it, managerial ability shows three main factors. The first is a temperamental factor; the average successful manager must be of the motor rather than of the sensory type, must be able to impose upon others himself and his conclusions. This factor cannot be developed by any formal training. The second is a socially developed factor: adaptability, adjustability to circumstances and individuals. This factor is the product of the home, the playground, the school, the college, the fraternity, athletics; there is probably no one instrument that combines the forces for its development as does the college. There is no reason to believe that the commercial course is of special value in the development of this factor. The third factor is that of knowledge: a thoro technical

knowledge of the object of the management; a knowledge of its instruments, its methods, its principles; that knowledge of it in all its relations which makes possible quick and sound judgments. In view of this analysis, it seems to me that much may be done toward the development of successful managers by an institution so organized that it takes a man of the motor type, who has been socialized by college training and associations, and gives him a thoro training, practical and specialized, for his chosen line of business.

II. IN THE UNIVERSITY OF PENNSYLVANIA

JAMES T. YOUNG, DIRECTOR, WHARTON SCHOOL OF FINANCE AND COMMERCE,
UNIVERSITY OF PENNSYLVANIA

When, in 1881, Mr. Joseph Wharton founded, at Pennsylvania, the School of Finance and Commerce which bears his name, the new departure was generally regarded as a grave and serious breach of university traditions. But as we look back over these twenty-four years, the impression is forced upon us that one result of the new departure has been a real broadening of university ideals. The place of a university in American life is still to be determined. Having established colleges of liberal arts, medicine, law, dentistry, civil, mechanical and electrical engineering, and architecture, the American university has at last come face to face with that great career which yearly enlists more young men than all the others combined—the magnificent modern field of business. What shall the university do? What shall be its attitude toward the manufacturers, the railway men, the merchants and bankers who are needed to develop, co-ordinate, and manage the immense resources of the American continent? The university must choose whether itself or some other agency is to undertake the great fundamental work of training these men. If, thru some unwillingness to “commercialize” its courses; if, by reason of worshiping some ideal of false culture, it fails to see and supply this keenly felt want, then other institutions must be found to prepare young men for these important careers. But mark the effect of such an unnatural solution of the question. A commercial school, dissociated from all the cultural surroundings and atmosphere of a university, must inevitably tend to produce the narrow, rather than the educated, man. The future leaders of the business world may be one-sided geniuses, or they may have that progressive breadth of view which distinguishes the university graduate. If the latter is to be part of our ideal, the desired training must be offered in a university. Only in this way can the whole system of advanced commercial training be maintained upon the highest cultural plane. From this point of view, a service of conspicuous merit has been rendered, both to the cause of education and to the business world, by those universities and colleges which have established the courses in preparation for business and the study of the law as integral parts of their curricula. Let us be thankful that university ideals have broadened.

A second result pertains to the arrangement of studies. A new phrase, "the professionalizing of business," is come into vogue. It refers to the growing tendency to evolve separate and distinct occupations or vocations in the expanding branches of commerce, industry, and finance. In Spencerian language, this is a process of differentiation. It is taking place along three lines: (a) between different businesses; (b) between the higher and the lower positions within a business; and (c) as between different kinds of vocation within the same grade of the same business.

As a consequence of the differentiation between businesses, it has become more difficult to pass from one branch to another. Each branch requires its peculiar training and apprenticeship; each requires the entire energies, the resources, and the special preparation of a well-equipped man.

Again, by reason of the second differentiation, there are gradually arising separate, distinct grades of business service. It is by no means impossible to pass from one to the other; but it is a noticeable fact that an increasing number of young men enter directly into the higher branches of service, after undergoing a period of special preparation. To enter successfully upon this superior grade of work, superior ability and training are required.

As a result of the third process of differentiation, there are growing up certain sharply defined business callings or professions. The gradation from a simple employment to an expert vocation, and from the latter to a profession, is now more clearly marked than ever before. Our business development has given rise to a series of such professions which are of importance to the educational world. A striking instance is seen in the field of accountancy. From the general utility-clerk there have evolved the book-keeper, the expert accountant, and finally the profession of accountancy, with its high standards and ideals, its national and state associations and institutes, its schools of training, its state boards of examiners, and its valuable and growing professional literature. Other such distinct vocations and professions are now in course of growth and formation; *e. g.*, the credit man, the railway freight or passenger agent, the bank cashier, etc. No words need be wasted in proving the importance of these occupations and the high rank which they now occupy in the business world. The head of a modern commercial enterprise relies upon a cabinet of such men, just as the president of the United States relies upon his department secretaries. As trained specialists, they form the very brains of the body commercial. An interesting result of the introduction of university courses in preparation for business is seen in the recognition now given to these new business professions and differentiated callings. At Pennsylvania we have found it advisable to arrange a grouping of the subjects given in the latter years of the course so as to admit of an appropriate measure of specialization for certain of these careers.

A third result of the introduction of the higher commercial curriculum has been the contagious spirit of enthusiasm which animates both students and teachers in the new subjects. A firm and inspiring belief in the combina-

tion of culture and efficiency, and a consciousness that the new curriculum is on probation in the eyes of the educational and business world, have kindled a feeling akin to the missionary spirit, a determination to give the new system the best and freest opportunities for success. At Pennsylvania not only have members of the faculty given very practical evidences of this spirit, but the students also have entered with enthusiasm into the movement. Acting upon their own initiative, they have formed a students' association which takes up all conceivable matters connected with higher business education. Its members welcome the incoming men and make them feel at home, secure employment for such as require financial aid, engage speakers of prominence from the business and legal world to address the student body, consult with the faculty and authorities of the university on appropriate questions of importance, prepare and give to inquirers the necessary information concerning the work of the Wharton School, and perform other functions of a similar nature. The existence of such an association implies a close bond of unity between the men who are taking up the new courses, and is one of the most encouraging signs of progress.

Lastly, the record of the graduates and former students of the school forms the supreme test of results. The Wharton School, altho it is the oldest and the largest institution in the field, began only twenty-three years ago with a class of two members. A majority of the graduates have been out of college walls less than a decade, and only partial returns on the records of these men are available. In spite of these facts, however, the list contains the names of men who have been able to make successful use of their training in a great variety of businesses, in the public service, journalism, and teaching. It contains directors, general manager, treasurers, secretaries, vice-presidents, and president of financial, industrial, and commercial corporations; newspaper editors; lawyers; university, high-school, and public-school teachers; a minister in the United States diplomatic service; a United States congressman; a member of the United States Isthmian Canal Commission, of the Porto Rican Code Commission; commissioner of education of Porto Rico; and other officials and men of influence and public usefulness. Is it too much to claim, as a result of such a record, that higher commercial education has passed the experimental stage and has become a strong, valuable, and necessary part of university work?

DEPARTMENT OF CHILD STUDY

SECRETARY'S MINUTES

FIRST SESSION.—THURSDAY MORNING, JULY 6, 1905

The meeting of the Department of Child Study was called to order in the Young People's Temple, Ocean Grove, at 9:30 A. M., July 6.

Charles W. Waddle, of the University of Texas, was elected acting secretary of the department.

President E. G. Lancaster, of Olivet College, Olivet, Mich., delivered the "President's Address," following which Dr. G. Stanley Hall, president of Clark University, Worcester, Mass., read a paper on "Child Study in the University and College." Professor E. A. Kirkpatrick was called to the chair while President Lancaster briefly discussed Dr. Hall's paper.

"Child Study in Normal Schools" was the subject of a paper by Frank Webster Smith, assistant professor of pedagogy of the University of Nebraska, Lincoln, Nebr. Discussion was led by E. A. Kirkpatrick, of the department of psychology and child study, State Normal School, Fitchburg, Mass.

Miss Harriet Marsh, principal of Hancock School, Detroit, Mich., read a paper on "Child Study in Special Clubs."

Miss Isabel Lawrence, superintendent of the training department of the State Normal School, St. Cloud, Minn., read a paper on "A Problem for Women's Clubs." This paper was discussed briefly by Mrs. Pauline Steinen, member of the Board of Education, Toledo, Ohio.

The president then appointed as a Committee of Nominations:

Frank Webster Smith, Lincoln, Nebr. E. A. Kirkpatrick, Fitchburg, Mass.
Mrs. H. A. Woodward, New York city.

Adjourned.

SECOND SESSION.—FRIDAY MORNING, JULY 7

William H. Burnham, assistant professor of pedagogy, Clark University, Worcester, Mass., read a paper on "Education from a Genetic Point of View," which was discussed by A. Caswell Ellis, associate professor of the science and art of education, University of Texas, Austin, Tex.

Dr. Amy E. Tanner, professor of philosophy, Wilson College, Chambersburg, Pa., read a paper on the "Relation of the Child's Development to His Control." This paper was discussed by Edwin Grant Dexter, professor of education, University of Illinois, Urbana, Ill.

This was followed by an address by Stuart H. Rowe, head of the department of psychology and pedagogy, Brooklyn Training School for Teachers, Brooklyn, N. Y., on the subject, "The School and the Child's Physical Development." A discussion followed by Frank G. Bruner, head assistant of the department of child study, public schools, Chicago, Ill.

The last paper before the department was delivered by Louis N. Wilson, librarian of Clark University, Worcester, Mass., on "Literature of Child Study."

The Committee on Nominations reported the following for officers of the department for the ensuing year, viz.:

For *President*—Edwin Grant Dexter, of Illinois.

For *Vice-President*—H. H. Goddard, of Pennsylvania.

For *Secretary*—Charles W. Waddle, of Texas.

The secretary was instructed by the members of the department to cast the ballot of the department for the officers nominated. This was done, and the officers were declared duly elected.

The department then adjourned.

CHARLES W. WADDLE, *Acting Secretary*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

E. G. LANCASTER, PRESIDENT OF OLIVET COLLEGE, OLIVET, MICH.

This is the twenty-fifth anniversary of the child-study movement in America. In the summer of 1880 President Hall began his first investigations, in Boston, into the contents of children's minds on entering school. Dr. Bowditch made his historic investigations of the physical growth of children at about the same time. These led at once to widely extended studies into the nature of the child.

It would be interesting to give a history of the development of child study in this country during these twenty-five years, but that has been partially done by others and could not be included in this brief address.

It may be said in general that, while many teachers have no knowledge of child study, the effects of it have reached every schoolroom in the land. Textbooks have been modified, and the ideas of leading investigators have percolated down thru superintendents, principals, and lecturers to the youngest teachers, until their work has been greatly influenced. The child today has a lesson better suited to his capacity, a kindness shown him born of intelligent sympathy—not sentimentality—and a regard for his health and recreation never known before.

During the past year the greatest event in child study has been the widespread reading of the large work by Dr. Hall on *Adolescence*. The book was published before our last meeting, but so few had read it that it was practically unknown to the educational world, and hence I shall speak of it as an event of the past year. In my judgment, no single publication has ever influenced education to the extent to which Hall's *Adolescence* is now influencing it. It is true that Rousseau's *Émile* kept Immanuel Kant from his usual afternoon walk for a whole week, and otherwise had a great influence on the world. The publications of Pestalozzi and his methods of work have greatly influenced, and practically reconstructed, education. Both of these

men caused the educators to realize that methods might be improved, that objects were better than words for class-room instruction, and that the child should be treated in a sympathetic way. But no one before Dr. Hall has taken up child-life scientifically, and by most thoro and extended investigations into the psychic and physical life of the child has revealed to us the nature and activities and phases of development of the child's mind. No work of the past century can be compared with *Adolescence* save Darwin's *Origin of Species*. I have discovered groups of teachers and educated people meeting regularly two or three evenings a week thruout the past winter for the careful reading and study of Hall's *Adolescence*. From them I have heard most enthusiastic expressions of appreciation of the work. A prominent physician in a western state said to me recently that in a great convention of medical men held in a large western city it was stated, with general approval, that the practice of medicine with children up to the time of complete maturity would be revolutionized by this work on *Adolescence*, because of its very scientific discussion of growth and diseases of children. One general idea is certainly growing in the consciousness of the teachers of the country, and is gradually destroying the old system of education. It is the idea that the child passes thru phases of development, and at certain stages is more interested in some things than he ever will be again in his whole life. As a consequence, the whole educational system is being adjusted to the natural development of the child. Courses of study may no longer be prescribed by the adult mind, beginning with general and abstract truths and gradually working down to particular facts, as if the child-mind were perfectly developed and ready to take up a subject logically. This work, I trust, has forever killed that notion of education. But the influence of the book is by no means confined to the professions of medicine and teaching. It has brought before parents everywhere the hitherto unsuspected life of the adolescent, and certainly will modify the treatment of young men and young women in the home. If the past year, or the past twenty-five years, had done nothing else in the field of education than produce this work of Dr. Hall on *Adolescence*, the world would be well repaid for the time and energy put forth. I am speaking with studied conservatism.

But in more general ways child study has advanced during the past year. Nearly every college, university, and normal school beyond provincial New England has a chair of pedagogy and child study. Excellent courses are being given in practically all of the great state universities of the West, and particularly in the normal schools. There has been an unprecedented call for teachers of child psychology and pedagogy during the past year. Nearly all of the teachers of child study in the central and far West are teaching in the summer schools, and for that reason cannot take part in this program.

To be more specific, the following universities and colleges are giving regular instruction in child study: the universities of Washington, Oregon, and California; Stanford University; the Universities of Texas and Colorado; Denver University; Colorado College; the Universities of Nebraska, Kansas,

Iowa, Illinois, Indiana and Wisconsin; the University of Chicago; Olivet College; Cornell University; Syracuse University; the Baltimore Woman's College; Columbia University; the University of Western Pennsylvania; Toronto University; Smith, Mount Holyoke, Vassar, Wellesley, and Wilson Colleges; and nearly all of the best normal schools in the United States. It is impossible in this paper to give a detailed statement of the progress made in these schools during the past year.

In foreign countries the growth of the child-study movement has been even greater than in America. In England the British Child Study Association has done active work and is contributing valuable data to the science of child study. In France there is manifested a very deep interest in child study. Binet has published an extended and valuable study of the intelligence of the child, and the department of education at the Sorbonne leads a society for the study of the child. In Italy seventy prominent educators have this year expressed a desire to co-operate with Clark University in its international child-study investigations.

The surprise of the year comes from Poland. The *Polish Pedagogical Seminary*, published at Warsaw, has put out many translations of American works, and the first chapters of Hall's *Adolescence* have been translated and are published before this time. Most valuable data have been sent to Clark University from Poland as a contribution to the international work. Japan, in the lead as usual, gives a three-year course in child study in the Woman's University of Tokyo. Their courses are based on the investigations made by Dr. Hall and his associates. Other countries have done and are still doing excellent work in child study; some of the first studies came from Russia, and the interest there is still alive. Germany has, of course, made the greatest investigation into the hygiene of the child, and has given to the world the most valuable publications on the physical conditions of child-life. Everyone knows the work of Dr. Key in Sweden, and its remarkable influence on the treatment of the child in relation to its growth and health. It has been said by a great scientist, Dr. Minot, of Harvard, that the discovery of the fact that all disease or sickness is due to fatigue is the greatest discovery of history, and is worth more to the world than all inventions of the past century. That discovery has come from the child-study movement.

Educators in all lands begin to realize that there is but one foundation for pedagogy, and that foundation is the scientific knowledge of the physical and mental life of the child.

CHILD STUDY IN THE UNIVERSITY AND COLLEGE

G. STANLEY HALL, PRESIDENT OF CLARK UNIVERSITY, WORCESTER, MASS.

In the university, where research should be the chief aim, many methods have been developed. I can here describe, and perhaps a trifle idealize, those with which I am most familiar. It is a plain story, uninteresting except to

those concerned for the advancement of knowledge. The chief requisites are, first, an expert who must have a good reading knowledge of at least French and German, and understand the theory and construction of averages and graphic curves. The simple apparatus for testing the eye, ear, and voice, and for making anthropometric curves, and the other hygienic and physiological tests usually found in a psychological laboratory, must also be understood. There has also developed a logical method of some detail which is peculiar to this class of work, altho this is not the place to describe it. The functions of this assistant should be personally to guide and induct beginners, and not to devise original problems.

Another function of university research is correspondence. At Clark we have now a list of some fifty people—only two-thirds of whom are in this country and the rest scattered thruout the world—who have pledged us a definite amount of assistance, such as can be rendered by correspondence. The only return they exact of us is that we send them each printed copies of all our publications in the field. Thus, wherever we desire simple measurements, or questionnaire returns, we look over our list, select those most competent, who have not yet rendered their annual quota of work, and send our specifications. Some of these individuals have attained a considerable degree of expertness, and a few have even worked independently and published papers of their own. A number have taken special courses in details and technique in the sessions of our summer schools.

Another correspondence function is that of answering letters, which have grown very greatly in the last few years in numbers. First, there are new societies constantly being established in this and other countries. Within the past year, for instance, a very large association of physicians in Italy, under the guidance of university experts, has been formed and has sought our co-operation. Another has been founded in Prague, which has branches thru Bohemia, yet another in Poland, another in India, and one in Spain. Despite the linguistic barriers, it has been possible in a few cases to secure active and valuable aid, and we hope to make suitable return therefor.

A new branch of our work, also established this year, concerns itself with missionaries. Scores of these in various lands have taken interest in, and answered many of, our questions, and we are greatly indebted to this new contingent, not only for their contributions to mission pedagogy, but also for their help in understanding child-life and nurture in their respective lands. This department has also added somewhat to our literature, as it has enabled us to secure valuable memoirs, not otherwise obtainable, which, if we cannot read, some student may.

Another correspondence field is concerned with exceptional children. Scores and hundreds of anxious parents or friends turn to the paidologist for expert counsel with descriptions of symptoms and photographs, etc. From all this we rarely derive any scientific material of value, and in most cases can render little or no aid. Occasionally, however, we can suggest examination for

deafness, or adenoid, nervous, or hereditary disease; suggest an institution, an expert, or literature. Some months ago I wrote a brief editorial in a medical journal suggesting a new kind of medical expert to deal with pubescence and its diseases. I think I have had a score of letters since, from physicians who desire to enter this new field, and three write me that they have already done so, tho I know not with what qualification. I predict that within ten years we shall have the beginning of a new specialty likely to rank with pediatrics and gynecology. It used to be said that in the early teens children were not yet immune from the diseases of infancy and not yet fully exposed to those of maturity, but liable to both in mild forms. We now know, not only that this is true, but that there are specific diseases due to this age alone.

Now, all these functions could to some extent be discharged by one capable person, altho, with plenty of means, they might be so enlarged as to give full occupation to several.

The university study of children needs an expert in its literature. This is not yet very copious, and a few thousand titles probably comprise all that it is worth anyone's while to know, but this material is often hidden by a vast mass of cheap and almost worthless material, sometimes bearing attractive and very deceptive titles. This evil, which is the curse of every department of education, has, I regret to say, already grown large and formidable in this field; hence the bibliographer must learn how to distinguish between the first and at least the tenth best, and do something to help much of the printed matter here to speedy oblivion. Another difficulty is found in the fact that this literature is very widely scattered. A few of the best articles are brief, and printed in the monthly, weekly, and occasionally only in the daily journals. Other material is found in the transactions of philological, anthropological, psychological, theological, pathological, and various other societies. Reprints are difficult to secure. A few of the best are found in doctors' dissertations. Indeed, I have sometimes thought that one librarian's assistant might profitably give her entire time to running down and securing, by exchange, purchase, or begging, this material, which must, of course, all be classified and cataloged by subject rather minutely. I lay stress on this subject because many investigations have simply repeated work previously done elsewhere, and thus involved a waste of time which might otherwise be saved.

Connected with this work there ought to be one ideal realized, toward which several publications are striving; viz., a central archive which shall attempt to present descriptive bibliographies of everything of importance published. This *Centralblatt* function would very greatly help our work, and it must be developed before the department can have the apparatus and facilities which other full-fledged academic departments enjoy.

Connected with all this should be a seminary, where all advanced pupils interested should meet weekly or fortnightly to pool their knowledge for each other's benefit. Here much of the material for the publication described above could be prepared. A great advantage of this, too, is that mind thus

sharpens mind, and there can thus be developed that critical and enthusiastic temper which is so essential for the investigator in this new and complex field. Here, too, different investigators read for each other's benefit and criticism their papers, and they find the new logic which is beginning to emerge, and which awaits some new Bacon.

There must also be some room or two convenient to the street, where children can go from the schools in small groups to be subjected to the hygienic and other tests. In the instrument department there should also be small sets of loan apparatus in duplicate, such as that used for testing the condition of the air in the schoolroom, the intensity of light, the temperature, and for the usual physical tests. We have found it greatly to the advantage of the department to make occasional loans of this kind, as well as of books, sometimes to a great distance. Not only teachers interested, who desire to collect data, can be thus helped, but also professors in other institutions can interchange their facilities, material, and instruments with mutual profit.

The most difficult problem for university child study is the selection of topics for research. Here incessant reading, thinking, observation in schools, sometimes on animals and the insane, and savages, may bring the fruitful suggestion. Half the battle is to find a really fresh and pregnant subject that enables one to steal a march upon nature by approaching her from a new point of view. A notebook should be incessantly at hand for the jotting down of first impressions as they occur. In my experience, only about one in twenty-five of these ever survives a second thought, and the best of them all are those so simple and near at hand that it would seem that almost any fool would have thought of them at first.

These topics are of two kinds, one scientific and the other practical, altho some features of both usually inhere in all work. Most of the theoretical problems are those which shed light upon human genesis, or they pertain to child-life before the school or even kindergarten. My own chief interest is and always has been, in this class of child study, and I have the most enthusiastic belief in its future, holding even that it will sooner or later transform our knowledge of man and bring every department of it into a new unity. The time is certainly coming when we shall realize that there is no true knowledge except the full description of all stages of development; and if man is the highest product of creation, and his own self-knowledge the highest type of knowledge, we can already forecast a little what this knowledge is to mean and bring to the race. It means a new correlation and co-ordination of all the highest knowledge of the world, more economic and pedagogic in form, and richer in contents. Indeed, almost all my idealism focuses in this general direction, and it is at this point where my homely theme this morning empties into the great ocean of future science.

Finally, on the practical side, academic child study has already brought certain results that can hardly be tabulated yet, but are very precious. There is a new zest for childhood abroad in the world. That means a new love of

the naïve and unconscious which affects all our philosophy and all our art, and is one of the most salient signs of our times. Men are a little weary of consciousness and ratiocination, and they want to sound the depths of the soul below the threshold, and to feel the larger pulses of life that make intelligence their sport. Of this intuitive soul of the world the child is the chief organ. Thus, parenthood itself is coming to be more desirable. There is reason to believe that many men and women are married today who would not have been so but for this movement, and very many children owe their existence to it. The British Society for Stirpiculture aims to promote wedlock in its biological season, and the multiplication of generations, and raises this duty to one of national and ethnic moment. Here, too, we are beginning another large chapter. "*Periculum est credere aut non credere.*"

CHILD STUDY IN NORMAL SCHOOLS

FRANK WEBSTER SMITH, PH.D., ADJUNCT-PROFESSOR OF EDUCATION, UNIVERSITY OF NEBRASKA, LINCOLN, NEBR.

Professional training for teachers is as yet in an unorganized condition. The provinces of elementary teacher-training and secondary teacher-training have not as yet been delimited. That the two classes of teachers require radically different training for their special fields is apparent, as they have to do with different studies and with different psychologies, and thus with different training-needs, with different pupil-attitudes toward training, and, as a result of all, with different methods. But today conditions are mixed. Not only do normal schools and departments for the professional training of teachers vary from a close approximation to academic work to real conditions for presenting the theory and practice of teaching, but normal schools frequently attempt to prepare teachers for both elementary and secondary schools; and university departments of pedagogy, while devoting themselves primarily to the training of secondary teachers, send many graduates into the elementary field. This is perhaps inevitable, partly because of the present inadequate supply of trained teachers. But it is becoming evident to both university and normal-school men that the normal school is better fitted for training elementary teachers, while the legitimate province of the university is to train secondary teachers, because of the differences I have briefly pointed out. This is the status under present organization. I believe, however, that provision should be made for training both classes of teachers in the same institution. Elementary and secondary schools are closely associated. There should be some association in the training of their teachers. It would make for unity in our system. Again, a teacher, to be efficient in any grade, needs to know what precedes and what follows, and so should be in a position to look all along the line.

The ideal place for such a school, which may be the central normal school of the state, is in connection with a substantial college or university, which can furnish the equipment for training the two classes of teachers in separate departments and can illustrate the whole educational process. Here the growing teachers may profit also by the broader views and culture, and the general opportunities and inspiration of a community which presents the higher grades of work. Here they are more likely to be led to larger ideas of academic work.

The course in child study which I suggest is for elementary teachers in whatever institution they may be trained. At present it would apply particularly to normal schools, as they are concerned especially with teachers of this grade.

Happily child study has come to be an essential subject for all teachers. Its services are so common and so deeply set in our present system that we sometimes forget to refer them to their real source. We have only to ask, Whence have come the medical inspection of schools, the reform in kindergarten work, improvement in school environment and school hygiene? Why have we adopted the adjustable desk? Why have we modified our ideas of school government? Why have we enriched curriculum and method? and a hundred other similar questions, to have our memories refreshed as to the effects of child study. The study is broader than notebook and tabulations, valuable as these are.

A public-school teacher told me the other day that after she took up the study she found herself conducting her school with less tension in herself and her children, because she appreciated their attitude toward things and honored it, and that the difference was appreciatively noted by parents. A college professor writes me:

To question the advisability of attacking the problems of the teacher from that [child study] as a starting-point seems to me like questioning the validity of the ancient principles of "simple to complex," "concrete to abstract," etc. . . . My habit of thought with regard to the attention given to child study has come to be almost precisely that which I have with regard to my study of the elements of physics, chemistry, biology, or psychology, as (for my profession) simply unquestionably essential as the apparatus of my thinking and acting. . . . Then I am able to regard it, besides that, as, for general culture purposes, a study which lacks nothing of the scientific dignity and worth of any other subject of study, while it has a place in that high scale of humanistic studies which includes the biological, psychological, and sociological.

The elementary teacher may have feelings as to child study corresponding to those of the college man.

Everyone whom I consult acknowledges the practical value of the study. It is, in fact, more essential to genuine teaching than general psychology.

Thruout a course in child study I would have two questions uppermost. (1) What is the child? (2) What does he demand in school environment and equipment, in the physical life of the school, in curriculum, method, and organization, to give him sound development and make him most efficient?

Each of these questions involves a knowledge of the so-called psychical and the so-called physical; in a word, of the *whole* child. The study can be and must be practical, putting the teacher in practical touch with the child, and giving him a more practical knowledge of the means of meeting child needs. For this purpose I would suggest the following points for a normal-school course:

1. A study of three well-defined periods of child-life as represented in the elementary school, but particularly the period with which one is to be most intimately connected. The period beginning at about seven and closing at about nine needs far more attention than it has received in school programs, because of physical conditions. The elementary teacher needs to know the typical characteristics of these periods rather than a mass of undigested minutiae. Here will come in the dominant interests, ideals, and activities of the periods, as well as the less conspicuous forces at work which are sometimes forgotten. By giving close attention to the larger and louder facts—to the more highly developed and conspicuous powers—we may neglect the rudiments, the germinal powers, which require nutrition and nutritive treatment to prevent maldevelopment. A one-sided educational diet is easy to prepare, but is liable to cause intellectual and physical dyspepsia later, because we fail to detect these more modest claims and meet them.

One of the most essential points, however, is to study so-called "nascent stages" for the development of various interests. It is essential to know the signs of the times—to know that they are not merely signs of something, but signs of this or that particular interest. An interest or activity may be dwarfed permanently because some teacher does not see the signs and know how to meet the occasion.

2. The interests, activities, and ideals which I have referred to are both physical and psychical. There is a deep-seated correlation here. But we need to study also a special correlation where neglect will bring equal danger—even a more conspicuous, tho not more serious, danger. The teacher must study the common and typical physical defects, their psychical bearings, and the safest methods of treating them, so as to make wise suggestions or direct to the proper source of health; and here a little parent study is advisable to assure helpful co-operation of the home, so that the teacher's knowledge of the physical may have tactful applications to home life.

It is not so simple a matter as it might at first sight appear really to know and appreciate the typical characteristics of any period of child-life. It is easy enough and pleasant enough to go to good books and read as to various groups of characteristics, and to discuss them in class. It is even stimulating to do this. But I take it that results of such study would be comparatively barren. In the first place, we must distinguish between normal characteristics and those which are due to the injudicious use and handling of the normal by unskillful hands. A study of the latter is quite as important as a study of the others. It will prevent us from taking as natural those qualities

and attitudes that are due to "art and man's device," and it will give large suggestions for the adjustment of educational forces to the normal characteristics.

In the second place, the growing teacher must see, not merely the general attitude of the period in question, but its particular attitudes or relations in various directions—relations to psychical, and especially physical, growth, rate of growth and correlations of growth, to physical culture, including games, to certain pathological states, to migratory and truant instincts, to the development of psychic powers and forces, such as attention and imagination, to historic sense, to language power, to social efficiency and initiative, and to various other powers and interests which are admirably summarized in Dr. Chamberlain's book on *The Child*. It will thus appear that the teacher, aside from the typical periods which I first mentioned, will multiply periods, as he follows out one line of activity after another. This will lead the young teacher to confusion, and must be avoided. By studying the relations of his original periods to these various points the study will be simpler and clearer.

In the third place, the teacher should study the subjects of the curriculum and the methods of teaching them on the basis of this child study and *in connection with it*. She will thus be in a position to look on the development of a subject, be it language, arithmetic, or history, as the development of the child in contact with the subject. This is the use of the subject which is most genuinely practical and will bring the most practical results in life. It is strikingly at variance with the other use in which we are following an abstract idea of utility. The idea here is concrete. In developing a course in history or art or literature or language (I use traditional terms), we take the child's point of view, begin with the best that appeals to him and helps him at the given stage, and lead him naturally to new points of view, new and better achievements, new ideals. So subjects become real forces. The whole process takes on a larger, more human meaning. The quota for a grade will no longer be a bit cut off from the logically systematized subject, but those facts and forces in the subject which are naturally related to the child; first, those which offer the best employment of his activities; second, those which afford natural equipment, in knowledge and otherwise, for social functions—and the latter are peculiarly dependent on the former. Our manner of grading subjects in the past has tended to defeat its own object. This grading has been greatly modified by child study. Kind of material presented, and order and method of presentation, have been greatly changed. The work needs to be perfected in these lines, and new applications must be made. Even supposing this should result in the omission of half the topics now given in some study, pupils would go out with such a grasp of principles and forms that new knowledge and applications would come with the greatest ease, as occasion arises. But extensive omissions would not be necessary if we understand the periods when certain phases of work can be done most naturally, quickly, and economically. We shall even find that we can in this way do

more in a given time, and do it more efficiently, or can do all that is necessary in so much shorter time that pressure of school life may be relieved or needed improvements be made. The greatest gains from the point of view of subjects of the curriculum would come thru efforts to rearrange them according to the logic of child-life and child-needs and to take up different phases of a subject at the psychologic moments. We have logicalized subjects and courses by a kind of logic that misses the development of the child. This is not the logic of nature. It is the logic of formal system which appeals to adult development, and has its place, like all phases of our inheritances, but at a later period.

Equally important is it to study school hygiene, school organization, and school environment in connection with child study. More can be accomplished for the pupil's development thru these means than by almost any others we can think of. Even their silent force is immense. But time forbids me to go into detail here, tho they furnish, for me, some of the most interesting and suggestive topics connected with school work.

A study of these fundamental matters in school life and school economy from this point of view is a most legitimate part of child study. For continuing and completing this work, for working out its applications under the most favorable circumstances, and thus for enriching a course in child study for the elementary teacher and inspiring her in it, we need a series of experimental schools managed by experts having a thoro appreciation of child-life, endowed with ample funds, supplied with the best teachers in thoro sympathy with the work and its principles, and unhampered by unsympathetic elements. Here might be applied the well-supported discoveries in child study. Here, I believe, we should demonstrate that stronger pupils, stronger physically and mentally, would be developed in a given time than at present. I feel confident the time would be shortened. Our present waste, and the amount and kind of waste, incident to ill-adjustment and indefiniteness and misconception of educational growth, would be shown completely. Favorable conditions for development constitute one of the fundamental principles of evolution, and are entirely consistent with the doctrine of the survival of the fittest.

But it is more important to treat of the conditions of child study than to outline a course. The idea of child study without children is amazing, but it is practically the child study of today, as carried on by prospective teachers, if we except a rather limited and superficial contact with children. The study should be carried on in the midst of children, at work and at play, and under the constant guidance of an expert teacher, herself constantly in touch with children. This is, to my mind, the first requisite for a child-study course. The teacher-student thus meets children directly and indirectly. She studies them under the most inspiring stimulus and guidance, and grows to understand them, to appreciate them, to sympathize with them, and thus attains some fitness to teach them. The study I speak of is thus not of the lecture-room, nor of a separate department of psychology. The work must have a concrete basis in a first-hand study of children under masterly guidance. *Pari passu*

with this study students should read standard literature on the subject. Books on Sunday-school pedagogy now furnish some of the best reading on child study. Class-room work should consist only of discussions and conferences as to observations and readings. Suggestions in the line I have followed were first made, I think, in an article on "Normal Schools" by Dr. Hall. I believe they promise the best results attainable. I would add this, that the teacher of child-psychology should be someone connected with the practice department of the normal school—a principal or assistant principal perhaps—who is also a master in child study. Such a teacher is needed in the practice school, in the first place, and should be utilized for this other work. I would also add that this work should continue thruout the normal course, of two years or one year, as the case may be. The school may be conveniently organized for the purpose, as I am making child study a broad subject and the central one of the course, rather than a mere attachment. It may easily comprise all the special training in psychology needed, particularly if related to genetic psychology and made a part of it. If care is taken to trace the natural development of children, as well as to impress the characteristics I have referred to, the teacher has a far better preparation from the point of view of psychology than a small amount of child study added to general psychology can give.

I would also provide for these elementary teachers opportunities for learning the general results of the study of adolescence, and that under one who has a sympathetic knowledge of adolescents. Every teacher must know something of the whence and whither of his grade in more than a perfunctory way. In addition to a detailed and accurate knowledge of the psychology of the group with which he is primarily concerned, and the culture-material and method best adapted to it, he must know the relations of all these to the psychologies, culture-material, and methods of preceding and succeeding school ages. Only thus can he define aims and follow them securely. That the teacher's occupation is not yet a profession is due in no small degree to lack of such knowledge, which brings loss in results and ideals for both teacher and pupil. We have no good excuse for thwarting destiny after this fashion.

From practical considerations teachers cannot be expected to come into touch with a training-department for high-school work as they have with the elementary training-school. Good lectures, supplemented by good articles and books, would, however, be instructive, suggestive, and inspiring in the directions I have mentioned.

Such a course of child study will, I believe, bring practical results and masterful teaching.

DISCUSSION

E. A. KIRKPATRICK, psychology and child study, State Normal School, Fitchburg, Mass.—It is true that child study in some form has become an essential element in all the work of our best teachers, whether they know it or not. It is the duty of the normal

school to lead young teachers into the habit of trying to understand and successfully direct the activities of children singly and in groups. Aside from giving a clearer idea of the aims and functions of school this is the whole purpose of all that is done to prepare normal students for the work of teaching.

Subject, methods, discipline, psychology, and even child study as a science or body of knowledge, are simply means of accomplishing this end of giving students the power to direct the activities of children. I would therefore lay less stress than Professor Smith does upon the generalizations of child-study investigators as to the characteristics of the normal child at different ages. Not only are most of these generalizations at present either doubtful or indefinite, and their applications difficult; but even if they were certain and definite, their value simply as truths is not great in the actual work of teaching. The great defect of the older type of normal-school instruction was that the rules of teaching were taught students instead of developing in them the power to deal with actual and constantly changing situations. Present methods, even with child study, are likely to embody the same error if we make too prominent the idea that children of a certain age have certain characteristics, and must therefore be treated in a certain way. Such truths are of more value to the makers of courses of study than to teachers who adapt subjects to individual children. In almost any group of eight children you will find nearly as marked individual differences in temperament, ability, and interest, as you will find between the averages of children of the eight ages from six to fourteen.

Furthermore, teaching is a process of directing changes in a constantly changing organism. The essential thing, therefore, is to discern the present condition, and to use successfully the various possible means by which desirable changes may be produced. The important thing for the teacher is to discern conditions and exert influence. Knowledge that certain instincts are prominent in children of the age with which the teacher is dealing may be helpful, but a change in mood—perhaps a reaction against the usual—so common in children, may cause an appeal to the usually dominant instinct of children of that age to be the worst possible move to make. Since children are constantly changing, so that the motive which sways them at one age may have weakened and almost disappeared the next year, the next day, or even the next hour, the young teacher who has been carefully taught a host of generalizations as to the characteristics of children at different ages, but has developed no power to discern the present situation and make the right appeal, is the most helpless of mortals unless she forgets it all and acts as prompted by instinct and common sense.

Do not misunderstand me. I do not wish you to think for one moment that I am minimizing the value of child study. I have been teaching it for many years, and regard it as *the* important subject in the normal school. I also agree with Professor Smith that the various topics he names should be studied; but, except in the case of physical defects, I am inclined to think that the change of mental attitude toward children, the raising of questions, and the attempts to find the answers not merely in books, but in children, are of more value than the generalizations that are reached or learned.

Normal students have from instinct and experience some power in understanding and dealing with active human beings, either old or young. The study of psychology, methods, and child study should increase this power. Introspection, reminiscence, observation, experiment, and reading are all helpful, especially if carried on in connection with actual contact with children engaged in various activities under a variety of circumstances. Normal pupils need to know not merely the fraction of the child that studies and recites in the schoolroom, but the other and more important phases of his nature that appear on the playground, on the street, and in the home. She needs to become familiar, not so much with the average static child as with the individual, changing, dynamic children with which she is led to come into sympathetic relations.

Enlarge the view-point of intending teachers as much as possible by reading and study, especially in the lines of evolutionary, comparative, and genetic psychology. Get

her to realize that the child is neither an angel nor an imp, but an organism continually changing, yet developing according to fixed laws which involve the constant interplay of inner tendencies and outer influences. Make her as familiar as possible with all that has been proved or suggested regarding all the various reflex and instinctive tendencies, and the times at which they are likely to be most prominent; reveal to her the effects of surroundings, and show her all the various means that may be used to call forth and develop healthful, enlightening, and ennobling activities. All this is helpful and necessary; yet the essential for the teacher, as for the engineer and motorman, is not knowledge of general truths, but the power to direct the mechanism smoothly and successfully under all circumstances. Practice in gaining truths about children at first hand, and in directing the activities of children in work and play, are the phases of child study that need to be emphasized in normal schools.

CHILD STUDY IN SPECIAL CLUBS

MISS HARRIET A. MARSH, PRINCIPAL OF HANCOCK SCHOOL, DETROIT, MICH.

It is undoubtedly true that club women do not yet know their power, or realize fully the strength that comes from unity. Suppose, for instance, that instead of diverting time and energy into innumerable channels, the clubs of a city or a state should unite in the study of one vital need or principle, devoting to it only the amount of thought and effort usually required by the work of an average club. The selection would naturally fall upon some well-recognized need or defect in our daily living—something which appeals directly to all classes of society, and can be studied and understood in a plain, common-sense fashion by people of ordinary intelligence.

I have sufficient faith in human nature to believe that when club work is unsuccessful, failure is due to one or more of the following causes: (a) It does not grow out of any vital need or necessity. (b) It is not presented in such a way as to appeal to, or be understood by, its intended beneficiaries. (c) Its principles or tenets are not followed, or lived up to, by the persons interested in its propagation.

Accepting this hypothesis as correct, the first requirement of successful child study is a well-recognized and keenly felt necessity, something that appeals alike to rich and poor, educated and ignorant, for another important element of club work is sympathy; not an aggravating mixture of pity, condescension, and patronage with which really good women often deceive themselves; but the genuine article, such as springs only from mutual need or interest. Under such conditions what shall we choose?

Necessarily, the chief concern of any people is the prolongation of life and the improvement of health. Here, then, is our field. What is most needed?

In Michigan, during the year 1904, about 26 per cent. of all deaths were of children under four years of age, 19 per cent. of children under one year; and the chief causes were poor or insufficient food and impure air. Michigan is not less favored than the average state in these respects, yet one-fourth of

her entire death-list was composed of little, helpless, struggling beings who died from actual starvation, or thru malnutrition found themselves unable to cope with the ordinary diseases of early childhood. But this is not all. Science tells us that

a plentiful supply of food tends to hasten an embryo thru the different stages of growth, and even to skip some. Lack of food may fix an embryo forever in a rudimentary condition. Conditions before and after birth may produce a criminal just as often and just as much as they produce a deaf child or a diseased child. A criminal is an instance of arrested development; the conditions tending to arrested development are poor food, insufficient warmth, and poor social conditions.

According to Dr. Dawson, who has made an exhaustive study of the delinquent classes, idiots and criminals come largely from immature or very old parents. He also favors the opinion that, generally speaking, the criminal seems in some respects to be arrested in a state of childhood, and, in support of his theory, calls attention to the physical signs of degeneracy indicated by a large proportion of the delinquent classes, as the cleft palate, face not matching, bullet-head, head too large or too small, abnormal innervation of one side, broader face, etc.; a tendency, in fact, to resemble the lower races, or our own race in infancy. If his conclusions are correct—viz., that the criminal and the idiot are instances of arrested development, and that the chief factors in development (both before and after birth) are food and temperature—then it may be said that malnutrition is largely responsible for crowded prisons and asylums, particularly when it is remembered that reproduction is exceedingly active at a point just above starvation, and that a large proportion of our delinquents spring from the struggling indigent classes.

But malnutrition is not confined to the very poor. When animals are brought into captivity, reproduction lessens or ceases altogether, and it is only by the most careful attention to conditions, among which that of diet plays a conspicuous part, that the menagerie is beginning to restore this function. How far the semi-captivity of the office, the counting-room, the school, and the workshop are responsible for the race-suicide of the more comfortable classes is a question for the future scientist; but one thing is certain; when an instinct as strong as that which has to do with the perpetuation of the race is weakened or perverted, the chief cause thereof should be sought in some fundamental physical degeneracy, rather than in "selfishness," "lack of moral principle," etc., which may be effects rather than causes of the decline just suggested.

Rich, highly seasoned food is often lacking in the most important qualities of nutrition, while it not infrequently overtaxes and overstimulates the organs of digestion. May it not be possible that the human being fed upon this description of food, and confined in the ordinary schoolroom until sixteen or eighteen years of age, may be as incapable of the office of parenthood as the animal in the menagerie just mentioned? Suppose a lamb, or a colt, or a calf confined in a stable at about the same age, relatively, that we send a child to the kindergarten or primary school for four or five hours a day; suppose

the little animals were kept busy at all kinds of stunts and tricks for five days in the week, month in and month out, until they reached maturity; how much reserve force would they have for the peculiar functions of adult life, particularly if they were fed during all this time upon whatever kind of food could be prepared most easily, without any special reference to their particular need or condition? Then suppose this state of things to continue thru long generations of cows and sheep and horses, where would our stock be? What stock- or cattle-raiser would submit to such an arrangement? A great deal more thought and time are given to the care and diet of domestic animals than are bestowed upon the average child; but then stock is a pecuniary investment while the human babe brings no price in the market.

Modern civilization thus finds itself with two defective classes—one at the top, the other at the bottom of the social scale; both alike seemingly the victims of malnutrition. Under our present régime, the captivity of school, office, and workshop must continue. It takes a long time to change the educational ideals or industrial conditions of a people, because both are the outcome of public sentiment, and of supply and demand, factors which work slowly. So the only factor at our disposal at present is food. Scholars in every age have testified to its tremendous importance, many going so far to assert that worry, toil, and disease cannot easily undermine the system that is carefully and systematically nourished. Here, then, is the particular opportunity of the special club; at this present moment the great need of the country is good cooks—women who can make plain, nourishing, simple, appetizing dishes; women who have a fair working knowledge of food-values, adulterations, preparation, etc. The average college girl could do far more good in the world with this kind of knowledge than will ever be possible with her Latin and Greek. Some such course of study should be in every elementary and high school in the country; but even if it were, the great mass of women who never get beyond the primary grades would not be helped by it. So far as I can see, the only influence that can touch this condition is the special club, and it can do it in two ways: directly, by means of the actual knowledge and experience it gives, and indirectly, by making this form of manual labor popular; for it is impossible to ignore the fact that a proper knowledge of food and cookery will never hold its true position in public estimation until women of education, means, and social standing unite in recognizing its importance. The sociological aspect of this question is serious in the extreme. The statesman, the novelist, and the scientist are honored somewhat in proportion to the benefit accruing to mankind from their efforts, but few, if any, give the slightest encouragement to excellence in this field of work, altho it offers employment for the highest order of intelligence and philanthropy; while, strange to say, women of good social position and fair education take pains to convey, by the means known only to their sex, the contempt they feel for all forms of manual labor, particularly those of the kitchen under which the preparation of food must chiefly fall. I am convinced that this form of

stupidity on the part of the more favored classes lies at the root of much of the difficulty between capital and labor. Besides, it is directly responsible for many hundred deaths each year, because, just so long as they render a knowledge of food and cookery contemptible by their attitude toward it, just so long will every poor family in the country strain every nerve to keep their daughters out of the kitchen, preferring all kinds of factory and store work to what ought to be (tho frequently is not) cheerful, legitimate, womanly occupation for all classes of society.

The writer has in mind one mother's club in Michigan that made a systematic study of foods for two succeeding years. The members of this little society were women too near the stern realities of life to waste time on senseless frivolities. No study or research ever gave them so much real pleasure and satisfaction. I quote at random from the secretary's notebook at that time:

Mrs. H— (seven children): "Last year we put in practice what we heard in the club; it is the only year that we did not employ a physician for a good part of the time. The doctor has not visited us for nearly twelve months."

Mrs. P— (four children): "I am sure Percy would never have been raised if it had not been for our club."

Mrs. G— (five children): "My health is much better. The club is responsible."

Mrs. N— (four children): "My youngest child is so much healthier than his brother or sister. I lay it to the club."

Space fails me for further illustration.

This is the practical kind of child study that the country needs today. Suffering humanity is not waiting for abstract discussion or high-flown sentimentality, but it is demanding a plain, common-sense knowledge, and application of the fundamental principles of life and health. "The harvest truly is ready, but the laborers are few."

A PROBLEM FOR WOMEN'S CLUBS

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Co-operation is the need of the moment. If the child is to be benefited, no organized force in the community can be ignored. One superintendent complains that the club woman of his region "figures prominently in all kinds of social reform, and that the school is so convenient to her hand, that she has turned her pop-gun upon it." This is doubtless a true statement of the case. The professional teacher expects a periodical peppering from the pop-guns of amateurs. But where is the superintendent or teacher who has the skill of a general, to transform pop-guns into cannon and then face them on the enemy? The woman's club should be utilized, as should every other force, to further right public sentiment in regard to the training of children—

a sentiment whose absence in any community will render futile the work of the most enlightened corps of teachers.

Sometimes it is the educated woman of the club who sees the situation rightly rather than the teachers; but she, too, is powerless except as she co-operates with the school authorities.

It matters not which side takes the initiative. The greatest danger to mutual work is ever the tendency to brag on the part of those who do things.

"The fool says,

This I did and that I wrought: the better-lessoned mind,
Knowing the play of things invisible,
And how the qualities do qualify;
Standeth aloof—even from his own acts."

However brought about, good will come of union. Happy are the children of that community where teachers talk of their problems in the woman's club, and where the club woman is sometimes heard in the teachers' meeting!

There is one vital problem of the present which educators will never solve without the aid of the good women of the community. It is the question of what shall constitute the social life of childhood and of early adolescence. The schools can no longer ignore this problem. They used to treat the child as if some day he were to occupy a solitary cell in some ascetic environment, or at least as if the home were the only institution that need take notice of his social instincts. But the true educator now realizes that his work must be done in full recognition of all that the child is and is to become. To him have come problems of the social relations of his pupils in their work, high-school fraternities, sports, parties, and the boy-and-girl question—all, as they arise individually, demanding instant settlement, wise or unwise.

It is these problems that the woman's club may help him solve. Woman has ever guided in social matters. The "eternal womanly" manifests itself most characteristically in the magnificent force of love which sacrifices itself hourly for others' comfort. It is the fine, unobtrusive power that dispels the vulgarity of small and selfish aims, and compels obedience to our best impulses toward others. This is the ideal society.

The training of children in these social virtues is pre-eminently woman's work. It is not true, however, that it is work she can do without preparation. Good breeding and native charm of personality and social tact add much to her power in this direction; but there is arrant nonsense in the supposition that woman does not need to study children, and that knowledge will not give her broader sympathies. The mother is commonly supposed to have an instinctive love of all children, but a moment's review of the source of this instinct shows that the love of the mother has been evolved for the protection of her offspring only. Every school-teacher has wondered at the selfish fierceness with which many a Christian mother guards her own children's interests regardless of the interests of other people's children. It is an exhibition of the mother-instinct, very like mother bluebird's savage pecking of the

bewildered young oriole who somehow got tangled up with her own azure babies. There is too much sentiment in regard to native instincts. They cannot be depended upon for twentieth-century altruism.

Nor is the mother intuitively endowed with all the necessary knowledge even of her own children's attitudes and needs. Pony Baker's mother, with the best of intentions, disgraced Pony by dressing him too well and calling him "Pony dear" before the other boys. She kept him on the verge of running away most of the time by her complete misunderstanding of his "big Injun" soul, with the vital element in it that found Jim Leonard fascinating and irresistible. Poor Jim! what would have become of him if Mrs. Baker had had a voice in deciding his fate?

No, the woman's club that would help the children of the community must lay a solid foundation of knowledge. The literature of child study should receive attention. Many unnoticed and uncomprehended phenomena of the child-world would be illuminated by the reading, among other studies, of Dr. Hall's *Adolescence*, Joseph Lee's *Playground Education*, and Lancaster and Stableton on the early adolescent period.

Book study should be supplemented by reminiscence and observation. This will give constant commentary on the text.

Teachers should be asked to present their observations before the club. Teachers of seventh and eighth grades, and high-school workers, can tell true stories of the social life of young boys and girls which it will be well for the woman's club to consider. Their stories can give a glimpse of the life of a class of young people, rarely known, or at least sympathetically known, to the best women of the community. There are few safeguards for this class of children who are just entering upon the period when interest in the other sex becomes suddenly dominant. The street is the place of social meeting, and intercourse is more or less coarse and degrading. The majority of these pupils leave school at this time. Then is the heart of the true teacher weighted with a heavy burden. The influence she has gained over their lives suddenly breaks, for she is too busy to follow them all into their outside life. When she can do this, she is deeply concerned for the little girl in the department store and the boy under new temptations.

There cannot fail to be a quick spot in the heart of the woman who listens to these tales, and help for the social life of these other children will be forthcoming.

Indeed, the value of this child study lies in its practical outcome. Problems relating to the social life of children at home, at school, and in the streets may well receive thoughtful consideration. That they will not be completely solved goes without saying. Finality is impossible; but, however disappointing the results, sympathy, the best tool for social work, will surely have been sharpened.

Some questions which may profitably be discussed are the following:

(1) How shall we promote democracy in the social training of children?

(2) The idle promenade on public streets. (3) The boy-and-girl problem. (4) The fraternity question. (5) The need of supervision of all public playgrounds and public functions. (6) The need of playgrounds. (7) Clubs for young people. (8) The social side of athletics. (9) Granted that there are to be visiting teams of high-school pupils for debates or athletic contests, how can ladies of the community make such visits contribute to the social culture of the pupils? (10) Parties, home and school—how should they be supervised? (11) Simplicity in commencement functions.

Each community will have its own local questions, and probably widely differing answers should be given the same question in different localities.

It has thus been suggested that a problem for women's clubs is the social life of childhood and early adolescence; that the problem be studied (1) thru the literature of child study; (2) thru reminiscence and observation of children; (3) thru conference with teachers; (4) thru discussion of practical questions.

There is no law against dreaming. Dream that all over the United States the women's clubs should unite with teachers to study this problem. Would it not go far toward securing a universal answer to that prayer of Robert Louis Stevenson's, which so beautifully expresses the ideal of human society—the prayer that “our loving kindness may make bright the house of our habitation”?

EDUCATION FROM THE GENETIC POINT OF VIEW

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The genetic conception of education is not new. The fundamental principle of genetic pedagogy—that of adaptation of education to the sequence of the stages of individual development—is at least as old as Comenius; but a point of view means nothing unless it enables one to see the facts as well as to dream dreams. The result of modern child study has been the insight that the only way to make this principle of adaptation vital is to find out just what is the actual condition of children at different stages of growth and development. My purpose this morning is to recount some of the recently discovered facts that have made the genetic point of view vital.

Fortunately, you are all familiar with the modern doctrines that education is a process; that the child is a different creature from the adult; that the child differs from the adolescent; that the child differs from the child at different stages of its development; that stages low and imperfect may be significant because preparatory to higher stages; that the child should be a child before he becomes a man; that the best guarantee of normal maturity is normal immaturity; that, as Fröebel put it, the full and complete development of each stage is necessary for the development of successive stages.

And, again, on the social side, that the child is not so much fitting himself for society, but that he now is a member of society; that the school represents society in embryo; that the teacher is primarily a member of this social group; that, as Professor Dewey puts it, the school life and the home life should be one and the same; and that the purpose of the school is to introduce to the fundamental, constructive, productive, social activities, and that here too everything must be adapted to the child's own social experience.

Such familiar doctrines are based upon the genetic interpretation of facts. There are some other truths with which perhaps you are not so familiar. First of all, certain physiological facts.

Besides the obvious facts of growth and development, which are of vital importance to education, there are certain more specific characteristics of the child's organism which are of practical significance. The child, for example, has a different circulatory system from the adult. The child's heart is relatively small, his arteries relatively large. During the period of development the heart grows very rapidly, and after adolescence it is relatively large, while the arteries are relatively small and narrow; or, more concretely, measurements have shown that during the period of growth the volume of the heart increases twelvefold, but the width of the aorta only threefold; or for 100 cm. of height in case of the child the heart volume is about 50 c.cm., while in the adult it is 150-90 c.cm. Thus during the school period there is a complete change of the circulatory type. This is a fact of great practical importance to be considered in all manual work and physical training, as well as the ordinary work and play of the child. Cardiac disturbance is quickly compensated for in the child's organism in a way that is impossible with the adult; hence short and rather violent activity is quite harmless for the child, altho prolonged activity and feats of endurance are dangerous.

Again, in the case of the child the constituents of the blood are different from those of the adult; especially is the protection against contagion less in case of the child. In the child the blood is less alkaline, and thus offers less resistance to micro-organisms; the germ-destroying or bacteriacidal power of the serum, according to Weill, is not so great, and the white corpuscles of the blood with bacteriacidal power are less in number. In case of the adult they are estimated at 70 in 100, but they are only 28 at birth, 40 at the end of the first year, 54 in the third, 64 from the eighth to the tenth. That is, the protective power of the blood is twice as great in case of the adult as in case of the young child. This difference, together with the child's inferior protection in other ways, makes contagious diseases especially dangerous in the kindergarten and early primary grades. This is not a mere matter of theoretical speculation; statistics show that over 90 per cent. of all deaths from such contagious diseases as measles, whooping-cough, and the like, occur before the age of ten; and an extensive study of measles in Munich shows that, while between the years of two and five, 5 per cent. of all cases proved fatal, between the ages of six and ten the fatal cases were only 0.4 per

cent.¹ In other words, if an epidemic of measles occurs in the kindergarten, the chances are that four children in one hundred cases will die; if the epidemic can be postponed until the primary school, the chances are that only four in a thousand will die.

Another specially important difference between the child and the adult is in the activity of the lymph. This gives a child added protection from certain contagious diseases, but, on the other hand, carries its own dangers with it. Experiments upon animals are instructive here. An artificial opening made into the thoracic duct of a young dog furnished lymph to the amount of between one-sixth and one-tenth of the body weight within one day, while from an adult dog lymph amounting to only one-tenth to one-sixteenth of the body weight was obtained. In some way the lymph apparatus in the young is more active than in the adult. Dr. Jacobi says:

This is why the condition of the lymph glands in the young is of such importance. Whenever there is any infection of the mucous membrane, the infecting poison is carried off to the next gland, where there is a stopping-place. That gland will become the seat of irritation or swelling. That is why . . . whenever there is only a slight diarrhea, no matter from what cause . . . the lymph bodies in the neighborhood will swell. Unless such a diarrhea is soon stopped, the irritation will continue; congestion, inflammation, swelling of the glands will ensue, and the structure of these neighboring glands will be changed.²

Other facts of practical significance are the different growth-rates of different organs at different periods, the immaturity of special organs demanding special care, the undeveloped eyes of young children, the danger to the naso-pharynx, ear, and mouth from hypertrophied tonsils, and the like, the undeveloped voice of the child, and the strain especially upon boys at the period of mutation.

On the physical side, then, the aim of education from the genetic point of view is to give a child the opportunity for growth and development, and to foster the acquisition of habits of healthful activity. Many other things are desirable, but a child's first business is to grow. He may have another opportunity for the acquisition of knowledge, but the demands of development cannot wait.

On the mental side the contribution of genetic psychology and physiology is perhaps equally great, altho it cannot be stated so concretely and definitely. It is true, as is popularly believed, that the child has less power of prolonged attention than the adult. Contrary to popular impression, he has also less power of memory. The fundamental difference is lack of experience. But of such differences I must not stop to speak.

I have recounted a few facts as I understand them. I should like to speak of the wider relations of these facts. Modern biological study has enormously enlarged the genetic conception. It is hardly fanciful from this wider point of view to consider that process of adjustment we call education as analogous

¹ See a paper by the writer on "The Hygiene of the Kindergarten," *Proceedings of the National Educational Association*, 1904, Kindergarten Department.

² See the *Teachers College Record*, March, 1905.

to the adaptation and mutation of species in plants found by De Vries, White, and others. And if De Vries is right in his conclusion that the production of new forms takes place only from time to time, that during the period of mutation new species are easily formed, that after this period is passed new forms cannot be produced, then there is a certain analogy between these periods of mutation and the nascent periods in the individual child. The period of growth and development in the individual or the special organ is the period of opportunity for education. Thus in a practical way biological studies are suggestive.

When one says that hygiene and sound pedagogy fear premature and unrelated developments, and that the best guarantee of normal maturity is normal immaturity, it means very little; but when one studies the developing nervous system of young animals, all this becomes very concrete and emphatic. I know of no more interesting illustration of this than the studies of the guinea pig, made by Miss Allen. The guinea pig at birth has all its senses, and well-developed muscles, and is psychically mature at the age of three or four days. The white rat, on the other hand, at birth is undeveloped, blind, deaf, naked, his nervous system unmedullated, his muscular system without control. He does not gain the power of vision for sixteen or seventeen days, of hearing for perhaps thirteen days, nor become psychically mature for some twenty-four to twenty-seven days.

The result of the precocious development of the guinea pig as compared with the slower development of the white rat appears in the education of the two animals. As Miss Allen puts it:

When the guinea pig has forced his way thru a labyrinth, he has reached the end of his psychical powers. He cannot pull a latch or push a bolt. He will not depress an inclined plane, chew a string, nor stamp his foot. . . . The experience of the white rat extends to strange combinations of wires and strings, and all the delightful surprises revealed by secret doors; but when the guinea pig has turned the proper number of corners, his dinner must be waiting for him or he does not get it. The white rat at three days is just learning to crawl. He has never seen an object and remembers nothing. The guinea pig at that age has triumphantly recalled a complex path at the end of which he sits eating his well-deserved carrot. At twenty-three days the rat is lifting latches neatly, and forming what Hobhouse calls practical judgments as to the value of an inclined plane in a situation at the center of which is his food, a desired thing, an end. The guinea pig is still wearing out the floor of the same labyrinth.

And, again, to quote Miss Allen:

The contrasting features in the two animals are their nervous systems. In the one, a mature nervous system is accompanied by psychical maturity; in the other, neural immaturity permits great psychical development.

Everywhere today teachers and students are studying children, some in the laboratory with carefully controlled conditions, some by the questionnaire method—*la méthode démocratique*, as the French call it; others by mere observation and reminiscence, often by methods crude and unreliable. What is the result of all this? What does it all amount to? Some of this work has yielded practical results. Some of it has illustrated the genetic point

of view. All, I believe, has been valuable. For a single illustration, in the city where I live the students of the normal school observe children as they have opportunity, and record isolated facts, sometimes significant, more often the trivial and banal. Tens of thousands of such reports are in the archives of the school. Each year adds something to this store. Is that all? By no means. The students in this work acquire the genetic point of view, the right attitude toward children; and Principal Russell says that reports from the graduates are to the effect that the bad boys and the defective become objects of special interest and study. On the other hand, the experimental method is justified by results. If the hack objection be raised that it cannot touch the practical problem of education, the answer is, it has already done so. And, in general, the great value of the experimental method is that it brings one to close quarters with the facts.

The study of children is in some important respects revolutionizing pedagogy. Attention is shifting from methods of teaching to methods of learning. The work has already passed from the stage of mere observation and crude speculation to the stage of analysis and experimentation. Concrete problems of school work and of economic and efficient methods of study are being investigated by careful methods in the laboratory. Mayer has studied the difference between the methods and results of school work done in a group of children and similar work done by children alone, finding that usually the group work is superior. Schmidt has studied the home work of children as compared with the school work, and found, on the one hand, that in the more mechanical work pupils do better in the school because of the stimulation from other pupils, while in original essays in the mother-tongue and the like they do better in the isolation of the home. Meumann has studied the most economical and efficient methods of learning by heart. A single concrete example must suffice. Suppose the school task be to learn a stanza of poetry. Children, as well as most adults, adopt the method of learning by parts—first a few words or a line, with many repetitions, and then another phrase or line. Is this a good method? Which is better—to learn the stanza as a whole, or to learn it by parts? By which method will it be learned in less time, with fewer repetitions, be remembered more permanently and more accurately? Investigations upon many children, extending thru several years, show clearly that, as a rule, with them as with adults, the method of learning as a whole is decidedly better. Somewhat less time is required by this method, a very much smaller number of repetitions suffices, and, most important of all, confusion of association and possibility of error are avoided, while correct and healthful habits of association and of study are developed.

If more were needed to show the importance of the genetic point of view, it would be necessary only to note the errors that result from ignoring it. I have time for but a single illustration. In medicine and hygiene there is always danger of mistaking defects incident to development, néuroses of

development, for symptoms of degeneration. The following case, reported to me by a physician, is an example: An hysterical boy thirteen or fourteen years of age was sent to a hospital. He showed symptoms of serious heart trouble; and the physician to whom he was intrusted, evidently having had more experience with the aged than with children, prescribed one one-hundredth of a grain of nitro-glycerin three times a day—a dose for an adult *in extremis*. The probability is that the boy's heart will be injured for life, while, with care and a judicious use of iron and other tonics, he might have outgrown the trouble. The blunder was so atrocious that it seems hardly possible that a physician could be guilty of it. Apparently it was a clear case of error from lack of the genetic point of view.

If child study had done no more than to give teachers the genetic point of view, all the labor expended would be well repaid; for they are prone to make similar mistakes. The faults and even the wickedness of boys and girls, mere psychoses of development, are often taken too seriously by parents and teachers. If they do not adopt a nitro-glycerin method of discipline, they are likely to desire a guinea pig form of pre-maturity.

It is difficult to describe a point of view, but the point of view is everything. It determines what we see and what we are unable to see. In every profession, especially perhaps in the teacher's calling, the development of the professional point of view soon inevitably makes it impossible for one to see things as they really are. The attainment of the genetic point of view would save teachers from much of this scholastic blindness. It would save them from worry over defects and imperfections, and give the insight that education is a process, and that normal development implies imperfection and the gradual approximation to higher stages and higher ideals. In a word, it would revolutionize the teacher's calling, and the teacher's task would become a part of the great world-process of evolution in human life and human society. Again, it would save the schools from what Professor James calls "the modern textbook Moloch, in whose belly the souls of living children are turned to ashes," and from the mechanism of artificiality and traditional examination, classification, and grading. It would emancipate them from the idolatry of methods. It would save them from overstimulation and overpressure, and from that overtraining which means arrest of development. In a word, it would make the aim of the modern school development, health, individualization, and the opportunity for spontaneous adjustment to nature and society.

DISCUSSION

A. CASWELL ELLIS, associate professor of education, University of Texas, Austin, Tex.—The study of children, and of education from the genetic point of view, from the point of view of origins and growth-processes, has been more than justified if nothing further is ever done than to furnish, as Dr. Burnham shows that it has furnished, the concrete facts to substantiate the notions loosely held for centuries by leading educators that the child is different from the adult, and that education is primarily a process of development

by stages from within, and only incidentally a matter of acquiring skill and information fitted for use in the social environment. The short-sighted view is all too common still in America and elsewhere, that education is primarily a matter of preparing to meet certain social and religious demands, and only incidentally a process of development from within. That the same subject-matter and methods which best serve the one of these ends must, in the nature of things, in a rationally organized universe, serve best also the other end, cannot be doubted. While, then, to an infinite wisdom these two ends would surely be plainly one, such is, and long will be, far from the case to the limited human intelligence of school superintendents, college professors, and committees on courses of study. Widely different courses and methods of study are as yet employed by him who aims primarily at development from within outward, and by him who strives primarily to meet the demands of society. The genetic view-point has all along made for liberty and for growth, as opposed to fixation and encrustation from without, which is the inevitable, tho unconscious, tendency of the other point of view.

The writer is greatly grieved and disappointed that he can only sit tamely by and agree with the paper he is to discuss, but there are actually no differences of opinion sufficient to justify taking up the time of this audience. He will therefore discuss this paper further by not discussing it. Let me use these few minutes to emphasize what seem to me the two most striking points of view, and new conceptions, which this genetic study has brought into education.

The first of these is the recognition of the biological or super-mathematical relation between successive phases of growth. We talk much now of the process of development, but to most of us it still means little more than a process of addition. An early childish activity is thought of as preparing the way for, and helping to develop, a later adult activity, only when the early activity involves the acquisition of certain simple forms of skill or knowledge, or bodily or mental power, which are also elements in the later adult activity. Now, biology shows that there are relations between successive stages of development far subtler and more indirect than this. In human embryology we see the young pass into low animal forms which it must later give up or radically transform; yet the perfection of the different forms in the lower stages gives the essential force for the development of the later higher forms. In the metamorphoses of lower animals we see the same fact. The crawling and feeding of the caterpillar or grub are activities very far removed from any apparent connection with what the butterfly or beetle will later do, and the powers developed are very different from what the butterfly and beetle will need; yet the future powers of these butterflies and beetles are dependent almost wholly upon the earlier caterpillar and grub activities. Genetic study now is asking what are the subtle developmental relations between the apparently opposing phases of the child's mental development. What relation is there between the development of the early superstitious tendencies in religion and the growth of later spiritual conceptions; what relation between early anthropomorphism and the later cold-blooded scientific view of nature; between childish selfishness and later ambition and self-respect; and so on. Some good work has been done here, and much more is yet to be done. This genetic view of the individual child's life must of course largely determine methods, and, in connection with one's aim or philosophy of education, must determine the subject-matter.

The second far-reaching conception coming from the genetic standpoint is one concerning this ultimate aim of education itself. Prior to this evolutionary view of education, the ideal aimed at was always something definite, fixed, unchanging. Plato's sagedom and the early Christian's heaven were final fixed states. Aristotle, in his doctrine that happiness, which was for him the end of education, is an activity and not a state, glimpsed a new idea, which biology has since made clearer. Hegel saw it at times thru a glass darkly, but only in this light of recent study from the biological standpoint has education been recognized as a never-ending process of evolution, working out unconsciously in the race to ends which as yet no human can possibly conceive. This view of the end of education

will soon cast down such golden calves as man-made morality and man-made social duties, which have been so long worshiped as something alive and ultimate. Instead of spending time in fashioning these dead idols, educators will train their ears to listen for the still, small voice of nature within, and, not attempting rigidly to predetermine the goal, will make education aim more to maintain and promote that plasticity in the organism which is the basis of variation and of evolution.

The limit of time forbids any exposition of the concrete and far-reaching changes which this conception will surely bring in education. Suffice it to say, in summary, that the genetic view-point of the individual will gradually make the individual's growth-processes to be the dominant factor in the determination of method; and the genetic view of the race, as a developing race, will make the effort to secure plasticity and racial growth determine all ultimate questions of both method and subject-matter in education.

RELATION OF THE CHILD'S DEVELOPMENT TO CONTROL OF HIM

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To some of you I fear that it will seem premature to discuss the relation of the child's development to the control of him while the problem of development itself is by no means settled. There are, however, certain periods which are now generally accepted as characteristic of children, and I shall confine myself to these, trying to deal with them from the side of motive and action rather than from that of thought or intellectual interests alone, as has been customary.

I wish also to preface my paper by the statement that I am presenting a working hypothesis rather than a proved theory. My own observation, and that of various teachers with whom I have talked, agree with the suggestions given here, but I do not know that they have been carried out on a large scale anywhere. I would therefore invite criticism and question.

In the test of life the highest mark is always given to the person who renders the most efficient social service. Never yet has a man entered the hall of wealth or of fame who has developed only himself. Selfish men have, indeed, become rich or famous, but it was because they were the involuntary and unconscious exponents of their time, who satisfied some social need while serving their own ambition.

What we seek in education primarily is, therefore, to produce an efficient social individual; that is, a person who finds his own truest growth in doing some valuable work for society. We believe in training the intellect only because we believe, with Socrates, that knowledge is virtue. If our knowledge is not virtue, the sooner we leave it or that portion of it out of our schools, the better off will be the rising generation. The new psychology has demonstrated too clearly the relation between thought and action for us to accept the distinction between studies for training and studies for practical use as anything but a relative and shifting one. If a so-called practical study does

not train the mind, it must be badly taught and fail of its practical purpose. Conversely, if a culture study is not somehow put to practical use, it cannot arouse clear and vivid images; that is, it cannot train the mind well. What we need is to recognize that efficient doing is both the test of the previous thinking and the condition of future clear thinking, and that therefore an unpractical or inefficient person is not truly educated, tho he have degrees from all the universities in the land, and tho his information be like the sands of the sea in quantity.

We take, then, an efficient social individual for our end, and when any problem of school discipline arises, the first question, and the only one of any importance, is: "What course of treatment will make this child more self-controlled and social in his ends?"

Such a question can, of course, only be answered in detail when one knows the individual child and the conditions in which he is placed, but it can also be answered in general terms if we understand the principles of growth that the race as a whole follows. Let us trace this development briefly.

During babyhood a child's energies are expended for the most part in getting control of his body. His first movements are impulsive and instinctive, but thru accidental combinations which bring pleasure or pain, the feeling of certain movements becomes associated with certain objects or ends, the traces of these are left upon the growing brain, and in a short time a desire or need calls out the movements necessary to gratify it. This process is greatly assisted by imitation, and the education of this period consists almost entirely in providing healthful and beautiful surroundings, and in leaving a child free to do as he wills.

After a child has acquired speech, education in a truer and wider sense begins. His growth now falls into at least four periods: first, from the acquisition of speech and walking to the beginning of the second dentition; second, from the second dentition to the rapid growth of connective brain fibers that occurs usually at about nine years; third, from this age to the beginning of adolescence; and fourth, adolescence itself. The period of adolescence may also be subdivided, as we shall see later.

During the first or kindergarten period a child's interests are still especially concerned with the use of his muscles and sense-organs. It is the period of sense plays and of imitation of sounds, movements, and all the activities that are going on about him. Thru such imitation a child becomes a participator in social activities. His crude reproductions mean that he is to some extent having the same thoughts and feelings as does the one imitated, and can therefore understand him and be understood by him.

This social training is, however, an unconscious training. So far as the child's own thought is concerned, he is only doing what he wants to do. He knows nothing, and cares less, about its social value. Still further, while he does care somewhat for the good opinion of others, he cares less for it than at any succeeding period, and he is more content to play alone than later.

The plays with other children in which he delights most are those in which all of the children do the same thing. His imitations are closer copies than later, and his invention is less free.

That is, to sum it up, in this period the content of a child's life comes to him entirely thru imitation and is social; but he is unconscious of his solidarity with the human race, and feels and asserts his own individuality without regard to others.

We have little scientific information about the characteristics of the next period, but such as we have seems to indicate that at this time a child becomes more original and inventive than before, and also more sensitive to public opinion. Instead of merely imitating, he uses the activities that go on about him as hints for something new to do. He is less satisfied with merely making movements of one sort or another, and is more desirous of carrying out some purpose of his own and of obtaining the good opinions of his companions. Whereas in the last period the emphasis was on the unconscious social content and the conscious self-assertiveness, in this one it tends more to conscious recognition of social relations and to greater originality.

From about the ninth year to the beginning of puberty there is a period of balance in the life of the little child. Many tendencies to ancestral modes of life crop out at this time. There is usually a craze for tree-climbing, for cave-digging, for tenting, for running away—the modern form of migrating. The love of animals rises to its maximum. The games played most are the traditional ones. There is a more definite entrance into the race inheritance than before.

At the same time, a child at this age is modern history as well as ancient. He does not care to live after the ancestral fashion all of the time. He likes best of all to mingle the old with the new, gratifying his vague instincts in ways of his own invention. His instincts both as an individual and as a socius find expression in reproducing primitive social occupations which have modern counterparts. We should not forget that the importance of an instinct never lies in the fact that it is a survival of some earlier mode of life, but only in its possible present utility. So a child may have tendencies to an infinite number of acts which his ancestors once performed, but only those are of significance educationally that have not only a past but a future, that will be of benefit to the race in the ages to come.

Finally in adolescence, the period from twelve or thirteen years to the completion of bodily growth at about the age of twenty-five, the child again passes thru three phases which correspond roughly to those already described.

First, with the beginning of puberty, is a period of self-assertiveness, when the boy or girl is likely to feel cut off from everyone else. He is not only divided against himself but is at war with others. He is overwhelmed by a strange self that he feels within him, a self that has no love for the childish occupations so dear to him but yesterday, and that finds the boundaries to the kingdom of manhood securely guarded by adult carelessness of his new claims to citizenship.

In retaliation for this indifference he is likely to show a great contempt for adult wishes or commands. He is also more or less at odds with his companions, and he has an overwhelming contempt for girls.

But in a short time all this changes. Instead of being regardless of the opinion of others, his only desire now is to stand well with his fellows. He becomes a slave to the customs of his boy and girl friends. Nothing cuts him so deeply as to be considered by them an odd fish. To escape this condemnation, he will brave adult displeasure to almost any point.

Finally, with later adolescence, I should say at about the junior year in college, the youth consciously begins to balance his individual desires against social claims, and various social claims against each other. He now seeks an adjustment between himself and society. He is entering upon maturity.

We may summarize the course of development thus: In the kindergarten period a child feels his own individuality most strongly, but is, nevertheless, entirely dependent upon his surroundings for his ideas. Therefore practically the only way in which he can act is by imitation of what he sees. He feels himself to be individual while he is in truth only social.

But the inevitable imitation results, first, in sympathy between himself and those whom he imitates, and, secondly, in a stock of ideas and acts which later he combines in new ways. He thus becomes more consciously dependent upon others while he is also becoming more original and individual.

Then, with the emphasis upon ancestral modes of life, there is an unconscious identification of self with the race. The child desires for himself the same thing that the race has found necessary in its development. Finally, in adolescence, there is a repetition on a larger and more conscious scale of these three stages, the final attempt at reconciliation marking the attainment of maturity. It would also be interesting to ascertain whether the adult passes thru corresponding stages.

Now, the question which especially interests us as teachers is how we shall treat a child who is in some one of these stages of development so as to lead him without friction to the next and make him finally into an efficient social individual. Our question is, what course of treatment in each period of development will make a child most social in his ends and most self-controlled and efficient in carrying them out?

In the kindergarten period, when a child does not recognize his solidarity, tho his mental content is exclusively social, when he plays happily alone but plays chiefly imitative plays, shall we follow his lead or shall we endeavor to cultivate him into sociability? Shall we have socialism in the nursery or private property with all the rights that it implies? When we can have but one thing of a kind, shall it belong to one child, and shall he use it selfishly if he so desires? How far are we to check the selfish tendencies that such little children show?

In the first place, the problem of management will be greatly simplified

at all stages if children live among adults who habitually show consideration for each other. Among such persons the use of private property follows the greater need or pleasure, whether it be that of the owner or not. If little children see such a course of action followed, their imitativeness will usually lead to their adoption of it in keeping or lending their own belongings. Otherwise, no amount of talking will have much effect.

But surely it is a mistake not to allow a child to have the final control over his own things, even if he is selfish in their use. A child who is required to give or to share with others when he does not want to do so, becomes so much the more aggressive when left to himself, and I believe is less social later on, when he would naturally share with others. If a little child is somewhat selfish, rather than force him to the appearance of unselfishness, I would leave him alone, to the influence of good surroundings, until he enters the next period. The point which I wish to make here, of course, is that merely requiring a child to do certain acts does not lead to his adopting the act as his own. His sympathies are relatively undeveloped at this time, and they grow more normally by imitation than by compulsion.

On the other hand, the beauties of unselfishness are far more likely to be noticed during the period of the second dentition, when children are more susceptible to public opinion than before. Teachers who have children between the ages of six and nine years, give very different reports as to the ease in controlling them. Some say that they are more difficult to manage than kindergarten children, others that they are less. But all with whom I have talked agree that they care more for the good opinion of others, especially of other children, than before. Does not this, perhaps, give the reason why they are sometimes harder, and sometimes easier, to control than before? If we are able to guide the public opinion of the school and to establish an *esprit de corps* harmonious with the end that we have in view, we control them easily, but if we try to impose an arbitrary and autocratic government, we meet with more or less open rebellion, especially if we shame them before their fellows.

On account of this social spirit, some form of self-government can be successfully used at this age, the teacher, of course, being a member of the government. It matters little, so far as the educational value is concerned, whether the government copies in form that of the city or nation, whether it be informal, or even whether the teacher rules nominally. The essential thing in any case is that the law of the school and the home shall be considered their law by the children, not an inexplicable one coming from outside and maintained in the last resort by compulsion. Only when it is looked on as their own law, do they feel the obligation to control themselves in order to obey it. Only so will they learn the self-government necessary in the members of a democracy.

But even when the children as a whole do make and obey the laws, there will be a few who disobey constantly. Most of the children will lapse occa-

sionally, but repent promptly. The habitual offender, however, is harder to deal with.

The most effectual check in such cases is a public opinion strong enough to apply the punishment without the intervention of the teacher. In other cases, the teacher must serve as the officer to carry out the punishment imposed by the school, and if public sentiment is weak and the offense is flagrant, she may even find it necessary to act both as judge and executioner. In the last case, however, it seems to me that it is better to allow some particular cases of wrong-doing to go unpunished than for the teacher to punish in opposition to the general sentiment of the school. The most important thing to do in such a case is to create a better public opinion.

I should perhaps say at this point that no government by the children is likely to impose the requirements of immobility, or even of silence, that are so dear to some of us. The schoolroom will not be a place where each child sits quietly and cons the printed page. Why should it be?

In the period of balance between nine and twelve years, the problem of discipline usually reduces itself to allowing children plenty of opportunity to indulge their tendencies toward primitive life under favorable modern conditions. I do not know that anyone has ever tried the experiment of seeing how children would take to primitive forms of government at this time. Why would it not be worth trying?

Under the usual conditions, self-government will become more firmly established at this time, and certain typical heroes and heroines will be imitated. Bravery is the paramount virtue—not moral courage, but disregard of physical pain—and the adventurous hero is the ideal.

At the entrance to adolescence, when the youth asserts his independence of adults and, tho to a less degree, of his companions, self-government undergoes its greatest strain. Both physically and mentally the youth is going thru the greatest readjustment of his life, and it is not surprising that he resents our disregard of his new view-point. He will never be easy to deal with either singly or *en masse*, because the physical conditions themselves lead to irritability, but it seems to me that the difficulties in dealing with him can be minimized to some extent.

In the first place, proper training in self-control before this period should have given him habits that will go far to carry him thru this time of transition. In the second place, we ought to give him the recognition and responsibility that he so craves. I mean that we should give it to him in reality, not only for as long as he does what we would do.

Let him manage some things even if he does it incorrectly. He will never see the value of advice until he has found out his own weakness. Let him learn by actual experience what his own limitations are, for thus he will learn persistence and self-control as well as his need of others.

In the following period, when he becomes overwhelmingly social, he enters into the age of hero worship and of ideals. At no other time is the

influence of good books and of friendships so strong. Probably at no other time can a teacher exert so strong and lasting an influence.

Control of the school should now be in the hands of the students, and the teacher's influence should be used even more than before to cultivate close personal friendships between herself and her pupils and between pupils. Of course co-operation should exist in every grade, from the kindergarten up, but surely it reaches its maximum only at this time, in the years of the later high-school, and early college, course. Do not we teachers make a great mistake in leaving the young people of this period to form all sorts of funny and foolish, if not actually harmful, societies by themselves? Surely if we co-operated with them, we could make the home, the school, and the town far better by using this passion for organization to effect some valuable ends. I do not mean that we should manage their societies for them, but that in various indirect ways their ideals of social relations should be made valuable and worthy, as well as interesting, to them. These years of education should be a course in training to conscious social co-operation, and in the establishing of high personal and civic ideals.

With the choice of such ideals, the youth finally enters upon the period of maturity, in which he must constantly set against each other the personal desire and the social need, harmonizing the two when possible and, when not, choosing between them. He has now, as a rule, attained to moral and legal responsibility, and the remainder of his education is that furnished by life. Whether he prefers the wide social service or the narrow personal ambition depends upon his previous training.

Does he amass wealth by wrecking the lives of others? Where then did he form the habit of disregarding others? Does he buy and sell the law? Where did he acquire a contempt of law? Are not our schools responsible to a large degree—equally with our homes—for our present economic and political evils? How can a democracy—a government of the people and for the people—ever succeed if our youth are trained in home and at school to autocratic or monarchical rule? The very foundation of our republic is the training of our children to self-control and to social efficiency and service. Are we giving such training?

DISCUSSION

EDWIN GRANT DEXTER, director, School of Education, The University of Illinois, Urbana, Ill.—The line of thought that I wish to present for your consideration is one borrowed from the biologist. He has accounted for the tremendous process of racial adjustment to a world-environment—racial education, if we adopt a definition of education that is becoming more and more widely accepted, thru reliance upon what is generally known as the "Darwinian Tripod of Evolution." It asserts, first, that more organic forms are brought into existence than can, in the nature of things, mature; second, that no two of these forms are exactly alike; and third, that the ones best fitted to their environment survive. These three laws, variously interpreted, seem to account for the process of

racial adjustment and control as it expresses itself in organic evolution. But this entire process is writ small in the lifetime of the single human individual. What our entire ancestry has accomplished in the progress of ages must, in a sense, be done over again by each human being. The education of the individual is but a synopsis of the education of the race. The evolutionary tripod restated in terms of the latter process is as follows.

First, more impulses and interests are born to the child than can be developed with profit; second, these impulses and interests vary with every child; third, only those prophetic of the greatest usefulness in the particular environment in which life is to be spent should be developed: the rest should be suppressed. The general thesis expressed by this application of scientific laws to the profession of the teacher might be stated as of education thru survivals. In terms of it, our educational systems are but features of the environment, controlled for the purpose of making certain that the useful impulses and interests of every child will be discovered and developed to their maximum of efficiency, the latter to be determined by the aim of education for the particular time and place.

By the term impulse is meant inherent tendencies to act; by interests, inherent tendencies to like or to dislike. The human being, in his growth from infancy to maturity, expresses a continuous sequence of impulses and interests, the appearance of which is determined by the laws of nature. Thru a proper selection of the former he gains control of the parts of the body and learns to do things. It seems quite probable that no activity which is essential to the perpetuation and preservation of the race comes in any other way. Let us see if this claim is unreasonable for the motor activities of walking and talking. In the case of the former, we should have to suppose that at an age somewhere between eight and sixteen months, and usually not far from a year, brain centers ripen—to use a figure of speech—which set up a series of motions of the legs, varied and almost innumerable; really nothing more than instinctive movements, differing not at all fundamentally from the spasmodic prenatal squirmings, except that some of them enabled the child to do things which he wanted to do, that “want to do” being determined by the laws of growth, and being, in the present case, what we call walking. Not that the child has any conception of walking, and so consciously determines his acts accordingly, but that each motion leading up to the act gives him pleasure in itself, because of enlarging his field of activity. Probably no single act in the series is due to conscious imitation, nor even to that unconscious imitation which we call suggestion, but each act is in itself an impulse, pure and simple, made without any reference to aim or end. Yet of the hundreds of impulsive movements, each different from the other qualitatively and quantitatively, some give no pleasure because they make his world no larger; these are suppressed, are the unfit, which nature eliminates. Others give pleasure by putting things within his reach which otherwise were beyond the limits of the little tangible world which he is building; such are the “fittest,” which survive. The only presupposition to this hypothesis of motor functioning is that of many movements natural to the child, and no one who has studied carefully thru the period just preceding that of learning to walk would, I think, wish to question the validity of such a presupposition. We certainly underestimate the possibilities of the little fellow if he has not kicked and squirmed in as many and varied contortions as are possible to his anatomy, and misjudge him if all the movements of walking are not among the myriads of other motions with which they are smothered. Creeping would be explained in the same way, and, coming at the time it does, gives a most admirable corroboration of the culture-epoch theory.

But how about talking? Our hypothesis would presuppose that among the babblings, and the gurglings, and the mumbblings, of the months and weeks just preceding the talking period were all the elements of articulate speech, mixed up with hundreds of sounds from which might just as well have been selected the elements of Chinese, Choctaw, and, for aught I know, Chimpanzee. Do you question the truth of that, fathers and mothers?

Among the interests common to the child—those likes which do not express themselves in motion—the earliest seems to me to be that for *rhythm*. What child does not like the mother's crooning lullaby, or the Mother Goose rhymes, or simple poetry?

An interest in flights of the *imagination* comes next and the fairy-tale and the story of myth are demanded. Next comes the imagination tied down to things of earth, and stories of *adventure* must be the medium for selection and development. But even this interest, especially with the girls, is soon eclipsed and subdued by an absorption in the things of *romance*. *Religion* and *humor* come in their turn as more or less controlling interests and with them the gamut is perhaps run.

But what, you ask, has the teacher to do with all this? Much, tho not the direction of the whole process. The education of the child covers two more or less distinct periods; one in which the environmental conditions are unmodified for educational purposes, and a second in which they are modified for particular educational ends. The former comprises roughly the first six years of childhood. During it the child probably undergoes more changes than during the other, but they are made in response to the conditions of the home which are established for quite other purposes. For this early period education is but a by-product; not so, however, for the later period. The school is an artificial phase of this environment, established solely for the purpose of selecting and perpetuating the favorable impulses and interests of the child.

If we are responsible for such an environment, and would not be recreant to a trust, we must recognize these facts: first, that the impulses and interests of the child express themselves in a sequence determined by nature and entirely beyond our control; second, that they are but temporary and must be seized upon at the opportune time; and third, that a sufficiently broad and varied environment be provided to make certain that none escapes detection. With these three fundamentals of education provided, nature will take care of the rest.

THE SCHOOL AND THE CHILD'S PHYSICAL DEVELOPMENT

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"You teachers *kill* a lot of girls every year. You would kill a lot of boys too, but you can't." Such, if correctly reported, was the pointed charge made by an eminent common-sense thinker on educational questions against a representative body of teachers. In remedying the errors to be pointed out in this article, and in the recommendations made, I believe that nothing is required of the teacher which common-sense does not dictate to be of the first importance to the child. So much progress has been made in years past in lighting, heating, ventilating, and seating schools and so much emphasis has been laid on these problems that these former scapegoats of teachers' mistakes no longer serve their ancient useful purpose. Consequently, I shall take for granted the essential features of equipment such as a building with rooms lighted from the left, or left and rear (in which case the architect has left the teacher to protect his own eyes as best he can), or from the left and right, with curtains to cut off direct sunlight, with no desks darkened by wide piers or pillars, with forced ventilation, and indirect and adequate heating, with a sanitary cellar and closets, with baths if possible, with hygienic

school fountains, and paper or cloth individual towels. I assume also an efficient janitor and suitable school furniture adjustable, of various sizes, and put down (if put down at all) with proper reference to the minus distance. There is still, as a matter of fact, even in splendidly equipped schools at best only a slight diminution in the growing number of defective eyes, curved spines, cases of contagious diseases, and nervous disorder. It is still more patent to the casual observer than to either teachers or parents that thru the school year there is a steady decrease in the number (not to say elimination) of the strong and healthy-looking children. It is no wonder that observing parents come to the teacher, or his directors, and ask why it is that their children after coming into school in September in the best of health have now lost their red cheeks and their zest for both food and study.

There is a form of infantile paralysis called embolism. It is due to a tiny growth which develops in the heart, becomes dislodged, and floats thru the arterial system until it reaches channels in the brain too small for its passage. This clogs the system beyond and so cuts off all nutriment from some portions of the brain, and as a result, the cells have no way of renewing their energy, and the portion of the body controlled by that portion of the brain becomes paralyzed. If one part of the brain be affected, the arm or leg, or perhaps both and other parts of the body are rendered useless. What this dread disease does in such a complete way, man often accomplishes by his short-sightedness. Failure to provide nutritious food, sufficient sleep, adequate clothing, pure air, and frequent bathing are all methods by which the thoughtless parent impoverishes the blood supply, and hence cuts off or diminishes, not so seriously as an embolism, but none the less surely, the energy which is necessary for the functioning of the cells.

The teacher, unfortunately, has his way of accomplishing similar results. Some of the most persistent, and least recognized, of these methods it is my purpose to present to your consideration, rather as emphasis is needed than in any hope of covering the ground or exhausting the topic.

It would naturally be supposed that given a good building, teachers would co-operate with the architect in bringing it to the highest efficiency possible. They usually do, as far as heating is concerned; but many do not know even the positions of the curtains necessary at various times of the day to co-operate with the architect's plan for light, while comparatively few can explain the general plan of the system of ventilation used in their buildings. Yet all this is necessary to adapt oneself properly to the changing conditions of cloud and sun and time of day in the lighting, or changes in wind and temperature affecting ventilation. Frequently, a whole system of heating and ventilating is deranged by an open door or window, and good left light is curtailed off for inferior rear light not to mention violations of the lighting scheme such as turning classes so as to face the light or so that the poorest possible light is given to the children's books.

Similarly, in rooms where the furniture is good on the whole, anyone

just glancing in while writing or figuring is being done will find in nine out of ten rooms from 20 to 90 per cent. of the children taking positions that are certain to produce in time spinal curvature, and are more than likely to do more harm to the eyes than was ever traceable to the old-fashioned, poorly lighted building. This is in most cases due to carelessness and inefficiency on the part of the teacher.

Weakness in this particular is sometimes accompanied by no rational attempt to adjust the desks and seats to the children. Where there is no adjustable furniture, frequently no effort is made to put the large children in the largest seats rather than according to some other principle, such as class divisions, alternate girls and boys, etc. If, as Eulenberg's figures would indicate, 90 per cent. of the cases of spinal curvature are developed during attendance at school, it is important that teachers realize the weakness and disablement which is likely to follow. A teacher should understand his building and its furniture perfectly, and be able to adapt himself to varying conditions, report defects, and otherwise co-operate with the architect. More than that, he should secure the children from harm as they read, and even in standing or walking (particularly if they are well laden with books) they must be watched, and taught to avoid postures likely to result in harm to them if made habitual.

But granted co-operation on the part of the teacher, still the fact remains that children are exposed to serious risk. Most grown people avoid three-hour sessions, whether of church or state, and, in spite of the attractiveness of a fine theatrical performance, would welcome an intermission. And no one wishes to shut himself up to that sort of thing for two sessions a day. Yet we ask, nay, require, of children that very thing without the attractiveness or excitement of the theater to sugar-coat the treatment. Where to this confinement is added the refusal of access to the closets, it becomes absolutely criminal. Of course, habit comes to the rescue of the child and makes it possible for him to endure confinement and live, but only at the expense of other powers. If by means of recesses, educative plays and games, out-of-door observation, and other devices for breaking up the confinement of school-life, the teacher reduced it to the minimum, then a long step in advance has been taken.

There is one advantage in a three-hour-and-a-half school day for primary children, except in densely populated sections. These children are then assured of their out-of-door play, not only in summer when they will get it anyway, but in winter when a five-hour school day ordinarily leaves the child no daylight for his play. Of course, it could be arranged much better, theoretically, by having an hour and a half of the second period assigned to free play out of doors, but as a matter of fact, I have yet to see the school course of study which does provide this amount, or anything like it, whereas there are a few isolated instances of the shorter sessions.

I am also desirous of endorsing the plan inaugurated by Dr. Balliet in

the Springfield schools, which provides for a recess of a week every two months during the school year. The desirability for the *average* child of a week's adjournment the last week of February and of April seems to me to need no argument, even if that time is subtracted from the long vacation.

The child comes to school with a tremendous desire to understand the things about him, his pets, birds and insects, flowers, trees and vegetables, the rocks, water, houses, stores, etc.; almost his whole mental make-up is a conglomeration of instincts calling him to continuous action over a most extended range. His first lesson in most schools is to inhibit every tendency to action until his teacher tells him what to do. He is to wait every thing "until the bell rings." These instincts were nature's chief provision for the education and healthful employment of children. We take them away, and too often supplant them with the blind efforts of the lowest bidder for the primary position. The children of this country are saved only by the fact that there are conscientious and noble hearts among these same low bidders. Thanks to theoretical pedagogy, the instincts of the child are now receiving more nearly their due recognition, and that necessitates the reduction of all repressive measures to the minimum. The method of repression is now to be replaced by the method of substitution. If a child reacts along the lines of an instinct which cannot be harmonized with the general activity of the room, then another must be evoked as a substitute. In low forms of life to react is to live.

Prominent among games used to break up the confinement, and reduce the repression, of school life are tag, letter carrying, London Bridge, Mr. Robin, following the leader, hiding (several games), skipping, cat-and-mouse, ponies, bean-bag, rocking horse, ringing the bell, hop-toad, Yankee-doodle, etc. Action has been directed thru manual work (1) by cutting (horseshoes, flags, trolleys, hens, tables, pinwheels, wigwams, rabbits, trees, triangles and squares, etc.); (2) by folding (making houses, oblong boxes, triangular boxes, boats, soldier-caps, picture frames, handkerchiefs, etc.). Teachers have also made use of dramatizations with the same object in view.¹ It seems hardly necessary to add that the extension of this free constructive work in upper grades is most desirable.

The course of study in general, but particularly a lack of business-like method in carrying out its provisions, frequently causes confusion which is both mentally and physically disastrous to the child. The failure of teachers to distinguish between the habits they wish to form and the ideas they wish to present is the most common of all mistakes in method. The jumbling of all the arithmetical processes into the first year of number, the telling of words in primary reading, and most mistakes in discipline are due to the failure to recognize the fact that the idea is to be fixed in action, that the habit is the matter of prime importance in each case. On the other hand, in geography and history, children still learn by heart and have drilled into them page after

¹ Teachers have found quite helpful Clara Sawyer Reid's *Games and Songs*, published by Hammett.

page of textbooks with only the barest facts; whereas here it is last of all the isolated habit of running thru a small number of barren details, but rather the mass of ideals or the panoramic picture, which marks the one who has learned.

Indefiniteness, indecision, and lack of clearness all result in confusion in the mind of the child. Where a child's general impression for several months tells him that he has learned nothing, even tho the majority of the class has done well, he is rendered physically even less able, thru the nervous wear and tear of such a situation. The identification between the value of sound pedagogy and of hygiene as applied to the avoidance of confusion becomes a criterion in method.

It applies as well to matters of discipline as of instruction. Children like order rather than chaos. They like to be protected from the too boisterous play or fooling of their associates, and in times of study from interruptions whether by whisper or noises. Consequently discipline is hygienic in so far as it promotes order rather than confusion. •

But on the contrary, discipline, as soon as it becomes merely arbitrary, and appeals to the fear of children, is provocative of the most undesirable form of confusion and results in a state of flurry which cannot fail, if continued, to have its effects on the nervous system.

Worry is another factor to be removed from the schoolroom, and frequently it is hardly to be distinguished from confusion, so often they go together. An examination is, however, usually a very definite, precise, and clear operation (I had almost said method of torture). It is not fundamentally productive of confusion. It is productive of worry. An arbitrary and overruling manner on the part of the teacher, a multiplicity of rules and regulations, tests in whatever guise, rivalry, rewards and punishments in their usual forms are all productive of a worry which helps to contribute to the pale faces and weakened physiques of the children at the end of the year. Almost the only argument for the private school in a democracy is its usual *laissez-faire* policy, a distinctly comfortable policy from a health standpoint. On this account Search in his extremely suggestive book, *An Ideal School*, leaves work unassigned for one year at about the age of fourteen, in spite of the recognized benefit of his play school, and the adaptability of his individual method. He says, and rightly: "The school which has difficulty in placing children received from other schools, or who have been out of school for a time, is not simply out of joint with other schools, but is itself out of joint with nature."

The strenuousness of our American life is too often carried into our schools, and the children pushed to the limit of their strength. They are often expected to maintain the positions in a class by parents who claim that they are as "smart" as the others, when, as a matter of fact, they have been doing their best, but have gradually lost ground. If this truth were recognized, these pupils would be saved much worry and discouragement. Children who are at home will fear that they are falling behind their classes, and return to school

before they are well, in order to keep their places. Some teachers are themselves nervous either in temperament or as a result of weakness and overwork, and consequently are quick, impatient, and arbitrary in their movements and directions. Children are very imitative. They become quick (which in them means thoughtless), impatient, and arbitrary, and, finally, as a result of friction, nervous and worn. The teacher who is enjoying life and is healthy in mind and body has a very different effect on the pupils.

If all these elements of error could be removed, we should do away with the discouragement which results from worry, confusion, and disappointment. It is, of course, absolutely impossible to reduce to nil any one of these three factors, but wonders can be done by appealing to the child's ability or talent or his courage and persistence. It is said that men who have been engaged in active work all their lives, break down very quickly after their employment has been taken away from them. Discouragement as a function is katabolic, and is deadening to both mind and body. Worry and confusion are warnings of danger, incentives to the substitution of more satisfactory forms of activity.

Professor Thorndike, in his *Notes on Psychology for Kindergartners*, has alluded forcibly to the unnaturally stimulating conditions incident to the life of a modern city child. As he proceeds, his picture of the modern schoolroom where the children with eyes bulging with excitement and arms waving in air "pop out of their seats like corks" has a certain uncanny reality about it which should serve as a warning. Children should not be keyed up artificially for long periods. Make provision for rest periods and do not allow even your enthusiasm in your teaching to infringe on those periods. Alternate the harder and the easier work, that requiring careful concentration and that admitting a freer play of fancy, the arithmetic and the drawing, the history and the music, and so forth.

Perhaps the most serious error of teachers is their failure to note pupils who lack normal physique, or are in any way defective, and to adapt their requirements to the physical strength of their pupils. In cases of defective eyesight, loss of hearing, poor digestion, bad circulation, overwrought nerves, spinal curvature, or other diseases, even supposing the teacher can do nothing positive toward remedying the evil, he can in almost all cases do something toward alleviating the conditions productive of ill, and certainly avoid the possibility of contributing to the defect. Errors of refraction may be corrected by glasses, nearly 90 per cent. of cases of defective hearing may be cured, relief from strain, and perhaps temporary removal from school altogether, will restore digestion, better air and more clothing or gymnastics or special treatment will better the circulation; and so in practically every case, given a defect that is known, something can be done about it.

You enter any average schoolroom and you will see children with squinting, inflamed, or bloodshot eyes or breathing with open mouths; less often children with headache, fevered faces, sore throats, spasmodic twitches, bad coughs, spinal curves, etc. Teachers who have really thought of it seriously have

no trouble in quickly sizing up their classes and noting all important departures from the normal.

Those who have not formed the habit of taking some definite period at the beginning of the day or session for making observations of this sort will leave out many cases worthy of their attention. Where medical supervision is available, the work of the teacher in this regard is made only the more important, as he can get expert confirmation or refutation of his suspicions, and thus add to the force with which these defects may be brought to the attention of the parents for treatment. This crowns the teacher's efforts with at least hope of their removal. When the supervision is absent the teacher should make an effort to get whatever reliable information he can.

The symptoms of eye defects are: squinting, discharge, bloodshot conditions with permanently inflamed or encrusted lids, pain in the eye and frequent headaches.

The symptoms of ear defects are: the open mouth which often accompanies adenoids, discharge, delay in executing commands, apparent stupidity (there may be other causes but defective hearing is certainly an important one).

Spinal curvatures are found where there is a noticeable lack of ability to walk distances or engage in certain forms of exercises, bad postures in writing (i. e. with back bent to the side) or in standing, when a bent spine shows itself by raising one hip higher than the other, and even round shoulders may be a symptom.

The symptoms of nervousness and permanent fatigue are of various sorts, but the really serious ones are those which are characterized by lack of muscular control such as involuntary twitchings of the face, hand or limbs (occasional lapses in control of the hand in writing, as certain letters or parts of letters are made, being an evidence of an early form of chorea); lapse from normal memory, inability to attend, irritability, hasty reaction, asymmetry in moving both hands, or quivering of hands, increasing pallor or thinness, hysterical laughing or crying; while in others there is a lack of sensitiveness and ready reaction, which is even more serious and is even recognized by the children as a dopy condition.

The flushed faces, sore throats, or skin eruptions, coughing, vomiting, or other serious condition will sufficiently warn teachers of oncoming disease of serious nature and should be followed by immediate dismissal of the child from school both for his own sake and for the sake of the other children.

To give directions for testing where symptoms have been noticed would be far beyond the scope of this paper. I have attempted that in my book, *The Physical Nature of the Child and How to Study It*. It should be remembered, however, that the well child does not need your tests. The child who responds to all his studies, is strong and healthy, full of life, vigor and optimism can be safely disregarded. The only hope of the weak, unhealthy, dopy, and morbid child is in being discovered. The child found defective opens a fine field for the play of the teacher's skill. Just how far can his work be

moderated without his taking advantage of his unique position with reference to the class? Just what means may be taken to find, and what to remove, the causes? These are questions which can only be answered by study of the child. He certainly must be excused from such exercises as are harmful. He may be excused from the restraint of school, but even then work can be given him which will be beneficial and, in a sense, compensatory.

This paper has already passed its assigned limits, but I cannot bring it to a close without recommending a more general acceptance of the value of positive building-up exercise in connection with the gymnastic and play periods of the school. There should be included in these breathing exercises. We are only just beginning to see the practical application of measurements as indicators of lines of development necessary, while in few schools, outside of a half-dozen cities, is the physical culture other than a more or less restful change.

The school is, on the average, more hygienically administered than the home; but unless the utmost caution is maintained to co-operate with the architect and adapt ourselves to his mistakes and omissions; to rest the children properly, and see that they maintain correct postures; to guard against contagion, and discern defects in time; to remove confinement by allowing freedom, and repression by substituting action; to avoid confusion as a result of method or discipline; and to remove causes of worry or of discouragement, we shall not need to wonder at the ravages of disease of one form or another among children attending school.

DISCUSSION

FRANK G. BRUNER, assistant director of the department of child study, Chicago Public Schools.—Tho by no means the only factor, and perhaps not the most important, in effecting injury to the health and beauty of children during their earlier years, the school does not escape with a modicum of responsibility. If anything, I should be inclined to emphasize what Professor Rowe has already so ably and emphatically said. Were I to take issue with him at all it would be on the method of applying a remedy, or rather upon whom I would place the responsibility for the present deplorable state of affairs. And lest I might be misunderstood in what I shall have to say, let me put emphatically at the beginning the statement that I consider this that I shall add entirely secondary to the statement of the need for improvement in this very much neglected field of education—the child's physical health and development.

The teacher's work is both positive and negative. In the positive sense, it tends to develop the child's activities, mental and physical, or to emphasize certain activities at the expense of others, so as to correct certain anomalies of body or mind. One does not have to argue long to show, too, that this process is more than a feeding process, in so far as this is considered the act of throwing the pabulum before the child. Exercise and study both require an adjustment on the part of the recipient. The teacher's work here is, first, to know the condition of the child's mind or body, and then, to apply the treatment that will bring about a symmetrical development of the individual, i. e., a sound, healthy, active mind in a vigorous and well-functioning body.

This, of course, necessitates a careful diagnosis. On the mental side it has long

been insisted that teaching to be developmental must be individual, and not mass teaching, that it must be suited to the individuals of a class as well as to the class as a whole. Now what I want to insist upon, with all my might, is that the child's physical organism should be given as careful attention as the mental, and this chiefly because haphazard treatment is not only unbeneficial, it is positively and decidedly harmful, frequently resulting in permanent ill health, and sometimes in premature death. This phase of the physical side of the child's organism makes it highly delicate to deal with, and, to my mind, of far greater importance than the mental could well be. And you will observe I have made absolutely no allusion to the other very important consideration the dependence of a healthy mind on a healthy body.

The godmother-tea stage of educational science, let us hope, is almost over. Children are too complex and finely organized in their mechanisms to be experimented upon with this or that expedient, just because it happened to prove beneficial to some other child, when the chances are that cases required radically different treatment. A few there are who are vigorous enough to survive such treatment with few or no evil consequences, but there are always thousands who prove victims to such unscientific procedures.

Child study, to date, has spent entirely too much time on averages, norms, and on developing educational dictums from some theoretical (so-called philosophical) presupposition, arriving at certain facts (so called) about child development, to which every teacher of brain and experience gives the lie. Everybody cannot invent, nor need it be expected that each teacher must needs have the capacity and peculiar gifts that are essential to the making of an efficient student of mental phenomena, or a student of any of the sciences. And it is just this peculiar type of mind, and this alone, to my mind, that is indispensable to the correct diagnosis of the physical and mental condition of the child, which we are here considering; I mean the physician's attitude.

You will say: "But we cannot have specialists as teachers, at least not for the present, so why not deal with the conditions as they obtain at present, and suggest some means of taking care of the problem that we have in hand." But I insist that, in the better schools, it is expected that teachers have special training in *teaching* the subjects they have to teach to normal children, but are not given that information which will assist them in detecting and correcting mental and physical defects; nor should so much be expected of them.

Physicians devote from four to six years to preparing themselves for the practice of their profession, and only those who have had the experience of referring pupils to physicians, for the diagnosis of such simple things (apparently so) as the detection of adenoids, that would impair hearing, or the most simple anomalies of refraction, that seem to be the cause of persistent headaches, I say that only those who have had experience can appreciate the almost total want of knowledge of these things on the part of the medical profession. Now if physicians, who, we expect, should be able to detect the common defects of sight and hearing, are unable to do so, can we with reason expect that teachers shall have this ability? If it were possible for teachers to acquire such knowledge from reading, the case would be different, but in most cases there would be repetition of the episodes of book-taught Bilkins, and the health of our children is of too great moment to be tampered with thus. A mistake is not often possible of correction, especially when the diagnosis has been incorrectly made and an improper remedy given.

I have in mind an instance of a girl of fourteen of very delicate health. Her teacher, judging that her poor health was due to insufficient exercise, put her thru a course of very vigorous gymnastics. The source of the weakness happened to be a heart trouble. The over-stimulation accentuated the weakness, and in consequence the girl died. This is an extreme case, I appreciate, but there are others which parallel it, and I have no doubt that there are many cases of poor eyes that have been examined by teachers, and pronounced all right, that have led to headaches that caused children, to leave school, or

permanent defects of sight, and in other instances, the entire loss of vision. The same might be said of hearing, tho the danger here is not so great, from the positive side of giving treatment in the wrong direction. When it comes to motor and nervous developmental defects, the danger from inability to detect anomalies and apply the suitable remedies is even greater than in the case of vision.

The test usually suggested in our books for sight is the Snellen letter test. Now this test shows only a general insensitiveness of the retina, or that the patient suffers from myopia. In either case, the defect is one of convenience rather than one whose neglect would have any very serious consequences. Very few would be those, if any, who would suggest that any teacher should give any further test, and those who have tested several hundred individuals, as have I, will appreciate the impossibility of anything more by anyone besides the specialist.

I should insist, therefore, that if teachers are to be given this work a very thoro preparation should be insisted upon, otherwise the work of teachers and principals in this direction should in all cases be (1) to be on the alert for any sign of abnormality in children under their care and, (2) to refer such a case to the parent or guardian of the child, and suggest that the child be taken to a specialist, or at least to a physician, for examination.

School boards have been very willing, in general, to take up any work that has been shown to be really worth while for the interests of the schools. In Chicago and Antwerp for many years there have been employed specialists who have been especially trained to do just such work as we have been considering here, and this has in both instances always received the hearty approval of parents and teachers alike.

It is a very simple matter to see that a tree is dying. It is very much more difficult to tell just what is causing the tree to wither and decay. Only by a careful study of the diseases of trees, the fungi that cause their decay, the means of destroying these, together with vast experience gained by work with trees under varying stages of decay, can the condition of any given tree be known and the remedy be suggested that will improve its condition.

Gymnastics given *ad hoc* will be preventive, but not curative. Likewise, the teacher can do much in the way of seeing to the sanitation of the school, and should know the fundamentals of this science, also the rules for seating pupils, so as to obviate eye-strain, spinal curvature, abdominal compression, and other nervous and motor defects. All this is well within the ability of every teacher.

We, as teachers, can do excellent work by forcing the condition of pupils in our schools to the attention of school officials, and in this way the time will come when every school will have a consulting oculist, aurist, and pediatrician to whom teachers may refer any case that they may suspect as suffering from some one or the other of these anomalies. But I should want to insist that no teacher, whatever her motives, should permit herself to pass upon any child unless she feels she has had the training that would fit her for such work.

NOTES ON A FEW BOOKS IN CHILD STUDY

LOUIS N. WILSON, LIBRARIAN, CLARK UNIVERSITY, WORCESTER, MASS.

The few books mentioned in this list are selected because they are in English and easily accessible. It is hoped that they may serve as an introduction to those who desire to know something of child study, but the list is not intended for specialists, nor for those already familiar with work in this field. These latter are referred to the "Bibliography of Child Study," pub-

lished each year in the *Pedagogical Seminary*; to the sections on "Child Study" in the *Psychological Index*, prepared by Professor H. C. Warren, of Princeton University; and to the Department of Child Study of the *Proceedings* of the National Educational Association.

The periodical literature, already vast, is growing more so year by year. The *Pedagogical Seminary* is devoted chiefly to this phase of the subject, as is also the *Paidologist*, the organ of the British Child Study Society.

The field of child study is so large that no single book could possibly embrace all phases of the subject. The one work thus far published that covers the most ground is President Hall's two volumes on *Adolescence*, the result of twenty-five years' careful study and observation by a pioneer in the field.

1. BARNES, EARL. *Studies in Education*. New York: G. E. Stechert & Co., 1896-1902. 2 vols. \$2 each.

Work done largely by public-school teachers with public-school children. The first volume treats American work, the second English. A good comparative study. Has good papers on punishment, the money sense, and on other social topics.

2. CHAMBERLAIN, ALEXANDER FRANCIS. *The Child: A Study in the Evolution of Man*. London: Scribner's, 1901. Pp. 498. \$1.50.

Covers the whole field in brief form from the evolutionary standpoint. Brings together a large amount of matter but slightly treated elsewhere. Gives good résumés of studies in foreign countries. Strong on the side of play, growth, food, and the significance of infancy. Contains a very complete bibliography.

3. DRUMMOND, W. B. *The Child: His Nature and Nurture*. London: Dent & Co., 1901. Pp. 146. 40c. A very useful and inexpensive little manual.

4. HALL, G. STANLEY. *Adolescence: Its Psychology and its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education*. New York: Appleton, 1904. 2 vols. \$7.50.

The latest, and by far the fullest, treatment of child study in existence at the present time. Presents the results of scientific study of the whole field. It is a large work treating a vast and important subject, and, while necessarily expensive, is pre-eminently the best work by a master hand.

5. KIRKPATRICK, EDWIN ASBURY. *Fundamentals of Child Study: A Discussion of Instincts and Other Factors in Human Development*. New York: Macmillan Co., 1903. Pp. 384. \$1.50.

While this volume does not adequately represent the genetic point of view, it is written in popular form, the chapters are brief, the style simple, and it gives a good idea of the mental development of the child as related to school work.

6. LOTI, PIERRE. *Story of a Child*; tr. from the French by C. F. Smith. Boston: Birchard, 1901. Pp. 304. \$1.25.

A reminiscent study. Perhaps the most consecutive work on the early life of a child, showing how the mind developed, as seen by the individual in his later years.

7. OPPENHEIM, NATHAN. *The Development of the Child*. New York: Macmillan, 1898. Pp. 296. \$1.25.

Written by a physician. Compares child and adult. Touches on the primary school, religion, the child as a witness in courts of law, the genius, the criminal, etc.

8. PREYER, W. *Mental Development in the Child*; tr. from the German by H. W. Brown. New York: Appleton, 1893. Pp. 170. \$1.

Good popular résumé of his larger work on *The Mind of the Child*. Valuable for parents and teachers as an introduction to the subject.

9. ROWE, STUART M. *Physical Nature of the Child and How to Study It*. New York: Macmillan, 1899. Pp. 207. \$1.

A brief statement of the physical side of child development. Perhaps too brief, but valuable, nevertheless, as an introduction. Written by one who knows public-school conditions. Summarizes many periodical articles, and should be used as complementary to Kirkpatrick.

10. SHINN, MILICENT WASHBURN. *Biography of a Baby*. Boston: Houghton, 1900. Pp. 247. \$1.50.

There are many other studies of individual children and for these the student is referred to the bibliographies.

11. SULLY, JAMES. *Studies of Childhood*. New York: D. Appleton & Co., 1896. Pp. 527. \$2.50.

A good general book by a well-known English educator. Has a chapter on children's drawings, and extracts from a father's diary covering the first six years of a child's life. Also a chapter on George Sand's childhood.

12. TANNER, AMY ELIZA. *The Child: His Thinking, Feeling, and Doing*. Chicago: Rand, McNally, 1904. Pp. 430. \$1.25.

Aims to present in condensed form a summary of the work thus far accomplished in child study. States a few general conclusions, and seeks to indicate lines along which further work is especially needed.

13. TRACY, FREDERICK. *Psychology of Childhood*. With an introduction by G. Stanley Hall. 5th ed. Boston: D. C. Heath & Co., 1903. Pp. 170. 90c.

Written from the psychological side; gives a good résumé of that phase of the subject. Is particularly good in such subjects as the acquisition of language and child vocabularies.

14. WARNER, FRANCIS. *Study of Children and Their School Training*. New York: Macmillan, 1897. Pp. 264. \$1.

Throws light on developmental defects, particularly minor abnormalities and borderland phenomena, and their detection in school children.

It is impossible here to give space to the many special books and articles, such as "The Psychology and Pedagogy of Adolescence," by E. G. Lancaster, published in the *Pedagogical Seminary*, July, 1897; "Growth of Children in Height and Weight," by Frederic Burk, published in the *American Journal of Psychology*, April, 1898; "The Meaning of Infancy," by John Fiske, in *Excursions of an Evolutionist* (chap. 12—which, by the way, the publishers ought to issue in pamphlet form for the benefit of teachers); "Talks to Teachers," by William James, etc.; but these and many more are referred to in the works already mentioned.

The subject of school hygiene, however, is worthy of special mention here because it covers so important a part of child study. In 1892 appeared Dr. A. G. Young's extended and valuable report on "School Hygiene" in the *Seventh Annual Report of the Maine State Board of Health*. In the same year Dr. Wm. H. Burnham published in the *Pedagogical Seminary*, a very important article entitled, "Outlines of School Hygiene," and is at present engaged upon a book covering this field. Two good books on this subject are:

15. SHAW, EDWARD R. *School Hygiene*. New York: Macmillan Co., 1901. Pp. 260. \$1.

A good, practical book by a reliable authority. For the most part elementary in its treatment, but contains a brief bibliography.

16. KOTELMAN, LUDWIG. *School Hygiene*; tr. by J. A. Bergström and E. Conradi. Syracuse, N. Y.: Bardeen, 1900. Pp. 391. \$1.50.

A good translation of a valuable German introduction to the subject; contains new and important matter not in the original.

DEPARTMENT OF PHYSICAL EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 5, 1905

The first session of the Department of Physical Education was called to order in the First Congregational Church, Asbury Park, N. J., at 10 A. M., by the president, E. Hermann Arnold, director of New Haven Normal School of Gymnastics, New Haven, Conn., who addressed the department upon the subject "The School Yard and its Importance to the Well-Being of the Child."

E. A. Kirkpatrick, department of psychology and child study, State Normal School, Fitchburg, Mass., read a paper entitled, "Some Simple Methods of Recognizing Physical Fitness and Unfitness of School Children for School Work."

This paper was followed by a short discussion by William W. Hastings, instructor in International Y. M. C. A. Training School, Springfield, Mass.

Miss Rebecca Stonerod, director of physical training, public schools, Washington, D. C., spoke on the subject "How Far Should Physical Training be Educational and How Far Recreative in Grammar Schools."

Clarence F. Carroll, superintendent of schools, Rochester, N. Y., then read a paper entitled "How Far Should Physical Training be Educational and How Far Recreative in High Schools."

A general discussion followed.

The president appointed a Committee on Nominations as follows:

Dr. Augusta Requa, New York city. Miss May Long, Mason City, Iowa.
Mr. Anderson.

SECOND SESSION.—FRIDAY, JULY 7

The second session of this department was called to order at 10 A. M. by the president.

Miss Caroline Crawford, instructor in physical training, Teachers College, Columbia University, New York city, read a paper on the subject "How Far Should Physical Training be Educational and How Far Recreative in Colleges and Universities."

Discussion was led by R. Tait McKenzie, professor of physical education, University of Pennsylvania, Philadelphia, Pa.

Dr. Augusta Requa then presented, on behalf of the nominating committee, the following nominations:

For *President*—E. Hermann Arnold, New Haven, Conn.

For *Vice-President*—Miss Rebecca Stonerod, Washington, D. C.

For *Secretary*—Miss May Long, Mason City, Iowa.

The report of the nominating committee was accepted without dissent, and the nominees declared elected.

REBECCA STONEROD, *Acting Secretary*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

THE IMPORTANCE OF THE SCHOOL-YARD FOR THE PHYSICAL WELL-BEING OF SCHOOL CHILDREN

E. H. ARNOLD, DIRECTOR NEW HAVEN NORMAL SCHOOL OF GYMNASTICS,
NEW HAVEN, CONN.

Physical education is a comparatively new branch in the curriculum of public schools in this country. Like other innovations, its way has been bestrewn with a great many difficulties. One of the main ones has been the lack of sufficient space for carrying on physical training. This lack of space brought with it the necessity of adapting gymnastics to the smaller space and the unfavorable conditions of the schoolroom. Thru this adaptation there has been lost a great deal of the efficiency of physical training. This is small wonder if we consider that practically all the systems of physical training now in vogue have originated either in the gymnasium or on the playground. Now, since we are slowly gaining suitable gymnasia in high and grammar schools, we find that in the readaptation of gymnastics to these more favorable circumstances features of the original system of exercises, which contributed largely to the efficiency of the exercise, do not reappear. They had been sacrificed to the necessity of exercising in the crowded schoolroom and on re-entrance into the gymnasium they are usually sacrificed to convenience. This is why schoolroom gymnastics have been in a great many places unsuccessful, and why, even with the provision of gymnasia, gymnastics cannot always be made a success. All this has been wrought by lack of space in the school building for physical training. Let us consider for a moment whether this has been an unavoidable process. The experience of other peoples, with whom physical education at some one time has also been a new branch in the public-school curriculum, may serve us as a guide in this matter. Neither the schoolhouses of Germany nor those of Sweden offered gymnasia to physical education when it was first introduced. Yet neither country has experienced the necessity of schoolroom gymnastics. It is interesting to know how this necessity was there circumvented. In most places, where, by ministerial edict, physical education was made over night a compulsory branch of the public-school curriculum, recourse has been had to the school-yard as the place most suitable to the conducting of physical education.

Why could not, and why can not, this same procedure be followed out in this country? A country as vast in extent as this, and as thinly populated as this, should certainly furnish ample opportunity for physical education in

school-yards of sufficient size. As a matter of fact, however, we find that in those places where physical training makes itself felt as a necessity this is not the case. The places where physical education is thought to be more urgently necessary than elsewhere are the large cities. In these we find that neither in the old school buildings is there room for a gymnasium, nor do there exist school-yards of sufficient dimensions to allow their use for the successful conduct of physical education exercise. In the smaller cities, towns, and villages, the necessity of physical training is not felt to be urgent. No provision in the school buildings is made for gymnasia and no one thinks of providing school-yards of considerable size. The unoccupied lots within town or village, the outlying fields and meadows offer such fine opportunities for physical training of the best kind, athletics, and games, that no one thinks that the school-yard has any right of existence at all, beyond serving to give access to the school building. The marvelous growth of cities in this country makes it highly probable that over night a place may take on such rapid growth that within the span of a very few years it has become a densely populated city, wherein building grounds command high prices. If now in this newly-created large city the necessity for physical training in the public schools demonstrates itself, one finds that there is not room in the school building for gymnastic exercises, and worst of all, that there is practically no school-yard. It would seem, then, a wise policy to establish the rule, that, in view of the possibility of growth of any city or town in this country, it is necessary that with each schoolhouse to be erected there should go a school-yard of considerable size. If I would make this plea before school authorities and before the taxpayers, and could rest it simply on the grounds of gymnastic necessity, the chances of their lending a willing ear to it would be mighty small. It behooves me then to reinforce my argument by additional reasons. The school-yard is important for the physical well-being of the child from other standpoints than that of physical training. The most important matter of school sanitation—the matter of ventilation—cannot satisfactorily be solved unless we have a large school-yard surrounding the school building. No matter how perfect may be the ventilating contrivance of a modern school building, you must have good air to take in your fan, or whatever else it may be, to begin with. In a crowded district with a scant few yards dividing the school building from tenements, factories, etc., it is impossible to furnish the ventilating contrivance with good air. This is recognized by sanitary engineers and architects in the larger cities, for we hear and read of their placing in operation, in connection with the ventilating plants of large office buildings, contrivances for the sifting out of dust. This having proven inefficient, they are now beginning to wash the air before using it in the ventilating outfit. Such contrivances are costly and a good many times unsatisfactory. It strikes me as much easier and much more economical to provide good air from a large school-yard free of dust, exposed to the beneficial action of the sun rays. Provision for the lighting of schoolrooms are unavailing

and it amounts to little that the laws of some states provide for a minimum of window area for the floor area of a schoolroom if the schoolhouse so well provided with windows stands in close proximity to buildings higher than itself and who shade it on all sides practically continually. It is impossible, now-a-days, to restrict the height of buildings, once we have gone to construct buildings of twenty stories and more for commercial and industrial purposes. The attempt to do so would involve legislation of most complicated, and in the end inefficient and unsatisfactory, kind. It would seem, then a much more rational performance to regulate by law the size of the school-yard. There should be established definite proportions of school-yards to ground area of school building, to its height, and to the number of children in the school building. This would provide for efficient ventilation, and for a plentiful source of light. It would also do away with one great difficulty schools situated in large cities have to contend with; namely, the street noises. Street noises penetrating into the schoolroom are not only disagreeable, but are positively deleterious to the health of the child. School life, without any doubt, makes necessary on the part of the child great nervous effort, even under the most favorable circumstances. Given a bright, willing child, a good teacher, good teaching facilities we shall still find that the nervous strain to which a child is subjected in school is tremendous. No unnecessary difficulty which would tend to increase this nervous strain should be added. One of these additional difficulties is the street noise. The child will have its attention diverted by these noises from the subject-matter under consideration. It can no longer pay the attention of interest to the instruction; but as its attention of interest is engaged by the unusual sound of a street noise, it must, in order to follow the instruction, pay the so-called willful attention. Willful attention is a power a child acquires late, a power which exhausts easily; and if the child must pay willful attention to the instruction and must, in addition, use its power of inhibition in order to prevent the street noises, against which it cannot close its ear as it could its eye against a sight which it was unwilling to behold, to reach the zone of consciousness, it is small wonder that the child will become nervous under such strain. The school is so often accused of destroying the nervous health of children that it cannot afford to have such a blame settled upon it without making some attempt of remedying the evil. Attempts at diminishing street noise by paving streets around schools with a pavement which will diminish rattling of wagons and cars and horses' hoofs have been made, and are still being made. While the noises have been thereby diminished in number, others still exist which this remedy can never reach. The one efficient remedy, in this respect, is greater distance from street and neighboring buildings—a large school-yard. This will do away with a great many noises altogether and will reduce the intensity of all. If we have proved the necessity of a large school-yard for other reasons than gymnastic considerations, and have been granted a school-yard of good dimensions, then it is my opinion that such school-yard should

be made use of, in the first place, for purposes of physical training. A large, well-kept lawn and magnificent flower beds in front of the school building may serve the purposes of æsthetic education admirably. They are, however, absolutely out of place if, in order to have such æsthetic enjoyment, the place where the child should play and roam is reduced to such dimensions that play is no longer possible. We may then behold the peculiar spectacle of blooming flowers on the front lawn and withering children in the school building, which spectacle would remove, for any feeling being, any æsthetic enjoyment of lawn and flower beds. The school-yard then should, in the first place, be a playground for the children. If it were of the proportion indicated above, it would give a chance for the re-establishment of the old-time recess, when all the school turned out for play and recreation in the school-yard at one time. This recess has been sacrificed to the necessities of discipline by small school-yards, which allow only one class of children at one time to enjoy its freedom. This freedom, however, is not unrestricted, for there is one condition under which one class may enjoy its separate recess; namely, that by its play it does not disturb the classes in session. This means play without shouting, natural activity without its natural form of expression—the shout of joy of playing children. Most consequential and logical beings we are, we schoolmasters. On the one hand, we strive to free the child from awkward forms of expression of its feelings, we strive to give it powers of expression, we preach about expression, the desirability of it, and so forth and so on, and then when the child is given a chance to indulge in the most natural and the most important of its activities—play—we tell it that it must not express its feeling by the expression intimately connected with this activity. This is to say, the child is given no chance to play at all. For while it plays the tendency to be noisy, for the exhibition of which there was before no chance, now crops out with renewed vigor. While the child made no effort before to restrict a shout, there being no occasion for one, it now is induced to play, is led into the temptation of shouting, and must now make special effort to suppress it. We wish to free it from awkward consciousness by play, and make it intensely conscious that it is playing and must not shout. This is what we call relief from mental strain and free play. This is what our deep knowledge of psychology brings us to do. A large spacious school-yard will do away with all this. It will allow the re-establishment of the old-time recess with all the children playing at one time in a school-yard and shouting; that is really playing. In order to provide such spacious school-yards, provision for their acquirement has to be made long before they may be actually used as school-yards. Not only years, but decades, ahead must the sites for school-yards and buildings be bought by the communities in the districts as yet outlying and unoccupied. Money so invested will come back with interest to any community that tries the scheme, as is evidenced by the prices paid for school sites by communities that buy the land for schoolhouses after the section in which they are to stand has been settled. Economy then

makes it necessary to buy a lot as small as possible. This can be avoided by foresight and prompt action of communities that this day foresee a chance of rapid growth. School-yards may not only serve the child and its physical well-being during school hours, but the conviction that the use of the school-house and its facilities during a part of the day, week, and year only is economical is fast gaining ground. School buildings and school-yards are being opened outside of school time as natural centers for the play and other activities of the child. As playgrounds outside of school hours, they are certainly vastly superior on account of their greater number and of being of easy access to playgrounds in parks. Two sets of children will be mainly benefited by such use of school-yards as neighborhood playgrounds. In the first place, the small children, who can easily walk the comparatively short distance to the schoolhouse, while they could not reach the park playground by walking without being, by the walk, so fatigued as to be incapacitated for play. To these smaller children the school-yard will offer ample ground for play, for their play does not require as much space as the baseball and kindred games of larger children, which larger children may well walk to the playground in the park. In the second place, the children of the poor, to whom the larger, and of necessity, remoter parks are inaccessible they not having the means of transportation, are the beneficiaries of school playgrounds.

For all these reasons we should demand legislative action to compel communities to furnish school-yards which can serve the above purposes. Communities by law compelled to furnish them would have to exercise foresight and acquire the sites in such goodly time that the purchase of school-yards of proper dimensions would not unduly burden the community.

SOME SIMPLE METHODS OF RECOGNIZING PHYSICAL FITNESS AND UNFITNESS OF SCHOOL CHILDREN FOR SCHOOL WORK

E. A. KIRKPATRICK, DEPARTMENT OF CHILD STUDY, STATE NORMAL SCHOOL, FITCHBURG, MASS.

Child study has been prominently before the American people for two decades, and has been represented by a department in this association for twelve years. The physical nature of children has received more attention than any other phase of the study. It has been emphasized over and over again that the mental and moral characteristics of children are largely determined by their physical condition, and it has been proved again and again that many children are in school who should be at home, in the woods, or in a hospital. It is not strange, therefore, that the physical department of this association has called upon a representative of the child-study department to supply it with "Some Simple Methods of Recognizing Physical Fitness and Unfitness of School Children for School Work." It will doubtless be assumed by many

that if child-study specialists cannot satisfactorily respond to all such simple requests as this they have accomplished nothing, and child study is only a popular fad.

Notwithstanding this, perhaps natural, opinion, I will say at the outset that I am unable to give an answer to this question that will enable every teacher to discover all of her physically unfit children, and I know of no one who can do so. Why then am I here? I hope first to decrease your demands from child-study investigators, and then partially to satisfy your decreased expectations. Allow me to refer you to a science and an art that has had a recognized place in all civilized nations, not merely for twenty years, but for more than two thousand years. I refer to the science and art of medicine. The populace has demanded that the medical profession shall supply them with some simple remedy that will cure all diseases. Quacks have been responding to this demand for many years, but regular physicians are strangely slow in granting this very reasonable request. The more reasonable demand for simple directions that will enable anyone to detect the common diseases and administer the proper remedies has been met by numerous books and articles, some of them by regular physicians, but strangely enough, most of them close with the advice: "You had better consult a regular physician."

The results of the demand that every man shall be taught how to be his own doctor can therefore scarcely be described as satisfactory. Comparatively few men are able to prescribe for sick umbrellas or disordered bicycles or automobiles, so one may be excused for his inability to profit by directions as to how to reinvigorate his own infinitely more complex mechanism. Even physicians themselves often look wise and say nothing definite as to the nature of the disorder. Sometimes they do name the disease and the remedy, yet occasionally it turns out that what is called scarlet fever proves to be only a cold, or that a case of measles actually is smallpox.

Physicians may even fail to do what you wish to have me tell teachers how to do. Last winter I sent notice to the parents of a boy in our training school that he probably had adenoids, and that he ought to be examined by a physician. They took him to one who practices as an eye, ear, and throat specialist. He informed them that the child was all right; that he simply had a habit of breathing through his mouth. The parents were advised to consult another physician and finally did so. This doctor at once said, "It is a bad case of adenoids;" and later proved it by removing a large growth.

Now adenoids is one of the most common diseases to which children are subject, and one which most often interferes with school work. This "specialist" could not detect its signs. Do you wonder that I do not claim to be able to tell untrained teachers how they can infallibly discover such defects? Since, however, the signs of adenoids are the most distinct and easily detected of all diseases I will describe to you the means by which all intelligent teachers, after a little experience, should be able to discover at least the worst cases.

The characteristic sign is the so-called "habit" of breathing thru the mouth. This habit, like all other habits, has a cause, and in this case the cause is an obstruction that makes it difficult to breathe thru the natural respirator, the nose. To observe for this defect, ask the child to close his mouth for a minute while you notice whether he has any difficulty in breathing. Test further by placing your finger on one side of his nose so as to close the opening, while you observe whether he can breathe thru one nostril. Repeat for the other side, making sure that the mouth is kept closed and that the breath is not being held. If the child has a severe cold when the test is made, repeat it when he has not.

The other signs of adenoids are a peculiar broadening of the nose between the eyes and an obstructed nasal tone of voice, both of which are easily detected by the experienced observer; chisel-shaped teeth, and either mental dulness or nervousness are common accompaniments, while partial deafness is an almost universal result. Probably at least three-fourths of all defects of hearing are due to adenoids. The above symptoms are much more prominent when the child has a cold, and may almost entirely disappear in the milder cases when the child has been free from a cold for some time. Sleeping with the mouth open and snoring are additional symptoms that may be discovered by inquiry.

In the moist climate of our eastern states this disease is very common, In the past year I found over fifty cases in our model and training school of about six hundred children, and about half of these were so serious as to interfere with the school work of the children. My students usually learn to detect the worst cases by means of the above symptoms.

Defective hearing, most of which is associated with adenoids, is not easily detected in its slighter forms because of the diversity of its signs and the difficulty of making accurate tests. The more common signs of serious impairment of hearing are expressionless face, inattention, and dulness. but sometimes the eyes take the place of the ears and the child is especially attentive and quick in response. In both types, failures to respond and unaccountable mistakes occur especially when the teacher speaks suddenly or from behind the children. They also frequently do not follow directions given them till they look around to see what the other children are doing.

In testing for defective hearing, the first essential is to make sure that the child is not being guided by some other sense, thus deceiving you and perhaps himself also. If the voice test is used, be sure that your mouth cannot be seen, and if a watch or some other instrument is used, have a card held against the side of the face next you in such a way as to cut off any possible view of your movements. In the voice test, numbers or other words should be spoken in a low tone (not whispered) and the children asked to reproduce them. With care, the worst cases of defective hearing in a room may be detected by a teacher without individual tests. In the test of individuals with a watch or other instrument, care needs to be exercised lest the tone of voice in asking

questions suggests the answer "Yes" or "No." The distance at which a watch or other instrument can usually be heard needs to be determined by experiment, and allowance made for other noises that may interfere with hearing. There are few watches which cannot be heard in a quiet room by a normal person at a distance of as much as three feet. The above directions are simple, but I will not guarantee that all teachers will be able to follow them. In one instance a bright young lady, who had received directions from me as to modes of testing hearing, not having a watch, used an alarm clock, and thus determined that her children all had good hearing, since they could without exception, hear it at a greater distance than three feet.

Regarding defects of sight, the facts are so familiar that I will say nothing except as to a few details of testing. If one wishes to test younger, as well as older, children, it is best to use the card with E's turned in various directions for the test. Before beginning, make sure that the child knows how to indicate what he can see by having him at a distance of only a few feet, point in the direction toward which some of the E's are turned. This is important. When I first began testing children, I found more defects of sight than I do now, and I am convinced that the reason is due in part to the fact that some children had difficulty in expressing what they saw, rather than in seeing.

The physical condition that in every school interferes with the work of some school children is indicated, in a general way, by the term "nervousness." In all cases where this or any other disorder is more or less permanent, simple tests are often of advantage, not so much because they are better than the signs which may be observed during the regular school work, but because the teacher's attention is then directed to definite signs, and she is thinking of the child's condition rather than of the course of study that she wishes him to master. Strange as it may seem, tests are especially important when the teacher is well acquainted with her children. We soon get used to the prominent peculiarities of people, and under the usual conditions are unable to see what strikes the stranger at once. If, however, we see familiar people under new circumstances, as in taking a simple test of some kind, we readily discover their peculiarities. In scarcely one case in a hundred will a teacher be able to detect defects of pupils which she has not already noticed, without a special test to direct her attention to the peculiarities of certain children.

Nervousness, real and pseudo, has so many forms which often quickly change from one to another, that it is exceedingly difficult to classify the conditions and describe the signs of each. In general, nervousness is either a state of low nervous tone or of nervous irritability, but it is most often both at the same time. Excess of nervous energy in children of the motor type is a form of pseudo-nervousness that is almost indistinguishable from the abnormal irritability of the really nervous child. The chief differences are that the really nervous child makes more irregular and unco-ordinated movements, responds excessively to slight stimuli given suddenly, is more likely to become angry and to cry on slight provocation, and these symptoms are more marked after a period of physical or mental exercise.

Nervous weakness may not be evident to ordinary observation, except when the child is subjected to an unusual or prolonged strain, when it is often shown in a sudden weakening and loss of self-control. The best test for deficiency of nervous force is obtained by following Warner's suggestions for observation of the nervous hand. Every teacher should look at the picture of the nervous hand which he gives in his book, *The Study of Children*, showing a peculiar drooping curve of the wrist with the third finger slightly separated from the others and the middle joint raised above them. After an image of this type of hand has been gained it may best be observed by asking the children to stand and hold their hands out in front of them, palms down. The significance of this test, and the uncertainty of a teacher's judgment based on ordinary observation, is indicated by the following case of twins. One was restless, which was taken as a sign of nervousness, while the other, a steady, quiet worker, gave no such signs, yet he had a nervous hand. The teacher was surprised to hear from the mother of the children that the quiet boy "went all to pieces" when he got home at night, while the other one showed no signs of nervousness at home. Doubtless close observation for nervous hands would often enable teachers to guard against the sudden "going to pieces" of quiet, studious children, which sometimes occurs, much to the surprise of the teacher and the disturbance of the school.

If, when the hands are held out in front, the fingers are straight but the thumbs drooping, a less degree of nervous weakness (perhaps due to temporary fatigue) is indicated. Other signs of lack of nervous tone and balance, shown in the same test, are over, under, or unequal elevation of the arms, or a throwing forward of the abdomen, especially when the pupil is asked to stand erect and hold his arms horizontally. Further evidence of lack of balance and good muscular control may be obtained by asking the children to close their eyes and hold their arms out horizontally on each side, then observe for swaying and lack of symmetry of the arms.

One of my students recently used these tests in observing several hundred children, and, with a few exceptions, all that had shown signs of nervousness were detected by these tests, while a number manifested some of these signs of nervousness in whom it had not previously been noticed.

Other enlightening tests are to ask children to sit perfectly still without moving a muscle for a minute or two, or to place their hands on the desk, and keeping all but the forefingers on the desk, tap as rapidly as possible for a minute or two without stopping. Manual work and games of various kinds also furnish good opportunities for observing nervous defects, irregularity of lack of control of movement usually indicating nervousness.

The more marked forms of nervousness such as chorea or St. Vitus dance are most readily detected by irregular twitching of the mouth or fingers. Whether children with such disorders as stuttering and chorea should be in the school is often a difficult question, as is illustrated by the following instances in our school. A child nearly ten years of age was sent to the first

grade. She had had scarlet fever, and remained sickly for some time, tho with the senses of sight and hearing unimpaired. She became much better, and having had little association with other children, her physician thought it would be good for her to go to school and be with other children. She made many irregular movements and talked to herself a great deal so that, altho she was placed in a rear corner partially behind a screen where the children could not readily see her, yet her lack of self-control so affected the other children that the teacher, tho experienced, tactful, and previously very successful in producing self-control, had very hard work, and never succeeded in getting her usual good results. The effect was increased by one or two other rather nervous children in the room, and it carried over into the next year. The child, who infected the other children as surely as she would have done had she had the smallpox, gained slightly from being in the school.

Another case is that of a boy of about the same age, large, apparently strong, successful in his studies, who had an attack of St. Vitus's dance, but after some improvement was admitted to the ungraded room. His irregular movements were confined almost wholly to the mouth, so he was placed in a front seat and little evidence of unfavorable influence on others was noticed. He remained for only a part of the session each day, and gradually improved in every way.

Freedom from worry or nervous strain of any kind is *the* essential in all cases of actual or incipient St. Vitus's dance, but whether those conditions can best be secured in the home or the school depends upon the characteristics of the home and the school, and how they affect that particular child. No teacher or other person can intelligently decide whether a nervous child should leave school unless he knows what kind of a home he lives in and the effects of school work upon the child and of the child's actions upon the school.

Physical tests, such as measurements of height, standing and sitting, weight, girth of head, and of chest contracted and expanded, breadth of head, chest, and waist, lung capacity and grip of right and left hand, such as are described by Dr. Hastings in his *Manual of Physical Measurements*, give facts of considerable value in judging of the physical vigor, or vital capacity, of children. They serve to suggest that certain children should be observed, and care taken that they are not subjected to undue strain. It is possible to make this whole series of tests, and several others, at the rate of about two children per minute. I have several times done this with two of my students for each test as helpers. Unfortunately, the division of labor which makes such rapid work possible, makes it impracticable for those engaged in the work to study the peculiarities which the children manifest as they take the various tests, something that is always important in giving any kind of a test. Two of the most important tests, those for lung capacity and chest expansion, unfortunately give results that depend almost as much upon the skill of the one who is trying to get a young child to do his best, as upon the actual power of the child. If time can be found to make such tests accurately one or more

times a year, much data of both general and individual value may be obtained regarding the normal physical development of children from year to year, but as indicated above, such tests have their limitations.

As to temporary conditions, such as fatigue, that unfit for successful school work, many investigations have been made with the purpose of discovering simple tests by which the unfitness of children for school work may be determined, but none of them have, in my judgment, been successful. In my opinion, no such tests will ever be found any more than we shall ever find what has so long been sought, *i. e.*, methods of teaching that will succeed without intelligent teachers. A locomotive engineer knows whether his engine is in perfect working order by the feel and the sound of it, even tho it is rushing thru the storm at the rate of a mile a minute, yet he could not tell you how you could do the same. In a similar way the intelligent, experienced, sympathetic teacher should know when her children are out of sorts, or are beginning to lose their inclination to work. She should discover the difficulty and apply the remedy long before it has become sufficiently pronounced to be detected by any simple mechanical test that can be devised.

Where the unfitness is more or less permanent tests are valuable, but the intelligent co-operation of teacher, of school or family physician, and of parents is necessary to determine whether a child should remain in school, and what remedies should be applied. The discovery of the physical unfitness of children by close observation of the way in which children do their school work and by such tests and measurements as have been described, devolves now, and in the future will devolve still more, upon the teacher, but in the final decision she must have the help of physicians and parents.

DISCUSSION

WILLIAM W. HASTINGS, instructor in International Y. M. C. A. Training School, Springfield Mass.—This question was first stated: "A simple test of physical fitness and unfitness of school children for school work." Professor Kirkpatrick has rightly changed the title to some "simple methods of recognizing physical fitness," etc. There is no one simple test which is final, but many; and this is fortunate. It enables various individual teachers, with each a particular bias of mind, to apply that method of observation which best pleases, and yet to reach much the same general conclusions as to the health of the child. To one, malnutrition is everything; to another, lack of exercise; another, defective posture; another, pulmonary diseases and ventilation; still another, nerve signs; etc. The result is the same and beneficial, whatever the facts of diagnosis emphasize, if only the right pupils are kept out of school or given special corrective exercises. It enables the teacher of broad views and culture, like a good physician, to arrive at the same conclusions thru a half-dozen different channels. The difference is that the judgment of the latter is thoroly scientific and final, and provides a satisfactory basis for advice to parent and child.

Whenever we cease to cry, "Lo here, and lo there, I have the newest secret of life," and therefore the best (?); whenever we, as teachers, have become more earnestly and honestly concerned about the discovery of truth than about obtaining credit for the same; whenever we learn to welcome that culmination of research, scientific classification of

facts in the order of their logical importance, even tho this involves the exaltation of another man's hitherto insignificant idea to become the corner-stone of the structure, and the debasement of our own exalted pet theory to become merely a building or a paving-stone, then will there have arisen such co-operation among the devotees of child study as shall rear toward heaven a new and harmonious temple of knowledge, even a real true science of child study or paidology.

My first word is therefore one of congratulation to Professor Kirkpatrick for the even temper and judgment displayed in the presentation of the different lines of approach to this subject.

Whatever is added to the discussion will be mainly along two lines: the natural order of use of these "simple methods of recognizing physical fitness," etc., and the education of the teacher in the use of these methods.

The natural or logical order is from the general to the particular, from that which takes little time to that which requires more careful observation; it is also from the consideration of those differences in growth and development which are due to the normal and prevailing differences in heredity, nutrition, and activity, to those which are abnormal and to be attributed to inherited disease, and positively wrong environment; it is from the consideration of organic vigor and normal growth, intellectual and physical, to the consideration of those abnormalities which may affect this vigor and growth unfavorably.

Normal growth intellectually is usually determined in a general way by school grades and progress in studies, as ascertained by daily recitations and tests. There are various and widely diverse explanations of the exceptions. Children are retarded in school progress by diseases and accidents, by deafness, poor eyesight, and other defects congenital or acquired; by being kept out of school for work, or because of lack of good schools. There is, however, a certain normal standard, and a certain normal variability from this standard. It is part of the teacher's function to seek out the occasion of the variability of the individual.

There are also certain physical standards of growth and development, and a certain normal limit of variability; and departure from these standards should call for the careful scrutiny of the individual concerned and a search for the cause of extreme variation.

This method of ascertaining the fitness of the child for study is basal. It applies to all children. In the case of certain diseased individuals, however, it becomes secondary in importance. Comparison with known standards of growth indicates the net result of the child's past physical activity and environment; gives not symptoms or disease, but the product of his heredity and habits of living. Naturally he must be compared with children of the same age, sex, and height, in order that any definite conclusions as to his variation from the normal may be reached.

Proceeding from that which is simplest, and most fundamental and easy to observe to that which is more complex, accessory, and which requires professional experts for final diagnosis, the following order is to be observed: (1) size or amount and quality of development, structural, muscular, and functional; (2) posture as associated with atrophy or disease; (3) nerve signs, as the symptoms of various disorders; (4) the etiology of these nervous symptoms discoverable in various functional defects.

Under the first heading the following is the order of importance in observation, by the teacher: height *vs.* weight as indicating nutrition; height *vs.* respiratory measures as indicating respiratory vigor; height *vs.* trunk dimensions as indicating vital capacity; and height *vs.* strength as indicating activity and muscular function and neuro-muscular control. Under posture the observation of one or two of the commonest defects may be mentioned, cervical curvature (kyphosis) giving rise to the degeneration of the scaleni muscles, and to consequent lack of upper chest depth and to permanent impairment of the respiratory vigor; uneven shoulders, and the associated scoliosis in the dorsal region; and flat foot. The observation of "nerve signs" is exceedingly important, but for lack

of time Professor Kirkpatrick's discussion must suffice.¹ It is enough to say that the majority of these nervous symptoms will be removed by the removal of the adenoid growths, of defects in eyesight, hearing, and other functional defects, simple to observe.

It is too often the case, however, that overpressure and stimulus, long school hours with scant recesses, are the occasion of these nervous symptoms. In this our school systems, as a whole, are at fault. A half-day of interested application on the part of a growing child is worth more than a whole day of droning fixed attention. The other half should be spent out-of-doors, if possible at free play and nature study. If this is impracticable, and everything must be systematized for him all day, then give him the same sort of thing in gymnasium and laboratories, but leave all the room possible for personal initiative and the development of individuality.

One cannot fail to agree with the closing statement of Professor Kirkpatrick that "the discovery of the physical unfitness of children, by close observation of the way in which children do their school work, and by such tests and measurements as have been described, devolves, and in the future will devolve, still more upon the teacher;" and with its corollary that "in the final decision she must have the help of physicians and parents;" and allow me to add also that of the physical director.

The comparison of the teacher to the locomotive engineer provides a pleasing analogy. The true teacher in the best sense, as also the engineer, is born, not made. Yet the knowledge of disorder in the machine is in each case based on accurate knowledge of the construction of the normal machine itself, and of its normal function. The successful engineer has been trained in locomotive shops to build his machine in every part; has often made many of the parts. His knowledge is therefore more absolute, his recognition of "working order" less intuitive, than that of the teacher; but the teacher must study in the same way—that is, by laboratory methods and as thoroly—the human organism. It is here, if anywhere, that there is need of emphasis. All these methods of recognizing physical fitness and unfitness of school children must be taught in the normal schools as thoroly and practically as locomotive engineering is learned in the shops.

HOW FAR SHOULD PHYSICAL TRAINING BE EDUCATIONAL AND HOW FAR RECREATIVE IN GRAMMAR SCHOOLS?

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The subject which has been assigned to me, "How Far Should Physical Training be Educational and How Far Recreative in Grammar Schools," might imply that there is a line of demarcation between physical training which is distinctly educational and that which is distinctly recreative, which need not be in our minds, for we know that what are considered recreative, the plays and games, are truly educational, and we can conceive that what are generally referred to as the educational or formal gymnastics may, by proper methods and wise choice of exercises, have much of the element of recreation.

In a complete system of physical education we have the two essential departments; one in which the motor education is obtained thru formal gymnastics, and one in which the motor education is obtained thru plays,

¹ For a fuller statement see E. A. Kirkpatrick's *Fundamentals of Child Study*, chap. xvii.

games, and athletic sports. I take it, then, that my subject asks: What should be the proportion of the plays and games to the formal gymnastics in grammar schools? To answer the question, let us consider in order, first, the physiological demands of the growing child in these years; second, the needs of the child in school, that nature be not thwarted by the artificial conditions of school life; third, the practical question as to how these demands can be met under present school conditions.

By grammar grades we generally mean the four or five years of school life following the four years in the primary schools, the ages of the children ranging from nine to fourteen years. These are the years which, in the life-history of the individual, correspond with the second period of development. They are the years immediately preceding, and partly including, the period of adolescence. Early childhood has passed. We know that this is a time of rapid growth and development; the bones are hardening, muscles growing larger and stronger. The power to co-ordinate muscular movements, especially in the finer mechanisms of bodily activity, which means a corresponding increase in the motor functions of the brain, is now reaching the high tide of its development. The mature man or woman is greatly the sum total of all the conditions of food, work, rest, sleep, and exercise which surround him at this critical time. If we would influence for good the future of the child, and have him attain in later life that maximum of body growth, physical skill, and mental power, all varying in degree according to inherited tendency, now, if ever, must education step in, both physical and mental, and, at this receptive stage of body and mind, do its best work, having the least amount of resistance.

The physical exercises which are adapted to children of this period, then, are those which specially affect nutrition and growth, which increase heart and lung power, and which have to do with the training of nerves and muscles to obey the will.

Herein lies the educational value of physical training, in that it is a training for life. The department of plays and games holds a high place in this thought, for in no other form of physical exercise can we get in so short a time those qualities of quick observation, reasoning, decision, nerve and muscle control. The constant playing of a game secures accuracy and quickness of execution, generally termed skill, which enables one to do not only this thing well, but all allied movements, thus relating them to the great purpose of education which is the power to do.

Now is the time to form in the school room those physical habits which are to be of the greatest advantage in the future life of the child. Among these may be mentioned, a fine poise of the body, conducive to health and adding to personal appearance, the habit of deep breathing, a good carriage in walking, and such control over muscles as is conducive to grace in all the ordinary motor activities of daily life. These come not to most of us naturally, but are the result of constant effort and practice.

It is in the grammar grades that we notice an increase in those defects of body which are sometimes referred to as school deformities, particularly the curvatures of the spine. Our school gymnastics then, must have the general purpose of counteracting the effect of much leaning over a desk. This necessitates a wise and deliberate choice of such exercises as directly affect and strengthen the muscles of the back, lift up the chest, and give definite power over those muscles whose office it is to hold the body in hygienic positions. Such exercises are both preventive and corrective in their results, and must be given to meet the demands of the body due to school conditions.

These two latter phases of physical education, the formation of good physical habits and the corrective work, are such as cannot be obtained through plays and games, but only from constant daily effort and class drill.

Grammar-school gymnastics consist of physical exercises adapted to the age of the children, becoming more complicated and difficult of execution with the increasing years. It is this enlarging of physical experience which makes a rational system of physical training educational in its results.

The games which appeal to children of this age are those having competition of sides and teams. There is the spirit of individual emulation in games of skill, in throwing, running, and catching. The most desirable games, from the standpoint of physical education, are those in which many can join at once, which demand quickness and moderate strength, but not those requiring tremendous exertion as the result of emulation. Physically, boys of this age are not ready for the great endurance which comes in adult life. There is grave danger of overdoing in the matter of certain athletic contests, particularly the individual feats, the undue and premature promotion of which may work harm to pupils of these grades.

I believe it would be possible, under ideal conditions of playground space, so to choose, plan, arrange, and adapt plays and games that they would form a large share of the physical training of the school. This requires rare powers of organization and leadership, and is most likely to be accomplished in private schools with many instructors, few children, large grounds, and much school time. These are not, however, the conditions of most of our grammar schools. Under the ordinary environment, it is practically impossible to institute a system of plays and games which will include *all* the children of the school. Even a gymnasium in the building does not answer all the requirements of space for daily exercise of all the children. Since this form of physical exercise must of necessity be taken in the school-yard, and when we consider that the average amount of space necessary for each child has been estimated at thirty square feet, our opportunities, at least in city schools, are greatly limited. It is by means of the class exercises that we are enabled to influence each and all of the hundreds of children in a grammar school, such as could not be reached or handled in plays and games alone. The opportunity is given for a personal inspection, and individual training in posture and habit. School gymnastics, altho an artificial form of exercise, have the advantage

over plays and games in our educational scheme on account of their practicability. We can give daily to large masses of children, in a short space of time, in all seasons, and under all conditions of weather, with or without playgrounds, a certain amount of all round, systematic, physical exercise, based upon physiological principles, calling into play all the muscles of the body, and so planned and executed as to be of the greatest value educationally.

It must be distinctly understood that school gymnastics are not recreation, they are school work. I would never attempt to substitute such work for the play of recess. Both departments of physical education, the plays and games and the formal gymnastics, are necessary, and should go hand in hand in a perfect system of physical education.

The time allotted for physical exercises varies from ten to thirty minutes daily, the average being fifteen minutes, with a fifteen-minute recess, exclusive of the noon hour. In so short a period as fifteen minutes, it is impossible to do more than meet the hygienic demands arising from school conditions, so that all of this time should be devoted to exercises having this purpose in view. When work is done in a gymnasium, and the period that of thirty or forty minutes, it would seem a fair proportion to divide the time into two equal parts, one consisting of class exercises and the other of plays and games.

A few directors of physical training in public schools have made more or less effective efforts to secure play in the school-yard during the recess period, hoping thereby to supplement the body training of the class-room or hall with the play of recess. This is done under the direction of one or more teachers, since it has been found that pupils of this age lack organizing power.

It may be said by some that such play is not real play, that it lacks spontaneity and the whimsical element. The experience of summer playground teachers has been that children prefer direction, that of two playgrounds, one having a teacher and the other not, the children flock to the one where the teacher is directing, while it is an acknowledged fact that the unsupervised free playgrounds are little used. Some children do not care to play, and need to be encouraged, not forced, or the purpose of play for recreation would be lost. When forced, play becomes work. If left to the individual child, only certain ones play, generally those who have special skill in a certain game which is played to the exclusion of others, producing onesidedness. Unsupervised play is spasmodic and irregular, and cannot be considered as an integral part of a physical-training course, altho accessory to it.

I believe that as our public-school system is at present organized, this is about all we can do. In certain cities public-school athletic leagues, not connected with the board of education, fill a certain place in the general scheme, but of necessity the league is managed by outside officials, and care cannot be taken of the individual.

Before closing, I would make the plea that more of joy and happiness be infused into gymnastic exercises. While as I have already said, school gymnastics are school work, yet there can be pleasure in work and an enjoyable phase which cheers and refreshes.

The choice of exercises determines to a great degree the amount of delight in them. Dancing movements are always pleasurable. Those large movements of walking, running, hopping, jumping, such as repeat the activities of the race, and at the same time engage large groups of muscles, appeal to the pupils more than conventional movements. We know enough of the psychology of play to take advantage of it in our class-work. Another important factor is variety in exercises; something new to do adds to the enjoyment. One great element in the pleasure of execution is success in the effort, bringing with it a feeling of achievement, a satisfaction in doing the thing well. The personality of the teacher, the voice and the manner, inspiring methods and enthusiasm all have their influence. Joy and happiness is a mental state which to a degree can be reflected from one to another. Enthusiasm is contagious.

While retaining the educational purpose and value, the method of teaching can be one which will arouse interest, delight, and pleasure. So let us introduce more of the recreative element into what by its very nature could resolve itself into a dreary monotonous drill.

In conclusion I would say the more recreative the educational gymnastics and the more educational the play, the better will be the system of physical training adapted to grammar schools.

DISCUSSION

MR. KILPATRICK, of New York, said that he would enter a protest against the excessive supervision of games. "Children who do not care to play of themselves should be under the care of a physician." When visiting his New York city playgrounds, he had noticed long lines of children waiting to play when under supervision. They did not seem to enjoy play. He made a plea for free play based upon the good results as shown in his own school. He quoted his little son as saying: "I wish I went to your school, papa, because the boys can make a noise at recess there." The school-yard should be a place for children to *play*.

MR. RAY K. SAVAGE, principal School No. 7, Rochester, N. Y., said that while he thought we should guard against oversupervision, we should also guard against under-supervision. The teacher's place is to see that the children are playing, not merely expending energy. The teachers are there simply to explain and direct the games. The aim should be to make the children forget the teacher's presence. His experience was that when children had no supervision they wandered aimlessly about, getting little good.

MISS STONE, of New York, said that she believed, personally, that the gymnasium should be the sunniest place in the whole building, literally as well as figuratively. Her own lessons in the high school were preceded by five minutes of absolute freedom, a remnant of the old-time recess. The girls had been kept perfectly still for hours and naturally had something to say. If advantage was taken of this freedom, one admonition of its possible withdrawal was sufficient. Following this period of relaxation came the body exercises, necessary, but not interesting. The gymnastic exercises were given twice a week, and on other days, games or Gilbert work. The lesson ended with another period of absolute freedom.

MISS MCCONKEY, of Springfield, Mass., said that the unprecedented growth of our great cities had brought about new conditions necessitating an entire reconstruction of our system. High-school girls are spending ten hours a day in a sitting position. There is little freedom of motion. Girls must walk demurely through the streets. The gymnasium alone is not enough. Open playgrounds are not used by girls. They need playgrounds inclosed by a high board fence, where they can abandon themselves to play. They need out-of-door play in the sunshine.

HOW FAR SHOULD PHYSICAL TRAINING BE EDUCATIONAL AND HOW FAR RECREATIVE IN HIGH SCHOOLS?

CLARENCE F. CARROLL, SUPERINTENDENT OF SCHOOLS, ROCHESTER, N. Y.

Our fathers lived outdoors. They were giants, and did the work of giants every day. Their offspring migrated to the cities and to the great West, and became leaders in our supremacy as a nation. In turn the offspring of these men are many of them physically weak, and often degenerate. Life on the farm was productive of intellectual and moral force. The life in the home of the rich or well-to-do in the city tends to diminish the power of observation, and reduces muscular activity. Strength and suppleness of body are necessary to the best type of manhood. Weakness of body is likely to be accompanied by loss of courage, ambition, and initiative.

Our urban population is rapidly becoming the victim of disease. Comparatively few people who follow a sedentary life are free from some form of physical weakness. Almost every person we meet carries about a physical handicap.

There is a great army of healers who fatten upon the infirmities of the community. The business of supplying remedies is one of the most extensive and profitable. There are great cities of sanitariums devoted to cures of every name. Men and families of means migrate, as do the birds, to find certain favorable conditions of temperature and weather.

If our population were made up entirely of families of affluence, the race would soon become extinct. It is necessary that the children of the extremely poor, who are underfed, and who swarm in homes that are unclean, be rescued from their hopeless condition, and bodily reconstructed. Depression of spirit often weighs down alike upon the rich and poor who labor under these crushing physical infirmities. A child of perfect physical development is rarely seen, and mild forms of nervous disease are everywhere visible in the faces of school children.

From this statement it is fair to derive the first principle upon which we base the need of physical development in schools. At the end of one or two generations, under present conditions, individual and community life are threatened with decay, and call for scientific treatment such as apparently can be generally supplied only thru the public schools. Germany has attempted such a reconstruction by a system of gymnastics, which is applied first to the

schools, and second to the army. Under this stimulus the German system has become so popular with Germans that it has attained a place as a part of the community life, and the German Turner Society is almost as well known in America as in Germany. No more remarkable evidence of what can be accomplished by a system of educative physical training was ever seen. This movement was offensive and defensive. It was due to the deliberate attempt of the German government to produce a generation and an army strong enough to defeat its western neighbor, and to give Germany such a place among the nations as it had never before attained.

So much in favor of a system of physical training which shall be educative. On the other hand, from the first, games are ever a source of education.

Playfulness is an element in the first intelligence of childhood. Instinctively the parent watches for, and stimulates, this tendency. Day by day new movement is stimulated under the impulse of play. Little children play together all the day long. The muscles depend upon games for development. Some of the best intellectual exercise of childhood consists in the competition of the playground. The games of the kindergarten are its soul and inspiration. Play has become almost a new religion among the great army of missionaries, among children. Playground leagues are a new discovery, and a new force, in civilization. New lines of sports have become popular within recent years. Every man of means aspires to some line of recreation. Golf, tennis, the bicycle are all serving their part in bringing joy back to the world.

Schools and colleges have entered into the competition. The college man who is not interested in some form of athletics is an anomaly and must make an explanation. Such a man would not be tolerated in an English university. Indeed, the educated Englishman receives an education in athletics as complete as that which he receives in Greek or Latin.

In an up-to-date school the games of childhood again have their place, and every child, and every class, engages each day in good earnest in these games with all the joy of ancient days. Not only do these games promise to help to arrest the downward physical course of the race and bring back ambition and courage, but they are also bringing back the joy of life. This spirit of free play has become contagious, and men and women alike look with delight upon the games of school children; and as gracefully as we may, we are all becoming children again. Men testify that the golf-field is revolutionizing their lives, and is giving hope of added years.

Who then shall attempt to say whether physical training shall be chiefly recreative or chiefly educational? It must be, on one side, systematic and exacting, correcting curvature and spinal weakness, giving keenness of appetite, and ambition to do and execute. On the other hand, it must lift the spirit depressed by confinement, and relieve the strain upon our weakened bodies. Again, who shall say that one is not as educational as the other? The trained athlete has a fund of intellectual reserve of no mean magnitude.

He is deliberate, resourceful, can mass all the energies of his life in a moment and at a given point. If systematic physical training develops patience, no less do endurance and skill, called for in games, enable a man to meet his competitors of whatever sort.

It is not our business to discuss abuses and excesses in athletics. They are inevitable and must be dealt with resolutely, but they do not affect the principle involved. Our hope in building up the individual and in perpetuating our national life is in the physical and educational alike, in one as much as in the other. The body is the dwelling-place of the spirit as it is of the intellect, and the education of either, considered apart, produces a monstrosity. We are gathering the data upon which we may build a civilization that shall be worthy of the day, and that may resist the inroads of luxury and ignorance alike. It is our privilege and opportunity as schoolmen to appreciate, and to appropriate, the opportunity that is held out to us.

To summarize: We are threatened by physical degeneracy in the large city. Intellectual and spiritual life, and general initiative must all suffer alike, in consequence. A complete physical reconstruction of the rising generation is called for, thru the school system. In the high school the strain on body and nerves is intense. Examination and marking systems and college requirements, isolation and lack of sympathy, pride and depression of spirit, and consequent lack of success are making the high school a place of frequent failure. We hesitate to tell the number of tragedies. This condition calls for the best system of physical training and for the largest increase possible of the social element provided by free games and athletic sports. The health and happiness, and very life, of the nation are at stake.

HOW FAR SHOULD PHYSICAL TRAINING BE EDUCATIONAL AND HOW FAR RECREATIVE IN COLLEGES AND UNIVERSITIES?

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It seems necessary in discussing the educative and recreative phases of any special department of education to restate the educative process in the terms of the educational theory of today. For such statement we have quoted "Froebel's Educational Principles" as given by Dewey in the *Elementary School Record* of the University of Chicago Laboratory School.

In general, they are:

1. That the primary business of the school is to train children in co-operative, and mutually helpful, living; to foster in them the consciousness of mutual independence, and to help them practically in making the adjustments that will carry this spirit into overt acts.

2. That the primary root of all educative activity is in the instinctive, impulsive attitudes and activities of the child, and not in the presentation and application of external

material, whether thru the ideas of others or thru the senses, and that accordingly, numberless spontaneous activities of children, plays, games, mimic efforts, even the apparently meaningless motions of infants—exhibitions previously ignored as trivial, futile, or even condemned as positively evil—are capable of educational use, nay, are the foundation stones of educational method.

3. That these individual tendencies and activities are organized and directed thru the uses made of them in keeping up the co-operative living already spoken of; taking advantage of them to reproduce on the child's plane the typical doings and occupations of the larger, maturer society into which he is finally to go forth; and that it is thru production and creative use that valuable knowledge is received and clinched.

Following the thought in these principles, the activity of the little child becomes an expression of the self which the educator must needs investigate in order to interpret the means for the educative process. The child's play is then of the deepest significance, and in it are found the beginnings of the completed forms of expression. The dramatic instinct, or instinct for representation, is one of the most prominent characteristics of childhood. The little child's expression is literally motor; he "acts" his thought, and he discovers the meaning of other's actions by his "make believe." A knowledge of other's actions is a necessary preparation for social life, and, in the development of the child's social experience, play is gradually carried over into games. This thought suggests that we may find values of expression in games not at present recognized in education.

In studying games as developed from the instinct of representation, there are two important characteristics to be considered: the expression of physical force thru action, a knowledge of which is gained only by comparison with other forces by conflict, and thus the development of games of skill and chance—the dramatic presentation of the elements of applied and pure science; and the expressing of the truth of relationship thru the action of the dramatic game—the dramatic presentation of the elements of art.

In the games of skill and chance, the child gets, in concrete form, a knowledge of the principles of science thru the action of related forces, and when he discovers mechanism from experience, he can project that knowledge into the field of action outside himself. (Here is the significance of the Greek games.) While the material is ready, the connection of such action with the symbolic forms, so that its projection into other fields may be directly possible in accord with development, is one of the missing factors of education. The dramatic games are an epitome of the world of art. The discovery, thru action of the truth of relationship is transferable to whatever medium may be used for the expression of that truth.

The common origin of the game-forms, and the development of the element of skill, apart from the dramatic, point to the ultimate development from this embryonic structure to the forms of science and of art; in other words, the two forms of truth are thus expressed: one, the truth of the existing factors of nature; and the other, the truth of the relation of these various factors when combined in an organic whole. The first form of truth is revealed

to the physical senses, and the second to the imagination, for in the second the existing forms become symbols, and in the final outcome, beauty; the test of the truth of the symbolic presentation, is the revelation to the senses.

The logical development from the games of skill is thru the co-operative occupations for food, clothing, and shelter. In the conflict with nature and with other forms of life, the invention of mechanical aids to compete in the struggle is only a greater mastery of the earlier games of skill and chance. While the child needs to make the adjustment from the game to the occupation, he needs also to bring the unity of the two to consciousness, and to realize the elements in the evolving occupation, in order that the instinctive and emotional interest developed thru the games may be carried over into the occupation. The development of the dramatic game, the song and dance, is thru the arts of movement—music, poetry, drama; the idealization of the occupation and its relations, thru the realization of the values.

To gain a knowledge of physical forces involves their measurement—the origination and mastery of mathematical symbols; and to use that knowledge by translation involves the abstraction of it thru sign-making-language symbols in the various forms. In this process is the living realization of the three "R's." There is thus suggested, thru the spontaneous activity of the child, the beginning of the mastery and organization of the factors of life; secondly, the representation of these factors by means of signs, that the knowledge gained may be translated to other factors, and thus more life be vicariously experienced; and lastly, the relating, the putting together, of these factors, either directly or by means of their symbols, that the final, the eternal values may be known thru their relationship.

There follows, from the biological and psychological standpoints, the consideration of the stages of individual development. Again we quote from the *Elementary School Record*.

The first stage found in the child, say of from four to eight years of age, is characterized by directness and promptness of relationship between impressions, ideas, and action. The demand for a motor outlet for expression is urgent and immediate. Hence the subject-matter for these years is selected from phases of life entering into the child's own social surroundings, and as far as may be possible, capable of production by him in something approaching social form—in play, games, occupations, or miniature industrial arts, stories, pictorial imagination, and conversation. The material is presented as something to be taken up into the child's own experience, thru his own activities.

In the second period, extending from eight or nine to eleven or twelve, the change comes to the child from his growing sense of the possibility of more permanent and objective results, and of the necessity for the control of agencies for the skill necessary to reach these results; when the child recognizes distinct and enduring ends which stand out and demand attention on their own account, the previous vague and fluid unity of life is broken up. The mere play of activity no longer directly satisfies. It must be felt to accomplish something—to lead up to a definite and abiding outcome. Hence the recognition of rules of action. That is, of regular means appropriate to reaching permanent results—and of the value of mastering special processes so as to give skill in their use.

But in recognizing that this is the period of technique, of getting facility, skill, in particular directions, we must keep in mind certain fundamental principles. First, the

growth is gradual; secondly, the interest in technique, in acquiring skill, demands, in order not to lead to arrested development, a sufficient background of actual experience; and, in the third place, the introduction to technique must come in connection with ends that arise within the children's own experience, that are present to them as desired ends, and hence as motives to effort. . . . The prime psychological necessity is that the child see and feel the end as his own end, the need as his own need, and thus have a motive from within, an intense and impelling motive, for making the analysis and mastering the "rules," *i. e.*, methods of procedure. This is possible only as the formal work is kept in connection with active, with constructive, and expressive work, which, presenting difficulties, suggests the need of acquiring an effective method of coping with them.

Carrying the general statement over to this special study it would seem that what has been called educational in physical training, in the terms of education, technique, and what has been termed recreative, is expression. The child's first actions are expressive in the sense of bringing a thing to consciousness, but in the process of gaining consciousness there comes gradually the sense of the inadequacy of the expression and the desire to intensify consciousness by a fuller expression. The necessity for training, for technique, grows out of this desire for more adequate expression. There is in this both the elements of play and of work; play in the sense of realizing the end, and work in the sense of mastery over the means to that end.

In this effort of the individual to intensify consciousness there is, on the one hand, the little child's play, and on the other, man's present attainments in science and in art. The achievement of the one from the other is thru action, and the educative process is the translation of activity to its intellectual and spiritual values. The vital thing in education is the translated activity, the necessary counterpart is the mastery of the symbols for the process. In physical education there is need of much study so to direct the activity that the translation of the expression will involve the symbols, and the technique of the expression, the development of the body.

HOW FAR SHOULD PHYSICAL TRAINING BE EDUCATIONAL AND HOW FAR RECREATIVE IN COLLEGES AND UN- IVERSITIES?

R. TAIT MCKENZIE, PROFESSOR OF PHYSICAL EDUCATION, AND DIRECTOR OF
THE DEPARTMENT, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PA.

To college conditions it is the practical application of the principles so clearly stated by Miss Crawford in her paper that we have to consider in this discussion, and if the object of all education is to develop and direct the latent powers of the individual in such a way that he will be most useful to himself, and most valuable to the state as a citizen, it is especially important that this should be kept prominently in mind, for those who are approaching the age when they must cast aside the leading strings of the schoolmaster and assume independence of thought and action.

The college student is at the golden age for educating his physical powers. His growth is almost completed; his heart and lungs having caught up with the great increase in body-height and -weight, that takes place from twelve to sixteen, and with his newly acquired physical powers still practically untried.

We find, however, that on entering college, most students have to begin with the simplest movements and easiest muscular tasks. Many men cannot jump over a cord two feet from the ground, or lift their weight by their arms. They do not know how to stand properly erect, or to answer promptly or correctly a word of command. They should begin with class gymnastics—marching formations, drills, and simple feats to teach control, agility and alertness—to give them speed and strength. This work is educational rather than recreative, and to lighten it, gymnastic games are introduced which are designed to cultivate some special physical quality; *e. g.*, alertness.

Athletic games may be modified to conform to this educational requirement, but, as a rule, they are too wasteful of time to be so used; *e. g.*, baseball.

Athletic games have, however, the important advantage of giving an ethical or moral training that is quite as important to the future citizen. The bruises and fatigue of games like football act as a useful counter to the ease, or even luxury, of the average youth's surroundings. They develop courage, loyalty to the team, to the institution, and by extension, to the land of his birth—the essence of patriotism—and so have an influence in molding character, that would be hard to overestimate.

The rounded college course in physical education should then include those formal gymnastics and the gymnastic games that train the body to know its possibilities and limitations in all the activities of running, leaping, and climbing, for which it is adapted; that give the prompt response to the word of command, and teach that discipline of obedience, which is so essential for all great achievements. It should include those athletic sports for all but the physically unfit that cultivate individual daring, courage, and pluck; and it should not overlook those games which are the epitome of life, where *inherent manliness* is put to the proof, and where, as representatives of their club or college, they have to uphold her good name on track and field, as in future life they will be called upon to do by their town, party, or country.

DEPARTMENT OF SCIENCE INSTRUCTION

SECRETARY'S MINUTES

FIRST SESSION.—TUESDAY, JULY 4, 1905

The department met in the auditorium of the Asbury Park High School, and was called to order at 10 A. M., and opened by an address by President Frank M. Gilley, instructor in physics and chemistry, High School, Chelsea, Mass.

The following program was then presented:

1. "Correlation of Mathematics and Science," by Clarence E. Comstock, department of mathematics, Bradley Polytechnic Institute, Peoria, Ill. Discussion was participated in by Lambert L. Jackson, Normal School, Brockport, N. Y.; F. T. Jones, University School, Cleveland, Ohio; William J. Holloway, Maryland State Normal School, Baltimore, Md.; Joseph V. Collins, State Normal School, Stevens Point, Wis.; George Macloskie, department of biology, Princeton, N. J.; and William McClain, London, Ohio.

2. "Science Teaching in Elementary Schools," by Hugo Newman, principal of Public School No. 33, New York city; followed with lantern illustrations of work done. Discussion by A. T. Schauffler, district superintendent, New York city, who also made use of the lantern to illustrate his paper.

The following Committee on Nominations was appointed by the president:

H. L. Morse, Troy, N. Y. O. W. Caldwell, Charleston, Ill.
William Franklin Watson, Greenville, S. C.

SECOND SESSION.—THURSDAY, JULY 6

The department was called to order at 2:30 P. M. by President Gilley, and the following papers on the teaching of biology were presented:

1. "Some of the Common Insect Pests, and How the Children Can Study Them," by John B. Smith, professor of entomology, New Jersey Agricultural College, Experiment Station, New Brunswick, N. J. This paper was illustrated by lantern slides, and was preceded by a few remarks on the author's experience in handling the mosquito problem. Discussion followed in the form of a talk on forestry, illustrated by lantern slides by H. A. Smith, of the Bureau of Forestry.

2. "Teaching Biology From Living Plants and Animals with a Projection Microscope: A Demonstration of Apparatus and Methods with Living Specimens," by A. H. Cole, department of biology, Lake High School, Chicago, Ill.

The president then called for the report of the Committee on the Physics Courses. The report on the "Course of Study for a First-Year Course in Physics," and an "Outline of a Second Year of Physics for High Schools," were presented.

These reports were discussed by E. R. Whitney, Troy, N. Y.; O. W. Caldwell, Charleston, Ill.; F. R. Nichols, Chicago, Ill.; and E. P. Churchill, Tarrytown, N. Y.; after which it was moved by Irving O. Palmer, Newtonville, Mass., that the report on the first-year course in physics, and the outline of a second year of physics for high schools, as presented by the committee, be adopted. The motion was seconded by several, and was unanimously carried.

The report of the Committee on Nominations was read and adopted, and the following officers were elected for the ensuing year:

For *President*—H. A. Senter, head of the department of chemistry, Omaha High School, Omaha, Nebr.

For *Vice-President*—Irving O. Palmer, science master, Newton High School, Newtonville, Mass.

For *Secretary*—E. R. Whitney, vice-principal of High School, Binghamton, N. Y.

The department adjourned at 5:45 P. M.

H. A. SENTER, *Secretary*.

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

FRANK M. GILLEY, INSTRUCTOR IN HIGH SCHOOL, CHELSEA, MASS.

We are here together again in the year of our Lord 1905, and of the independence of the United States of America 129; or if you like—and I don't know why the historians should have matters their own way even in fixing dates—the year of the separation of fluorin 14, and of the discovery of Roentgen rays 9. We are here to see what we can do for science, and for students of science—and by students I mean teachers as well as pupils. The first step in that process is to see what there is to be done.

In general, it is safe to say that the outlook in science teaching is today brighter than ever before. During the past few weeks commencement speakers all over the country have been telling us of the increased demand for scientific instruction in technological schools and scientific departments, and reporting at the same time greatly increased endowments to meet such demands. But in secondary schools the outlook is not so bright. The demand for instruction, to be sure, is increasing there also, but neither the schools nor the teachers have an equipment commensurate with the part that science must have in the education, or the development, of the present century. Secondary education, even more than collegiate education, needs, and should have, actual endowment. It must be admitted that science in secondary schools has not yet proved the success that its friends have prayed, and its opponents feared, it might be. That it has not proved so is due to the lack of equipment of which I have spoken, and the many difficulties under which the science teachers labor. The causes of these hindrances are not beyond remedy.

Perhaps the most serious difficulty under which the science teacher labors is the great number of demands on his time, even the time he should devote to recreation, professional study, and culture. He often has to teach from three to six sciences, each as large a subject as a language, and each represented by publications, many of which he must read—publications of far greater extent than the growing literature of any one language.

The administrative duties of his department, the selection, purchase, care, repair, and use, of apparatus, and the obtaining of money, the superintendence

of assistants, and the general oversight of laboratories and equipment, require a portion of his time in school hours. He cannot teach and attend to these duties at the same time. In some instances, additional burdens in the management of the school, the control and supervision of the athletics, for instance, requiring several half days' time per week, have been put on the already overburdened science teacher. Since his subject is larger and more exacting than those of other teachers, and requires more time both in school and out, all the time and energy he can give to it is none too much. He should not be required to give any to other duties.

Besides being hindered by multifarious duties, the science teacher is hampered in his methods of teaching. The changes in courses of study, and the policy of management of schools, always lag behind the advancement in methods of teaching. A reform in mathematical teaching, or in language, is easy to inaugurate, but any change from the beaten paths in science instruction requires changes that are made too slowly.

In most schools today the science teacher is urged to have his methods on the established methods of teaching other subjects—the method of the assigned lesson and the recitation thereon. To do this would be to deprive science teaching of its greatest value—the necessity for constant original thought on the part of the pupil. I think it is an open question whether it would not be better to introduce more of the science method into other subjects than to reduce science to the dead level of memory work.

Another difficulty which, if anything, grows, rather than diminishes, as time goes on, is the lack of buildings and equipment. Demands for these essentials are too often outgrown before they are fulfilled. The constantly growing need for equipment is seldom anticipated, more often it is not met for years. New laboratories are overcrowded during the first year they are used.

It is perhaps safe to say that over three-quarters of the secondary schools have no equipment in science worthy of the name. An expenditure of \$5 per year per pupil for books is often exceeded in the upper classes; yet the science department that has the inadequate expenditure of \$2 per pupil per year is considered very fortunate. Better by far postpone the introduction of scientific studies, saving for the time being the salaries that would be paid, until an equipment in some one branch is assured. Apparatus and equipment that has become useless should be "scrapped," and not carried on the list as effective. In view of the large sums that could be profitably spent, I might suggest here that secondary science work is a good field for private contributions.

This first cause, then, of the present unsatisfactory condition of science teaching, the lack of proper equipment, can be removed in a year or more with a proper supply of money. The second, the lack of able and well-trained teachers, is not so easily disposed of. Certainly it is no less important than the other. Fully half of the ineffectiveness of science teaching in second-

ary schools today is due, as it seems to me, to the fact that nearly all science teachers have had their training in college, and college methods are not suitable for secondary work. For the tendency of teachers is to teach as they have been taught. The example of their teachers is more impressive than the precepts of the pedagogical department, which does not always emphasize the need of thoro knowledge.

For this there seems to be no immediate remedy. No single school exists today where complete instruction can be obtained in the subject-matter, methods of presentation, and preparation of equipment. The manipulation of the projection lantern, the preparation of lantern slides, specimens, apparatus for demonstration or to serve as models, the use of charts and diagrams, should be learned by every science teacher.

Even in such schools as exist, those preparing to teach science do not spend enough time. Most of them spend one or two years, taking one, or at most two, courses in each subject; whereas language teachers have, as a rule, from four to nine years. This is a wrong proportion. I have already pointed out that any one science taught in a secondary school is a larger and more constantly growing subject than any one language. The teacher who handles several such sciences should have at least as long training as he who teaches one language.

One of the primary causes of this difficulty is the fact that, in most cases, the man who studies one branch of science as long as a language teacher studies a language can earn more money in practical work than in teaching. Large commercial awards await the man who perfects himself in physics, chemistry, or geology. If such a man teaches at all it is either during the first year or two of his study, or else in university work, where the dignity and rewards are greater, and he has leisure to pursue practical work. In either case, he is lost to the secondary school. These matters can be improved by demanding longer preparation on the part of teachers; by providing more elementary courses in colleges and technical schools, courses which, including the practical and interesting applications, are presented in a fullness and simplicity that would be intelligible to a high-school pupil; by providing courses for teachers in summer schools that shall deal with sciences from the school, rather than from the college, point of view; and by making such inducements in increased salary as shall encourage teachers to follow these courses year by year. Moreover, science teachers should be allowed a sabbatical year for foreign study, and inducements should be offered in the way of salary, etc., for good teachers to enter upon, and remain in, the work. They should be allowed constant opportunity for study while in service. The training of science teachers should be not only in school but in the growing world, and should never cease. The habit of continual daily study must be formed and exercised.

One of the ways to make the position of a good teacher more attractive is to relieve him of some of the demands on his time in ways I have already

suggested. But more than this, he should be relieved of the necessity of teaching any part of the mathematics required for his subject by proper correlation of mathematics with science, especially with physics and chemistry. Early in the course of mathematics introduce squared paper and the plotting of simple equations, the teaching of simple trigonometric functions, and the use of physical problems. Specific gravity, composition of forces, moments and the center of gravity, motion, force, impact of projectiles, machines, efficiency of engines and machinery, photometry, thermometry, Boyle's law, expansion of gases, linear and cubical expansion, mirrors, refraction, foci, size of object and image, arrangements of cells, resistance, and the electric motor and dynamo are a few of the topics in physics alone that supply practice in algebraic formulas, and the manipulation and derivation of useful algebraic equations. Any of these would be not only more useful, but more interesting, than the fabulous hare and tortoise races or impossible railway schedules. All this requires only the simple portions of algebra and geometry. What need is there, at any stage, of complicated exercises and abstruse problems in algebra and geometry, if the problems that are met in science demand so small an amount of mathematic knowledge?

The manual-training and science departments should be made more mutually helpful. Without some practical experience in a few trades, scientific knowledge is often merely academic. The close acquaintance with real things, the study of the property of inertia, the only property that all matter possesses in common, and the most important one, is best studied in the shop. There are no laboratory exercises in physics that teach much of the laws of motion. The hammer and chisel, the hammering, bending, and spinning of metals teach the properties of matter. The workman does not merely know, he *feels*, what is the right way to perform an operation. This arrangement I suggest fully as much in behalf of the manual-training schools as of the science teacher. Without science an artisan works merely by rule of thumb. The problems in the mechanical world require a knowledge both of constructive processes and of the scientific principles that underly them. The specialist becomes a specialist merely because he has no time for more than a narrow portion of one subject. His narrowness is a weakness, never a source of strength. Therefore the manual-training schools should teach much physics, and the physics teacher should be trained in all branches, and more than the manual-training school teacher. I cannot emphasize too strongly the fact that technical education must rest on a broad scientific basis; for the time is past when improvements can be made by novices.

A portion of the hand-work of the manual-training school might well be apparatus and models for use in science work. By this arrangement much of the mystery which the apparatus has for the new pupil would be dispelled. An interest would be aroused in the manual-training department, and in its productions. Homemade kites, boats, models, and toys are more real, and interest us more, than those we buy. If they are our own, or the production

of our schoolmates, if we are more or less in at the making of them, they have the strongest hold upon our interest.

The training of the hand, as I understand it, is to carry out accurately some motive impulse of the will. If the manual-training and science instruction fit well together, there will be economy of effort and efficiency in work. Accuracy of measurement, for instance, is taught in both departments. In one, we discard the incorrect results obtained or computed; in the other, the imperfect object itself. Correlation of the two departments would prevent the waste. It would also double the amount of energy available for use at critical points. That there is no such thing as an absolutely straight line, an object exactly 2.5 cm. long, or a perfectly elastic body, or an irresistible force are conceptions which the average pupil finds, for some reason, very difficult to grasp. If he had them presented to him in both departments he would be almost certain to get hold of them from one side or the other.

Further correlation of science with other branches would bring about similarly beneficial results. Science teaching should be brought into relation with language work by teaching the French, and particularly the German, names along with the English ones for each substance and process. *Azote* means to 40,000,000 Frenchmen, and *Stickstoff* to 70,000,000 Germans, what nitrogen does to English-speaking people. *Sauerstoff* is "the gas that makes things burn" to one-half the educated, scientific world. There are five common names in English for copper sulphate. We learn them without great effort. Why not learn one more name? The pupil will then be able with the additional study of a little academic French or German (given in the regular modern language courses) to get at the vast amount of science which is, and always will be, locked up in those languages. Science offers an inexhaustible list of subjects for expository themes in English, and no subjects could offer better training in accuracy of expression.

Another opportunity of improving science teaching, one which is not used to half the extent that it should be, lies in the use of museums, parks, and factories. These offer the city child opportunities similar to those of the country child (tho not so great) of acquiring simple facts from observation. Things are presented to the mind first as wholes, and, as far as possible, in the true setting in the natural environment. The city of New York has proved that this work is very useful. It is true that our museums, at least, are not all that they might be in some respects. We should have models like those in the South Kensington Museum, some of which work continuously when an observer presses a button. Almost side by side are the first locomotives ever made and models, many of them operative, of improvements up to the present time. These models could be made by amateur mechanics. Such models should be larger than ordinary toys. There is, it seems to me, a psychological size for each model, large enough for the separate parts to be distinct, yet small enough for the machine to be viewed as a whole; a size, perhaps, that a boy could carry, and that he imagines would carry him.

Further practical efficiency could be given to science teaching by establishing "continuation schools" in science and the trades as has already been done on a small scale in several cities. They are of great value to business men and mechanics. Such men are able to do more and better work in a surprisingly short time after they begin to study. They know more, can do more, and earn more money. The increased wages for one year more than offsets the total cost of maintaining such a school. They find not only advancement, but relaxation, in such classes. The best of work is done in such classes because the pupils, being in some employment, are earnest.

The effect of these schools is more far-reaching than one would at first expect. After all, it is the general sentiment in a community toward education that determines the success or failure of school systems. The interest of parents in education can most easily be awakened by educating the parents themselves. The wage-earner is a producer, and should have as much attention as is given so freely to the regular pupils, all of whom belong to the unemployed in a certain sense. The work of the older pupils is of the best kind, as is admitted by all who have taught in evening high schools, for the eagerness to learn and the dogged persistence to conquer each point by one's self make up for the lack of quickness. Just as the use of the hand arouses the activities of the brain, so the use of the brain in intellectual work will lead to more efficient use of the hand in any trade. The thinking man makes a better soldier and a better artisan.

In the matter of laboratory work, too, I think the teaching of science in secondary schools is susceptible of improvement. It is now, to be sure, pretty generally admitted that instruction in science, if it is to be instruction at all in any real sense of the word, must include some laboratory work. In spite of this, however, there are still many schools where the quality or quantity of the laboratory work (too often both) is such as to make it unworthy of the name.

By this I do not mean to say that less attention should be given to other methods of instruction. On the contrary, I see clearly the importance and the need of more attractive and well-illustrated lecture-table experiments. A most hopeful sign is the attention now given in biology teaching to the living plant or animal. A large part of the best work that is being done in this direction is the instruction given to the class as a unit with the aid of the demonstration lantern. The projection microscope in the hands of a skillful teacher enables each member of the class to see and study on the screen, while the results of individual work with the compound microscope would yield negative results. The life-history of common insects is of unfailing interest. The fact that some are helpful, others harmful unless held in check by parasites, the development of new, or the improvement of existing, food-plants, the bacterial and chemical means of making atmospheric nitrogen combine and form useful fertilizer, all these are live topics for study. Is it not natural that a child likes to study tangible things instead of abstractions, to watch

from day to day the life-history of an animal, or of insects, in the laboratory or aquarium? Nomenclature and plant analysis actually are much less important than direct observation.

The school garden might have added to it a school forest where each year many trees are planted. The sense of partnership in its success, the delight in watching the growth, slow but sure, in learning to distinguish one kind of tree from another, and the love of nature that comes from continued association would in time aid in the reforestation of the waste land of this country.

I know that it is always easy to suggest reforms. Any earthly creature could outline in five minutes a millennium such as the angel Gabriel has not dreamed since time began. I have no more patience than you have with the man who sits coolly in the shade and criticises him who toils in the sun. But between his criticism, or that of the millennium dreamer, and mine, I beg you to note two essential distinctions. The first is that I too am toiling in the sun. The second is that there is not one of the improvements that I have suggested that could not be put into effect, under proper conditions, within five years, and by far the greater part could be put in working-order at once. There is no reason in the nature of things why, if we all work together, the sixteenth year of the separation of fluorine should not see them all accomplished.

CORRELATION OF MATHEMATICS AND SCIENCE

CLARENCE E. COMSTOCK, PROFESSOR OF MATHEMATICS, BRADLEY POLYTECHNIC INSTITUTE, PEORIA, ILL.

A foreword in regard to the point of view of this paper may be of service. I take it that any interplay between the school courses in different subjects to be of lasting value must spring from underlying relations which serve as essential links binding those subjects into one. This interplay must result in mutual helpfulness, or else it fails of its purpose. Science is not to be lugged into mathematics as an outsider, nor is mathematics to be foisted upon science as an added burden. If it can be found that the one is indispensable to the other, then, and only then, can there be any reasonableness in the remarks offered in this paper. I trust that you will find the position of the speaker a thousand miles removed from that of the teacher in a grammar school of a decade or two ago, who, holding up a bird before her bright-eyed pupils, asked them to count its eyes, its legs, its toes, its wings, etc., and then propounded these elucidating questions: "How many eyes and toes does the birdie have? If it had three more toes, how many would it have in all? If you multiply the number of its eyes by the number of its toes, what would the result be?"

From the point of view of the scientist, mathematics is a tool of science; from the point of view of the mathematician, science is a field for the application of mathematical truth; from the view-point of both, mathematics is a

method of science. In fact, it may be called the ultimate method of science; the more perfectly a science is developed, the more mathematical does it become, until it reaches a stage when it is classified as mathematics. Away in the past was it when the sciences of arithmetic and geometry assumed their mathematical names. In comparatively recent years mechanics has reached this same development, and is now classed as mathematics. The various branches of physical science—astronomy, meteorology, and chemistry—are rapidly being subjugated by this method of exact investigation; while the biological, mental, and social sciences are still in a very unmathematical state of evolution. The method is of such power and value that it must itself be made the subject of investigation; its inner relations must be scrutinized, and the inevitability of its conclusions established on a firm basis. There has thus arisen the most wonderful and enthralling science of them all—that science which defies definition, as it transcends all limiting bounds; that science which rears unto itself in imagination a palace whose walls and turrets know not the limiting thralldom of time and space; the queen science of them all—abstract mathematics.

If this view of the relation of mathematics and science in general be true, then it would seem that there should be a corresponding intimacy between the courses offered in schools and colleges for instruction in these subjects. Of course, there is, and always has been, a certain degree of interplay between such courses; but the query obtrudes itself: Cannot a more vital and effective relation be maintained? It is easy to see that the study of mathematics is absolutely essential to anything but a very superficial knowledge of the sciences. Physical laws of motion, the laws of chemical action, and the laws of the formation of crystals are derived from observed data and verified by the methods of the higher mathematics. It is the very language of science. To read Shakespeare one needs to know the meaning and the use of words. To read Hilton's *Crystallography*, Preston's *Theory of Light*, or the works of the masters in chemistry, a very considerable acquaintance with mathematics is a prerequisite, if they are not to be sealed books.

But it is not to the scientific man alone that mathematics is indispensable; the engineering profession, that vast army of workers in applied science, is equally in need of such knowledge. The minute differentiation of the engineering profession, which has in very recent times resulted in countless pursuits which require technical education, has opened an ever-increasing field for the operation of human activities. The specialists who concern themselves with problems of sanitation, water-supply, highway construction, marine architecture, bridge-building, the telephone, tannery, refinery, and manufactory; the machinist and the designer—all these, and a thousand more, have need of expert technical knowledge. It is becoming more and more apparent that success in these technical professions is conditioned upon such knowledge and training. In a recent meeting of the National Association of Electrical Engineers it was the generally expressed conviction that one

prerequisite for success in that profession is a thoro training in mathematics. It is clear that science is an indispensable part of modern civilization. Of course, science is not the only element in education, for culture is broader and must include much more. And yet it is certainly true that, when so large a part of modern human activity is based upon scientific knowledge, it becomes necessary that the schools furnish ample opportunity for adequate instruction in science; and if in science, then also in mathematics.

An examination into the teaching of science in the schools and colleges of America for the past two hundred years or so reveals some interesting things. Until very recently its study was considered of little importance. The amount of mathematics required in courses in astronomy and natural philosophy in early American times can be inferred from the amount of mathematics taught. At Harvard in 1643 the mathematical course began in the senior year, and consisted of arithmetic, geometry, and astronomy. The science of algebra was unknown on the continent. The importance ascribed to mathematics is shown by the time devoted to different studies: philosophy, 10 hours; Greek, 6; rhetoric, 6; oriental languages, 4; mathematics, 2.

In 1726 natural philosophy was given in the junior year, but was metaphysical rather than mathematical in form; nor could it be otherwise, as arithmetic and geometry were still taught in the senior year. By 1742 algebra was taught at Yale, and the mathematical studies were put earlier in the course. The freshmen had arithmetic and algebra; the sophomores, geometry; the juniors, mathematics (probably trigonometry), conic sections, and natural philosophy. By 1766 fluxions had been introduced as an optional study.

Since 1816 the whole of arithmetic has been required for entrance to Harvard. The catalog of 1825 adds algebra thru simple equations, with roots, powers, and the progressions. In 1843 a little introductory geometry was added. The mathematical course at Harvard in 1818 was as follows: freshmen—algebra and geometry; sophomores—algebra and trigonometry, with application to heights and distances and navigation; juniors—natural philosophy, astronomy, mensuration of surfaces and solids, surveying; seniors—conic sections, spherical geometry.

The physics taught in the colleges of the eighteenth century required very little knowledge of mathematics. To master Olmsted's *Natural Philosophy*, which was extensively used during the middle of the nineteenth century, a fair knowledge of algebra and geometry, with a very little trigonometry, was sufficient. Almost no mathematics was used in the treatment of heat and electricity, whereas now calculus is commonly used in college courses in physics. In former days, when the college course (classical) chiefly trained for the so-called learned professions, the student found very little or no field in which his mathematics was needed. There was no application for it in his serious work, and it was therefore studied purely for a cultural value, as a means of training the general logical and reasoning powers of the mind.

But, with the growth of scientific study and the rise of scientific courses and technical schools, the study of mathematics has assumed a much more important rôle. It now becomes an essential prerequisite to the future work of a large number of students; it becomes highly functional rather than decorative or gymnastic. We begin to learn that the real worth of mathematical study is not the general training of the mind, but the training of the mind in mathematical thought, to the end that our ignorance of the phenomena about us may be lessened, and our impotence in the face of the forces which surround us may be reduced.

One would naturally suppose that such an important change in function ought to have considerable influence in determining the form in which mathematics is presented to the student. It is having some effect in the dethronement of the mathematical fetish; the increasing tendency to make mathematical study optional is traceable, I think, in some degree to this cause. And yet the courses themselves are too little affected. In most cases the vital connection between mathematics and science is not dwelt upon, and the student fails to find any place for his mathematics in his scheme of life. He learns to cipher, but sees in it nothing but an artificial pastime. Now, ciphering is of value when ciphering leads to some desired end. The ability to solve a quadratic equation in itself is worthless; it is only when the equation is solved for some other end that the ability to solve it has meaning.

It appears to be true that under present conditions the student is not properly prepared in mathematics for his work in science. A training which does not furnish the student with the best and most efficient mathematical equipment for such work is certainly misdirected. This brings us to the main quest of this paper: How can courses in mathematics be organized to better meet the needs of science?

A speaker in a recent convention of electrical engineers said: "What we need most is a common-sense mathematics." This voices what seems to me to be an imperative need. We need a mathematics stripped of its artificialities and direct in its purpose. It is often a far cry from the mathematics of the schools to the mathematics of actuality. Our texts are filled with cunningly devised exercises which are remarkable for nothing but their intricacy, tangles, and labyrinths, the like of which are found nowhere save in the brain of the drill-master. They are meaningless devices, "which," to use Beltrami's language, "make the student's mind sterile thru the everlasting exercises which are of no use except to produce a new Arcadia where indolence is veiled under the form of useless activity."

Such artificial exercises, it is true, afford a certain training, but a training in nothing else than dexterity in the manipulation of impossible formulæ—"brain-spinning," as the Germans call it. Now, altho a high degree of dexterity in the use of algebraic forms is essential to successful study of higher mathematics and science, yet that dexterity is not the main thing to be sought. That which is of the most importance in mathematics as well as in science is

the interpretation of the mathematical forms used. In the higher mathematics there are countless forms that do appear and call for transformation or simplification. Let such forms be used as exercises in lower reaches of algebra, instead of the useless forms so prevalent in our texts. A few illustrations may make clearer this distinction between mathematics as it is taught and mathematics as it is used.

A recently published algebra tells us that "an unknown quantity is usually denoted by one of the last letters of the alphabet, as x , y , z ." Now, this is far from being the fact, unless you restrict the field to elementary algebra. Open any book on astronomy, physics, chemistry, meteorology, or higher mathematics, and the exact contrary is found to be the case. Such equations as these meet the eye on every page.

$$\frac{a}{b} = \frac{\sin A}{\sin B}$$

$$A = \pi r^2$$

$$s = vt - \frac{1}{2}gt^2$$

$$c = \frac{E}{r + R}$$

$$p = ae^{\phi}$$

$$w = c \log \frac{v_2}{v_1}$$

$$v = e^{\alpha y + \beta x}$$

$$I = \int \rho^2 dM$$

In fact, in the higher mathematics x and y have a meaning largely restricted to the Cartesian co-ordinates. The constant use of the x , y method is harmful in that it relieves the student of the necessity of scanning an equation; for the unknown for which the equation is to be solved is at once recognized, and the solution follows mechanically, whereas some attention must be given to such an equation as

$$D = \frac{w}{v} \text{ or } s = vt - \frac{1}{2}gt^2 ;$$

and right here lies a fundamental of great importance. From the standpoint of science an equation is looked upon as stating a relation between certain numbers of co-ordinate importance. The significance of the equation rests in this, that if some of these numbers be known, the others can be found. Now, in order that algebraic training shall be of advantage to the student of science, this view should be firmly impressed upon him. Too often the equation is regarded as a formal puzzle to be solved, rather than as an essential relation to be perceived. It is in the interpretation of the equation and the result of its solution that true algebraic thought resides. It were better to solve a limited number of equations understandingly than a large number mechanically. Nor will this thoro consideration of a few examples prevent the acquiring of dexterity in solution; for if all steps are understood to have a meaning and are thoroly mastered in their relations, the very clearness of perception thus produced will induce a better performance. Clear seeing is more than half in the doing.

Again, the scholastic method so prominent in all our texts produces the result pointed out by a recent scientific writer: "The regular text-books of mathematics rather perplex than assist the chemical student who seeks a short road to a working knowledge of higher mathematics." The scientific student needs a thoro insight into mathematical methods, as well as a working knowledge of them; but to obtain this it is not necessary for him to go thru all the artificial rubbish with which so many works are incumbered. A man can gain his exercise and develop his mathematical muscle among the green fields and wooded lanes of God's universe, rather than on the tread-wheel in a man-made gymnasium. I protest against a condition of affairs because of which it is possible to say that instruction in mathematics befores the issue and cheats the scientific student out of the very results for which he began his study of mathematics.

As a second element in the improvement of mathematical training I would suggest that the best mathematical methods be used as early as possible. As mathematical science advances, it produces better and better methods for solving given problems. It was a long step in advance when multiplication was substituted for a large class of additions; and one can hardly express the debt the world owes to Napier and Briggs for logarithms. Descartes, Newton, and Leibnitz have forged for us titanic instruments with which to work. The progress of civilization is conditioned to some extent upon the application of these discoveries to the needs of mankind. Without a murmur, the most of us replace our tallow dip with the incandescent fiber, the messenger post with the copper wire, the copper wire with the wireless telegraph. But there is a great outcry when any of us propose to use logarithms in arithmetic, trigonometry in geometry, or calculus in the secondary school.

The history of mathematics is but the story of the victorious march of new and better methods; new ideas and processes replace the old; new discoveries increase efficiency. A search in the algebras of a generation ago would not reveal the presence of the remainder theorem, the graph, or the determinant. Only within late years has the ratio definition of the trigonometric functions become current in our teaching. It is a waste of time and of perspicuity to teach simultaneous equations without graphs and determinants, or the geometry of the triangle without trigonometric functions. The calculus offers instant relief among the antiquities of college algebra and analytic geometry. Says Professor Jules Tannery, of the *École Normale Supérieure*, in speaking of the use of integral calculus in the secondary school: "After these lessons, say, nine or ten, one half-hour is sufficient to establish the expressions for all the volumes of elementary geometry." Why not use the best instruments the mathematician can turn out, at the first opportunity that offers? Because, says one, the student cannot understand all the fundamental theory of the subject. Especially is this urged in the case of calculus. But would you throw the equation out of algebra because it is impossible to prove to the child that every rational, integral equation has a root? Shall we give up

multiplication because we cannot construct a definition that will include all cases of multiplication? Indeed, we never get to the bottom of anything. What is number? No one can tell us, not even Professor Peano. We are often led away by the will-o'-the-wisp, thoroness, until we lose our pupils in the maze and perplexities of the more advanced reaches of a subject much too abstract to be within their powers of comprehension; whereas the beginnings of trigonometry, analytics, calculus, and differential equations open a field of clear and simple ideas, well within their power of understanding. It is folly to insist that a problem be worked by a certain method of elementary arithmetic, when it can be done in a better way by algebra or calculus. It is high time to strike off such shackles as those with which Euclid bound elementary geometry, the ruler and the compass.

The sciences, astronomy, physics, chemistry, and mechanics, can make powerful use of these higher forms of tools. What waste of effort to treat the composition and resolution of forces without the help of the trigonometric functions! The ideas of differentiation and integration are wonderfully productive in the hands of science. We can best benefit the student of science by giving him an early mastery of these powerful agents. He must have that mastery, if he is to have anything but a superficial glimpse of the fields of science, or if he is to be of material service in the application of that science to the subjugation of the world.

But there is a third way in which mathematical courses may better fit for service—the consideration of real scientific problems. The stating of a problem in algebraic form, its solution, and the interpretation of the result are rightly regarded a valuable part of algebraic study. All our algebras contain long lists of such problems, and it is to the character of these problems that I wish to call attention. They are for the most part manufactured, unnatural. A few illustrations, taken from an algebra published in 1904, will serve to make this point clearer:

A lady purchased 20 yards of one kind of cloth, and 50 yards of another, for \$30. She could have purchased 30 yards of the first kind and 20 yards of the second for \$23. What was the price of each?

This is artificial, as no lady would ever meet such a problem. Or this:

A fishing-rod consists of two parts. The length of the upper part is $\frac{5}{8}$ that of the lower part. The sum of 9 times the length of the upper part and 13 times the lower part exceeds 11 times the length of the whole rod by 36 inches. Find the length of the rod.

This was evidently manufactured for consumption in simultaneous equations. It is thoroly unnatural and impossible, and is a mere rehabiting of that old problem supposed to have been given by Euclid, in 300 B. C.:

A horse and a donkey, laden with corn, were walking together. The horse said to the donkey: "If you gave me one measure of corn, I should carry twice as much as you, but if I gave you one, we should carry equal burdens." Tell me their burdens, O most learned master of geometry.

As a contrast to these problems consider two:

A stone dropped from a balloon, rising at the rate of 32 feet a second, reaches the ground in 17 seconds. How high above the ground was the balloon when the stone was dropped?

It is desired to find the height of a tower or hill above a level plain. A 6-foot pole is set up, and the point determined where the line connecting the top of the tower and pole strikes the ground. The pole is placed at this point, and a second point determined in the same way. The distance between these two points is measured. What is the height of the tower?

Objection is often made to this sort of a problem, that it brings in matter that is unfamiliar to the pupil, and it is said that in the first class, such as deal with ages, money, capital, partnership, legacies, "there is an especial advantage in that the attention is not distracted from the algebraic side of the problem while the acquaintance with algebra is as yet slight." After considerable experience in using both kinds, I find that students will solve the second class as readily as the first kind. They may require more thought, but this is to be commended; for the thought is productive thought. Respect for mathematics can hardly be maintained if its interpretation is given in terms of how old is Ann, and if it seems to have no more serious purpose than the solution of a mathematical rebus. It were much better to present the dignity of a mathematics evolved to solve real problems; and the world is full of such problems—problems of number, mensuration, statics, and dynamics, which need offer no distracting ideas. The two problems just mentioned, the balloon and the tower problems, were solved with little difficulty by a class in first-year algebra, and several solutions given. These natural, real, vital problems should be spread thru the whole course of school and college mathematics.

Mathematics is an abstract science. Its glory is that it can proceed to the profoundest generalizations without appeal to the world of the senses; and yet its ideas at the start are abstractions from that world. From one point of view, geometry is a system of logic entirely independent of a physical world; yet our Euclidean geometry is but a classification of observed facts and the generalizations arising therefrom. The difficulties of a geometrical proposition may often be dissipated by the study of a model. In our geometrical teaching we are making constant use of diagram and model. The transit has come to be of service for furnishing material for the class in trigonometry to work upon. But this is about the extent of any appeal to the world of the senses, made in our classes in mathematics. To me this seems unfortunate, especially in view of the steady pressure by which mathematical study is being crowded into the earlier years of a student's growth. It appears to be undeniable that capacity for abstract thought develops late. Now, it takes thirty-six or forty-eight weeks to cover the same ground that was covered in twelve or sixteen weeks when geometry was a college study. Altho we have lengthened the time for the boy, we have made but little alteration in the method, forgetful of the fact that "boys are not men of a lesser growth. Boys are men in the process of making, and there the likeness ends." The impetus given to

the study of physical, chemical, and biological phenomena by the recourse to actual observation and experiment has been most remarkable. It would seem to me that a similar vitalizing movement may be of service to mathematics. There are dangers connected with the use of experimental methods in instruction, and laboratory work has often been carried to absurd lengths; and yet the study of the world at first hand can never cease to be the fountain-head of all serious scientific study. I firmly believe that the study of mathematical relations in concrete form by students of elementary mathematics is of great value. Last fall I asked a class beginning algebra to cut from a strip of cardboard 10 by $1\frac{1}{2}$ inches a piece containing 12 square inches. Not more than two out of a class of thirty could do it. I found that very few of them had ever used a scale or a tape-line. All of them could answer the abstract question: "The area of a rectangle is 15 square inches; one side is $3\frac{1}{2}$ inches; what is the other side?" The divorce between the abstract and the concrete had been so complete in their case that the connection had been entirely lost. This is but an instance of a widespread condition—the failure to embody mathematics.

As a fourth means of meeting the needs of a scientific age, then, I would make the suggestion that more use of actual experiment and observation be made in our classes in mathematics. You will pardon a reference to some work with which I am intimately connected. I make it with the thought that a bit of testimony from actual experience may be of service in this connection. In Bradley Polytechnic Institute we have introduced such experimental work to a greater or less degree for five or six years. The results lead us to increase rather than diminish such work. There are certain experiments usually performed in the physics laboratory that are really mathematical in form. But little physical knowledge is needed for their performance. A number of these are now performed in our mathematical classes; credit is given for reports upon them by both departments of mathematics and physics. It is not so much the purpose to teach physics as to teach mathematics in a setting of physics. In the beginning algebra class the balance and lever are used, and observations on the movement of a street car are made. The law of falling bodies, $s = \frac{1}{2}gt^2$, is tested by a stone dropped from the tower. Heights and distances are calculated, and then actually measured. This gives confidence in mathematical processes and control in their application. In the second year, devoted especially to geometry, the work is a little more serious. Careful reports are required on about thirty experiments, chosen because of the geometrical ideas involved. Among these may be mentioned reflection of light and formation of images in plane mirrors, refraction of light by prism, composition and resolution of forces, and inclined plane involving use of trigonometric functions. The same care and accuracy that are demanded in the physics laboratory are insisted upon. From this kind of work the student gets a more real and intimate hold on the meaning of geometric and algebraic truth. It is often objected that there is a waste of time in such

work; it is said that "the geometrical results can be arrived at more expeditiously in other ways." Is it not true, however, that the geometrical result is not the only thing to be sought? Fully as important is the setting, the value, and the utility of the fact. A boy may not see the use of filing a piece of metal to the exact diameter demanded by the teacher, but when he finds that the piece is too large or too small by the thousandth of an inch, to fit into the engine or machine he is helping to build, and has to be made over or thrown away, he learns something of great value. Just so, the student who finds that exceeding care must be taken if the lines determining the image in the mirror are actually to meet on his drawing, learns something from his own experience that the insistence of the teacher can seldom impart.

Our experience seems to point to two definite things. We are often told that, "no matter how geometry be taught, the student must be able to pass the entrance examinations set by the colleges and the universities." Now, while I demur to the view that the typical entrance examination is either a fair or a desirable test of mathematical ability, I am willing to admit that, since the examinations exist, they must be met. We determined to make a test in the examination just held two weeks ago. There were two classes in geometry to be examined: One, a class of boys, was given the entrance examination for one of the large eastern universities; the other, a class of girls, was given an entrance examination of one of our best-known woman's colleges. The instructor in charge of the classes did not see the papers until they were given him at the time of the examination. The class had reviewed but a very small portion of the work of the year. There were in the classes a few students whose general standing as students would debar them from being college timber. Of those who were at all eligible for going up for college entrance, but two out of forty were unable to pass, and those two were good students who always fell down on examinations from emotional or nervous reasons. Some of the papers were of a very high order. At least this can be said. After a training involving a large number of physical experiments, they were no less able to handle the reasoning of the abstract originals than are those who are not so trained, while at the same time they have in addition a real and intimate knowledge of mathematics as revealed in natural phenomena.

The other point of interest comes as testimony from the classes in physics. Said a boy who entered the physics class from another school, to his instructor in physics: "You talk to us as tho you expected us to know mathematics, and I seem to be the only one that has very much difficulty in using mathematics." Now, this is a crucial test.

This is the real service that instruction in mathematics may render to science. Not that science be taught as science in classes of mathematics, but that the language in which science speaks shall be taught and, as far as possible, mastered so that the science teacher may proceed with his teaching unhampered by the inability of the student to understand the language in

which he can most clearly and accurately put the ideas and laws with which he is dealing.

By such means, it would seem to me possible to make mathematics a more efficient instrument in the hand of the student of science or engineering. Nor would the student who is to become the pure mathematician receive a less worthy training. It is from a rich mathematical soil that the great mathematicians of the future will arise. It is Fourier who said: "The deeper study of nature is the most fruitful source of mathematical study;" and we remember that it was the effort to solve some particular problem of science that gave birth to most of the great advances in mathematics. In our study of mathematics, the queen of science, let us not get too far from that world which, to quote Kelvin and Tait,

is replete with astonishing theorems of pure mathematics such as rarely fall to the lot of those mathematicians who confine themselves to pure analysis or geometry, instead of allowing themselves to be led into the rich and beautiful fields of mathematical truth which lie in the way of physical research.

SCIENCE TEACHING IN ELEMENTARY SCHOOLS

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What can the elementary school do in the teaching of physical science? What should be the aim, scope, and method of science work in the elementary school? What results may reasonably be expected? It is my purpose in this paper to set forth what is being done in the city of New York toward answering these questions.

About two years ago, a new course in "nature study" was planned for the elementary schools. It is stated in the syllabus that

The aim of nature study, particularly in the lower grades, is to cultivate a sympathetic acquaintance with nature, and to develop the power of observation. To this end, the children should be brought into actual contact with the object of study whenever possible, either in or out of the class-room. The power gained by learning facts thru actual observation or experiment will enable the pupils afterward to picture to themselves facts which it will be feasible to make known to them only by description. . . . The phenomena of life in the world about the pupil should be made prominent. The presentation of the topics in elementary science in the seventh and eighth years should, as far as possible, be accompanied with illustrative experiments. Classroom work should be supplemented by visits to the parks and museums, and by the use of pictures and lantern slides.

The course of study outlined in the syllabus divides itself into three cycles. In the first three years it is purely observational, consisting of lessons on familiar animals and plants, and observations of familiar natural phenomena, such as the weather, winds, clouds, storms, the sun, changes of season, etc. In the fourth and fifth years a more intensive study of animals and plants is

required, together with some elementary classification. In the seventh and eighth years (the last two years of the elementary school course), nature study becomes "elementary science"—practically a complete course in elementary physics. It is this last phase of our nature-study work that I purpose to speak of somewhat in detail.

The aim of the course in "elementary science" is not only to acquaint the pupil with the fundamental laws and principles of physics, but to train him into habits of careful doing, close observation, accurate thinking, and correct expression—in short, physics is taught for its disciplinary as well as its practical value.

The scope of the course is somewhat comprehensive, as may be seen from the following outline:

Seventh year, first half: Gravity, mechanical powers.

Seventh year, second half: The mechanics of liquids and gases.

Eighth year, first half: The phenomena of sound and heat.

Eighth year, second half: The phenomena of light, electricity, and magnetism.

For the interpretation and practical operation of this course, a special syllabus has been prepared which contains a suggestive list of experiments that may be performed by the teacher and the pupils. Thruout the course, emphasis is laid on the experimental presentation and development of the subject. Constant correlations with the other subjects of the grades, and with the experiences in the daily lives of the children, are required. It is sought to make the course not merely a collection of isolated facts, but to organize the experiences of the pupils into a connected, logical, unified whole. The practical applications and illustrations in the industries are an essential feature of the course—in fact the keynote is found in the injunction to "make the work practical and interesting."

The time schedule calls for two periods of 40 minutes each per week, but the permissible addition of a "study period" makes the available time to be given to physics three periods per week.

Many discouraging conditions were met with in the introduction of this experimental course in science into the public schools. There was no equipment whatever for the work, no apparatus was available, the classes were too large for laboratory work, and (most discouraging of all) the majority of upper-class teachers had no preparation whatever to teach properly an experimental course.

It is gratifying to note that these unfavorable conditions are being overcome as rapidly as it is possible in so vast a system of education as that of New York. There is a growing realization of the importance of natural science as a legitimate branch of the common-school curriculum. Treated at first with contempt, as another of the "fads and frills," it is now generally felt that the study of science has a high claim for recognition as a factor in the common-school education of every boy and girl, not only as an object in itself, but as a means of general culture and discipline.

Our board of education has recognized the importance of laboratory work in science teaching by providing for a "science room" in the plans of all new elementary school buildings, and by placing on the supply list apparatus and material for fully equipping such a room for demonstration and individual laboratory work. In a number of the older schools, regular class-rooms have been equipped with demonstration tables for the teachers, and a sufficient supply of apparatus to carry on successfully a practical laboratory course.

The introduction, two years ago, of the "departmental system" of teaching into the seventh and eighth years, has been a powerful aid in developing and perfecting the course in science. Under this system, each teacher becomes, to a certain extent, a specialist devoting his time exclusively to one subject, or, at most, to a small group of related subjects. It is thus possible, in many cases, for the principal of the school to assign the subject of physics to a teacher who has some special qualifications for the work. This system, also, conduces to economy of equipment and a unification of the entire course in a school. It makes possible the division of a large class into small laboratory sections, or the assignment of an additional teacher to aid in supervision and instruction.

Finally, the teachers as a whole are realizing the educational and disciplinary value of science instruction, and are striving by all means in their power to equip themselves for the work. Perhaps in no other subject of the course of study do the results to be attained depend so much upon the teacher as in the subject of elementary science. Not only must he be enthusiastic, and thoroly conversant with pedagogical method in general, but in addition, he must possess a comprehensive knowledge of the subject-matter and its technique. It is useless for a teacher to attempt to teach physics unless he can *do* as well as tell. This practical knowledge he can obtain only at first hand, as the result of his own experimental work. University and summer-school courses in practical physics are being attended by a goodly number of those teachers who feel the lack of training in laboratory methods. As a further proof of the desire on the part of the school authorities to obtain the best results in this branch of instruction, it may be stated that all applicants for license to teach in the elementary schools of the city must now pass an examination in physics.

It will be seen from this rapid survey of the field that much has already been accomplished toward the establishment of a rational course in physics in the elementary schools, and that the outlook for future development is very bright.

Regarding the method of teaching physics to be followed in the elementary school, it is my opinion that the work should be conducted along three lines:

1. Presentation or demonstration by the teacher, assisted, whenever practicable, by some pupil or pupils.
2. Individual laboratory work by the pupils.
3. Recitations upon the topics of the demonstration or laboratory work.

Let us consider briefly these three phases.

1. It is assumed that the school has an ample equipment of apparatus

and material to enable the teacher to present experimentally the fundamental principles of the science. Every experiment to be performed by the teacher before the class should be rehearsed carefully in private, no matter how simple it may appear, or how often it has been done before. The teacher, when he stands before his class, should have absolute confidence in the successful outcome of the experiment he performs. Nothing can be more subversive of the aims of science teaching than the exhibition of an experiment performed in a bungling manner. An occasional failure may occur, even when the teacher has the highest technical skill. In such a case, no particular harm is done, in fact the failure may prove even more instructive than a successful outcome, provided the teacher retains his composure, and quickly turns the attention of his class to a careful examination and consideration of the new and unexpected phenomena observed.

During an experiment (which should always be performed with deliberation, never in a hurry) the teacher should, by skillful questioning, guide and direct the attention of his pupils, and stimulate their observing and reasoning powers. Toward the end of the period, the teacher should write on the blackboard an outline giving in concise form the object, method, results, and applications of the experiment. This may be copied by the pupils in their notebooks, together with a sketch or diagram of the apparatus. I would not let the pupils of the seventh year take notes during the progress of a demonstration. It is my experience that pupils at this age (about 13 years) are too young and unprepared to take notes intelligently in this way. Their attention is divided between the experiment and the notebook, and the lesson of the experiment becomes obscured or lost entirely. Besides, a habit of scribbling is easily formed, and may seriously cripple their work in other departments. With the eighth year pupils, I would omit the outline on the blackboard, but would pause in the demonstration, at frequent intervals, to enable the pupils to record observations and inferences, and to arrange their notes logically and neatly. All this may seem like doing too much for the pupil, but experience has shown me that the average pupil of 13 to 14 years needs much more help than the teacher is apt to realize.

As to the kind of experiments that should be performed by the teacher, I would say that, in general, he should perform:

1. Experiments that may be considered basic or typical.
2. Experiments that are wholly, or almost wholly, qualitative in character, and which it would be a waste of time to have each pupil perform.
3. Experiments requiring apparatus not easily or conveniently duplicated for individual work.
4. Experiments requiring a degree of manipulative skill not to be expected of the pupil.
5. Experiments or exercises illustrating methods of manipulation or computation.

The question as to whether the teacher's demonstrations should precede or follow the laboratory work will depend for its answer upon the nature of the topic treated, the method of treatment, the equipment of the school, the

capacity and previous training of the pupils, etc. In general, I would say that a fundamental principle or law should be developed by the teacher before the class, to be followed by verification and application in the laboratory by the pupils. If a series of minute observations has to be made in order to establish a law, these observations may well be made in the laboratory by the pupils individually, and then discussed with the teacher in the recitation or "study period."

The experiments selected by the teacher for demonstration should be the simplest that can be devised for the purpose in view. It is a mistake to use complicated apparatus with beginners, to call attention to all the details of manipulation, and the multiplicity of minor phenomena that have no direct bearing on the object of the experiment. It is a good plan to call upon the more apt pupils to assist the teacher wherever possible. This gives an added interest to the demonstration, and is a stimulus to the other pupils to do their best in order to secure the coveted privilege of assisting the teacher. In this way, the teacher may be able to train some pupils to be of valuable aid to him in the preparation of apparatus and its distribution and storage.

No opportunity should be lost to impress upon the pupils the practical applications and illustrations of the principles they are studying. The basement of the modern school building usually furnishes a storehouse of useful and interesting information regarding furnaces, boilers, heating and ventilating machinery, pumps, elevators, dynamos, motors, etc. An inspection and explanation of this valuable school equipment should form a part of the demonstration work. Whenever and wherever possible, the class should visit neighboring manufacturing establishments, power-houses, etc. In fact, the field work of "nature study" in the lower grades, may here find its counterpart and extension in the more advanced work of the upper grades. By this means an intense interest is aroused and maintained in the pupils.

2. Regarding the pupils' laboratory work, I think there can be no question of its necessity in science teaching, even in the elementary school. Satisfactory results in this, as in most other branches of study, can only be obtained by having the pupil *do* something, by providing that most potent means in the acquisition of knowledge—physical contact with, and manipulation of, the thing to be studied. During the first five years of the course in "nature study," the attitude of the pupil was largely, if not wholly, that of a passive observer of given phenomena or conditions. Now in the seventh and eighth years he *creates* the conditions, adds experiment to observation, and learns to use for the first time this most powerful and fruitful of all aids in the acquisition of knowledge. He learns how to put "a question to Nature, as it were, which she must herself answer—a kind of observation under definite and deliberate conditions." This being a new and untried process for the pupil, it is no wonder that he often finds it difficult to "get his bearings," unless the skillful and experienced teacher sets him right at the start. I have no sympathy with that use of the inductive method which places before the untrained pupil

a physical problem to be solved experimentally, without giving him the slightest cue as to purpose, method, and results to be looked for. An unconscionable amount of time may be wasted in this way. Life is too short for this sort of thing.

Let the experiment to be performed by the pupils be most carefully considered by the teacher before assigning it. Let it be the most simple that can be devised, and absolutely within the comprehension and capacity of the pupil. Let it have some practical bearing, if possible, on his every-day life. State in clear terms the object or aim of the exercise, give explicit and minute directions (particularly at the beginning of the course), and, if necessary, call attention by means of suggestive questions to those phenomena which have a bearing on the conclusions to be drawn. After the pupil has been in the laboratory for a term, there will be less need for minuteness of directions, for he will have acquired then some skill in technique, and he will be able to observe more closely and accurately, without guidance at every point. But at the beginning, definiteness and clearness in statement of aim and method are essential to his later success. "Nature can only give a correct and unambiguous answer to the question you put it, when it is clearly and definitely proposed. This is very often not the case, and the experimenter loses himself in meaningless efforts, with the foolish hope that 'something may come of it.' " Aimless, desultory work in the laboratory, a mere pottering and playing with test tubes, bottles, magnets, etc., is the worst possible introduction a student can have into the realm of physical science. On the other hand, a carefully selected series of experiments, adapted to his capacity, and performed with intelligence and earnestness, will develop in him a power of doing and thinking which no other single study can give him so well. There is no better means for training in observation, reflection, judgment, and expression, than judiciously selected, and carefully executed, work in the laboratory. An eminent German philosopher says: "The accurate and discriminating observation of facts, supported by careful experiment, is certainly a great advantage that modern science has over all earlier efforts to attain the truth."

The kind of experiments to be performed by the pupils may be classified as follows:

1. Experiments that verify laws demonstrated by the teacher.
2. Experiments wholly, or largely, quantitative in character.
3. Experiments or exercises that will impart a certain degree of mechanical skill.

These may properly be repetitions of the teacher's model demonstrations.

The so-called "even front" system of laboratory work is, in my opinion, the best for elementary school pupils. Under this plan, all pupils work at the same exercise at the same time. It requires, of course, a complete outfit of apparatus for each pupil, and hence is somewhat more expensive than the plan of assigning a different exercise to each pupil. However, the "even front" plan enables the teacher to utilize to the best advantage the all-too-short

time at his command, it permits of general directions and explanations to the whole class, facilitates supervision, and simplifies the management of the laboratory. Indeed, since the classes in the city schools are apt to be large, this seems to me to be the only feasible plan to adopt.

One of the essential requisites in laboratory work is the keeping of a written record of the details of an experiment. This record should be made in a notebook of convenient size, and should contain the following data: Number and date of experiment, object or aim, a description or diagram of the apparatus used, a statement of manipulations performed, the observations made (tabulated or graphically illustrated when possible), and the conclusions or inferences drawn from the experiment.

It is best to use two pages for each exercise, reserving the even-numbered pages for a description of the experiment and the odd-numbered pages for diagrams, tabulations, and computations. A device for facilitating the examination and criticism of notebooks, which I have seen used with some success, consists of a rubber stamp by means of which the instructor stamps the following items on the lower part of the odd numbered pages: Description; diagram; observation; inference; grammatical structure; neatness. A word or two opposite an item will serve to call the attention of the pupil to those particulars in which his record is deficient. The teacher should only indicate the errors; the pupil himself should make the corrections. Much attention should be given to the language employed by the pupil in making his records. There is a good opportunity here for emphasizing the work of the English department.

A good plan for presenting the experiments to the class is to typewrite and mimeograph the directions on a set of cards about 5×6 inches, and distribute these among the pupils during a "study period" for careful perusal and for preparation of the form to be used in the notebooks in the following laboratory period. No portion of the time allotted to laboratory work should be given to reading up the experiment. This should always be done in a previous "study period," thus giving the full time of the laboratory period to the actual performance of the experiment.

The supervision of laboratory work is no easy matter, especially if the class be large. One teacher cannot handle effectively more than 15 to 20 pupils, even when they are all working at the same exercise. Under the "departmental system," it is possible, by a judicious arrangement of the program, to divide a large class into two or more sections, or it may be possible to assign an assisting teacher to aid in supervision and instruction of a large class. The latter method has been tried in the school under my supervision with excellent results. Both teachers are in close touch with the pupils, and their work in the laboratory, and can give counsel and direction with facility and despatch. These two teachers also divide between them the labor of examining and criticising the written work.

3. In the recitation periods, the topics of the laboratory periods and

demonstrations should be carefully reviewed and discussed, errors indicated and corrected, correlations made with the other subjects of the grades, and very simple problems given, illustrating the principles or laws derived by experiment. This period should usually take the form of a *quiz*, both teacher and class asking and answering questions. In this way a greater interest can be maintained in the class than by a formal recitation, and it is possible for the teacher to gauge more accurately the mental status of his class. If a textbook be used, it should be a real textbook, not a manual of "inductive questions." The textbook should supplement and extend the knowledge gained by the pupil in class and individual work. I consider a good, simple textbook, if rightly used, an important aid in the teaching of physics. Without it, the pupil is likely to become possessed of a mass of isolated facts which he has not the power to correlate or classify. The textbook will provide the connecting links which he needs to unify his knowledge. The absence of a textbook increases very materially the work of the teacher and restricts somewhat the scope of the course.

Written tests should be given about once a month. These will serve to indicate to the teacher the general grasp which the pupil has of the subject as a whole.

I cannot, within the limits of this paper, do more than merely indicate a few of the correlations of science with the other branches of study that can be made if the teachers of the "departmental" classes work together as a unit. Mathematics, physical geography, physiology, composition, drawing, shop-work—all these departments may draw upon the science work, and the latter may, in turn, draw upon all the others. It is essential to the success of the whole system that such correlations be properly made. The practicability of this is one of the tests of a well-made curriculum.

It is too early, as yet, to say what will be the effect of this new course in science on the later science work of those pupils who enter the high school. It is safe to assume, however, that they will be better prepared to do the advanced work, even if some of the earlier work has to be repeated. There can be no doubt as to the value of this work in science to that vast majority of pupils who never enter the high school. It is for them, more particularly, that the whole course is planned. That the work is already producing practical results is evidenced by the fact that several recent inventions of considerable merit were made by elementary-school pupils. Among these is a plan to relieve the congestion at Brooklyn bridge, and a new receiving apparatus for a wireless-telegraph system. These inventors claim to have obtained their initiative and inspiration from the physics lessons in the schools.

Thus we are not only acquainting our pupils with the great truths of science, but we are creating and fostering that most desirable and productive quality, the "scientific habit of mind."

(Followed by an exhibition of lantern slides illustrating the work in "elementary science" as carried on in Public School 33, The Bronx, New York city.)

DISCUSSION

BOTANY—FOURTH YEAR

[ILLUSTRATED WITH LANTERN SLIDES]

A. T. SCHAUFFLER, district superintendent 25th and 26th districts, Borough of the Bronx, New York.—In opening the discussion on this subject I shall confine myself to a description of an experiment tried in the last term, and I am happy to say with great success, in the schools of the Borough of The Bronx, New York city. In these schools there are some 45,000 pupils, but the experiment referred to, namely, the broadening of the instruction in Botany in the fourth year, under the general heading "Nature Study," was confined to the pupils in the last half of the fourth year, some 3,000 in number.

Believing that the best way to study nature is to go to nature, and that the only way to become intimate with living objects is to see them alive, and that hence the only proper way to study plants is to observe them growing, it occurred to some of us that an attempt should be made to enlist the co-operation of the management of the New York Botanical Gardens in an endeavor to bring our young people, who are studying nature, into immediate contact with it, and that under the guidance of experts, who could not only tell them what to see and how to see it, but show them where the objects to be observed could be found.

We were met more than half way by Dr. N. L. Britton and his associates and his board of directors, and the purpose of this discussion is to show how the fourth year pupils have been brought into that contact with nature which alone can give them the opportunity to become, not only interested in the subject, but intimately acquainted with the plants about which they have been studying from pictures and descriptions, which pictures have faded from their memory, and which descriptions have left only very limited notions.

As taught in the fourth year, the subject is subdivided into three heads:

1. Seedless plants (mosses, lichens, fungi, seaweeds, ferns).
2. Cultivation of plants.
3. Classification of plants.

About 2,500 pupils of this grade were taken to the Botanical Gardens in groups of from 700 to 800, and each group attended a lecture under each head in the lecture-hall of the museum. These lectures lasted about forty minutes and, as prepared, followed closely the syllabus laid down by the board of superintendents. The lecturers, one and all, avoided technicalities that were above the comprehension of the children and spoke to them in language which they could perfectly assimilate. After each lecture the pupils were separated into groups of from 40 to 100, and taken from the museum into the grounds of the garden and into the conservatories, and there demonstrators showed them the real things, of which they had seen enlarged pictures on the screen. This laboratory method of fixing the matter which had been given them in lectures was the most happy and successful part of the work.

To show a little more in detail how the scheme was planned, let me describe the work of the first lecture. After Dr. M. A. Howe had talked to them about the "seedless plants," and shown them pictures of various kinds of mosses and lichens (emphasizing carefully the difference between the two and showing, for example, that certain mosses, such as the reindeer mosses, are misnamed and should be called, as they are really, lichens), he continued with fungi and a very full illustration of seaweeds, closing with slides showing the different kinds of ferns, and illustrating in detail the methods by which the spores are protected, etc. The pupils were taken into the museum and at one large case, which was opened and the contents taken out, they had an opportunity to observe closely the preserved seaweeds, and, at another case, fungi. They then were guided to a spot where

there is a large bed of mosses at the foot of some bold rocks richly covered with mosses of other kinds, where a demonstrator was ready to point out the different kinds growing, and also to show them specimens of mosses which could not be found near by. Thence they walked thru the forest to a fine large rock covered with lichens, at which point the matter heard in the lecture was further illustrated. Thence they proceeded to the conservatory, in one of the divisions of which another demonstrator showed them some twelve or fifteen different kinds of ferns, ranging from the ordinary ferns most commonly found, thru the climbing fern, the walking fern, the maidenhair, the staghorn, etc., to the tree fern of the tropics.

The second lecture by Mr. George V. Nash on the "Cultivation of Plants" was specially prepared in every detail for this occasion. I shall show you a set of slides prepared by him to show the development of the pea, from the time of its planting to the production of the new pea. This entire lecture was again illustrated at various points in the garden and conservatories, where demonstrators showed the real objects from which the slides had been made.

The third lecture on the "Classification of Plants" was given by Dr. N. L. Britton, director-in-chief of the garden. I shall show you a few of his slides, all of which were prepared especially for this lecture. The demonstrations and illustrations followed as before.

By a special resolution of the board of education, on the hearty recommendation of the city superintendent, pupils were permitted to attend these lectures during school hours. The lectures commenced at 2 o'clock and the children were all on their way home after demonstrations before five.

Since these lectures were given, I have made it a point in all my visits to schools to test their effects upon the classes attending. The stimulus given and the interest aroused, amounting to a real enthusiasm, has been most gratifying to teachers and principals, as well as to myself. I am glad to say that the authorities of the Botanical Garden are ready to extend similar privileges to schools in the other boroughs and to broaden the work, so as to cover the entire subject as taught in the fifth year, as well as the fourth.

My hope is that this may be only a beginning, and that before long we shall be giving the pupils who study zoölogy an opportunity to receive the same kind of instruction and demonstration in the Zoölogical Park, not far distant from the Botanical Garden.

SOME OF THE COMMON INSECTS, AND HOW THE CHILDREN CAN STUDY THEM

JOHN B. SMITH, PROFESSOR OF ENTOMOLOGY, NEW JERSEY STATE
AGRICULTURAL COLLEGE, NEW BRUNSWICK, N. J.

[ILLUSTRATED WITH LANTERN SLIDES]

It has always been a matter of interest to me to test the students that come into my classes, year after year, as to their natural tendency toward observation, and the extent to which whatever ability they may have has been exercised. After I have become acquainted with each individual, know where he has spent his early school life, and under what circumstances he has lived, I make opportunity to ask a question concerning some every-day feature of insect economy, which I feel sure has come into his way again and again. In almost every instance, the student pleads ignorance!—never saw such a thing; feels almost sure it could not have occurred without his seeing

it; and doubts whether it would have been possible for him to overlook such an occurrence, under any combination of circumstances. Almost invariably, after the first visit home, the man tells me that he had looked up the question to which I had referred, and had found to his surprise that matters were just as I had stated, and that for years he had been seeing things, without recognizing the fact that he did see them.

In my official mail as entomologist to the Experiment Station, I frequently get some striking specimen that has fairly run against the sender, with the statement that no one in his vicinity has ever seen such a creature before; that it is something utterly unheard of, and must be of entirely new occurrence. I have got so that before I have read half a dozen lines of said letter, I know almost exactly what is coming, and can identify the specimen long before I get to the end, or have opened the parcel that accompanies it. The trouble is simply that few persons pay attention to even the commonest insects, or to the most obvious facts in insect life, unless the specimens are directly annoying, or unless they cause some injury that touches the well-being or the pocket of the observer. Yet a little observation of even the commonest of our insects may be made to teach important biological facts.

Material for observation is always abundant during the warmer months of the year, and only the simplest apparatus is needed. The young collector, who desires to learn something about the common insects, needs only half-a-dozen fruit jars, with as many squares of cheese cloth to serve as covers; a few rubber bands, or pieces of twine, to keep them in place; a few small boxes to hold the living specimens collected; a few small bottles for aquatic insects, when such are sought for; perhaps a small forceps; and a needle mounted at the end of a thin stick. That is all that is required, and even that can be cut down so that only two or three fruit jars constitute the entire outfit. In extreme cases, it is not necessary to have any outfit whatever; and if the young student has access to a garden, he can make his observations from day to day, and learn many facts that will prove both new and interesting to him.

House flies are found abundantly in the city as well as in the country, and to breed them in one of the fruit jars, all that is necessary is to cover the bottom with an inch or two of horse droppings pretty well pounded down. Capture about a dozen flies in such a way as not to injure them more than necessary, introduce them into the jar, cover with one of the squares of cheese cloth, and watch. It is suggested that a dozen or more of the insects be captured, that both sexes may be represented; and then the children should be asked to examine carefully the specimens that are in captivity. Their attention should be called to the fact that however similar all flies appear, nevertheless no two of them are exactly alike. This is a matter that will require some little attention to appreciate, but in even a few minutes the difference between the males and the females will be recognized, and two₁ groups in that way will be established in their minds. After that, individua

peculiarities will be seen, especially when several children are engaged in looking at the same jar. The point to be emphasized in this connection is the individuality of each unit of a species, and the fact that it is as marked in the insect as in the human species. In from twenty-four to forty-eight hours, little heaps of white eggs will be seen on the bottom covering, and from these, minute wriggling maggots will emerge a few hours thereafter. Growth is rapid, and if the jar was well stocked with flies, the astonishing point will be to see how many maggots may develop within so small a space. This is an important feature, because it points out to the children that even small neglected places may be of very grave importance when the matter of development of insects comes into consideration, and that no foul place is so insignificant as to be unworthy of attention. In about a week, the maggots are full grown, stop feeding, contract to a brown, barrel-shaped pupa, utterly unlike either the maggot that formed it or the adult fly that laid the egg. Yet in a day or two more, a perfect house fly will emerge from each of these brown pupæ, thru a split at one end of the structure. It has been frequently asked whether something could not be done to reduce the fly pest. The first step is to teach the children how and where flies develop, and that if we do away with places where flies breed, there will be no flies.

Wherever there is a shrub or a tree, even if it be only a rosebush in a back yard, or a few plants in pots in the window, there are almost certain to be plant lice; and wherever there are plant lice, there are almost sure to be ants and lady-bird beetles. As to the plant lice, it requires no apparatus at all to study them, and it is really very amusing to watch them for a time, and note their antics. Some of them are always kicking up their heels, or exercising themselves in some way, feeding continually the while; and it is a weak colony in which there are not some young being born at all hours. All stages in the process of extruding the young may be noticed, and it is interesting to see the little ones kick themselves free of the enveloping membrane, and start feeding by inserting the soft little beak into the plant tissue. Children have very sharp eyes as a rule, but a magnifying glass, even if of low power, will add materially to the ease of observation. Access to a garden is desirable for the study of these insects, but if that is impossible a few potted roses and chrysanthemums will usually supply abundant material.

The relation of ants to plant lice may be also studied in the garden; and the first thing to be noted is that the association is a friendly one. An ant never eats a plant louse, and the plant louse never resents the presence of an ant. Nevertheless, plant lice do furnish the ants with a food in the form of a sweetish excretion from the honey tubes at the end of the body; and in return, the ants render important service in continuing their hosts, for there are some plant lice that are absolutely dependent upon ants for the continuance of the species. When such aphids lay eggs, they are allowed to drop to the ground without attention and without regard to situation. The ants gather them, carry them down into their winter nests, and in the spring bring them to the plants upon which the insects afterward feed.

An important lesson to be learned here is the dependence of one species upon another, and that this dependence is based upon a benefit to each party. Among almost every colony of plant lice, minute, blackish, wasplike creatures may be seen moving about; and scattered among the green and black lice, livid gray specimens will be noted, many of them with a little round hole in the back. This illustrates parasitism, and brings out that all insects have their natural enemies, which under normal conditions prevent them from becoming over-abundant. It should be impressed upon the young student that there are two forces at work in nature: the first, to increase the number of individuals of a species; the second, to prevent any species from becoming dominant at the expense of any other. Some species lay hundreds, and some thousands, of eggs; and yet, in ordinary seasons, the surviving progeny of the single female that may have laid a thousand eggs is exactly one pair. It is not a bad lesson to teach that life is the cheapest thing that nature has. The individual is absolutely unregarded: regard is had to the species only; and if it is necessary to produce one thousand individuals in order that two may survive, that all comes within the ordinary course of affairs.

Caterpillars appear on shade trees, even in the city, and at times are quite common. In the large cities, the vaporer moth and its larvæ are usually most abundant, and may be easily bred. One of the fruit jars will serve to mature half a dozen or even more examples. If only large caterpillars are collected, a few leaves of the food plant will be sufficient to make them ready for pupation, and then it will be interesting to watch the larva spin a thin silky covering as a protection during the change. There is not silk enough to make the covering complete, so the caterpillar divests itself of its hairy coat, and, by rolling round and round, works the hairs into the silk, making a thick, feltlike substance. At this point it will be well to call the attention of the children to the fact that all silk is the product of caterpillars, and practically of one kind of caterpillar only. It takes an enormous number to produce the silken goods used by all the world, and every mile of the simple silken fiber means the death of a pupa, because the insects are killed before the cocoons are reeled. The change to the pupa, and from pupa to the adult, comes rapidly with the vaporer moth, and tho the caterpillars were all alike, the resulting adults are very different. One set will have broad black or gray mottled wings, and these are the males. The others will have no wings at all, and will crawl to the outside of their cocoons and remain there, grublike. These are the females, and they lay their eggs in white frothy masses just where they develop. The life-cycle is now complete, and the young observer is ready to understand why, if we clear the eggs off a tree during the winter, we may prevent re-infestation next season by a band of fluffy cotton or other barrier, that neither caterpillars nor wingless females can climb over. Outside of the cities caterpillars are more numerous. In any cabbage patch, at almost any time during the summer, we may find the yellow eggs of the rape butterfly; and after a little closer search, the caterpillars themselves may be found, tho

that is not as easy as would appear at first sight, because the color of the caterpillar and its texture are so nearly like that of the leaf on which it feeds, that it is easily overlooked. This makes an excellent example of protective resemblance, and shows how some caterpillars escape from some of their enemies. This is another of the forms that develop rapidly, and the course from the chrysalis to the adult stage requires only a few days in midsummer. It will be interesting to watch the butterflies, just out of the chrysalis, to see the crumpled-up wings when the insect first emerges, and to note that those wings are really sacs, filled with a liquid material; but the sacs rapidly expand, the liquid disappears, and then we have the broad wings, ready for flight.

Some butterflies are easily caught, and these, when handled, will serve to demonstrate the fact that the colors "come off;" that there is really only a transparent membrane covered with scales arranged in definite patterns. It will be easy, also, to show the coiled tongue, held on the underside of the head, but readily unwound with the point of a pin. Under the compound microscope, the tip of such a tongue is a really beautiful object.

There are many kinds of caterpillars, they vary much, and many people have an unreasoning dread of them; but with only a few exceptions, they are harmless. As a rule, it is safe to say that the more formidable a caterpillar appears, the less dangerous it really is. This is illustrated by the "hickory horned devil," and by the caterpillars of the hawk moths in general. No caterpillar can bite so as to pierce the skin, except under the most favorable conditions, and then the bite is harmless, because there is no poisonous secretion to be forced into the wound. This is a general statement that may be made as to all insects, and a bite inflicted by the jaws or mandibles can never under any circumstances become injurious. This does not include, however, the puncturings made by those insects that have lancet-like mouth parts, and pierce like horse flies and mosquitoes. Nevertheless, there are some slug caterpillars, and some that are covered with short, stiff hair, that are capable of causing discomfort, and even severe pain; but that is by a process of nettling, or because the hair is furnished with little prickles which make their way into the skin and set up a mechanical irritation.

Many insects fly at night, and the question arises: What becomes of these during the day? Many, as a matter of fact, rest openly, exposed to the view of anybody who can see them. I have often walked thru the shaded streets of cities, and have seen dozens of moths sitting openly on tree trunks, where probably no one else who walked the streets that day suspected their presence. A large proportion of the nocturnal species that do not actually hide, are protected by their selection of places that resemble themselves so closely that they are practically invisible.

Under every flat stone in the field, insects occur; and under every piece of loose bark on a dead or dying tree, beetles or their work may be seen, and other insects are found in hiding. In every garden, and on almost every

city tree, some kind of leaf beetle may be found, and in almost every open lot in the outskirts, potato beetles occur on some of the solanaceous plants that are almost sure to grow there. While the slugs or larvæ of potato beetles are not especially attractive, they grow rapidly, and require only a few days to come to maturity and bury themselves in the ground. It is usually easy, also, to find the patches of orange-yellow eggs on the undersides of the leaves, and there is no real difficulty in raising a brood from the eggs to the adults. One of the same fruit jars will answer the purpose, and there should be about two inches of loose soil in the bottom. When the slugs have changed to pupæ, it will be noticed that every member of the future beetle can be distinguished, and is separately incased in a thin membrane. It is interesting to watch the gradual hardening of the tissue, the appearance of the colors, and then suddenly, when stimulated or irritated in some way, the pupa that has so gradually changed to a beetle will start and walk away, without any distinct shedding of the skin.

There is no more interesting insect for easy examination than the honey bee, which is with us from the opening of the first dandelion in spring to the end of the last aster in fall. A bumble bee is better for ordinary study because of its greater size, but otherwise presents the same facts. First of all, the insects should be observed on the flowers, and it will be seen that they do not only feed, but actually roll themselves, in the blossoms, and become covered with the yellow pollen. Bees may usually be captured by putting the mouth of a bottle over the flower, allowing the insect to fly up, and then plugging the neck with cotton. Observations may then be made at leisure, and without danger of being stung. It will be seen that the pollen is held among the hairs partly by its viscid character, and partly by the structure of the hair which, examined under the microscope, is seen to be branched or compound. Large masses of pollen are sometimes observed on the outside of the hind legs, and the question arises: How did they get there? It is easy, even without a glass, to see the broad joints of the hind feet, with a curry-comb-like setting of spines, by means of which almost the entire body can be combed and all particles of pollen removed. So on the fore-legs there is an arrangement for cleaning the antennæ, and altogether we have a beautiful example of adaptation for a special purpose. If the bottle in which the bee has been collected is a large one, the process of combing and cleaning may be generally seen after the insect has been in confinement for a few moments. If it is a bumble bee that is under examination, the head and mouth structures will be found interesting. The tongue is almost as long as the insect itself, and, as a matter of fact, it is the bumble bee only that can get out the honey in red clover, incidentally pollenizing that plant.

Almost anywhere, except in the heart of a city, mud wasps may be observed. They select back porches, sheltered corners under eaves, and other places not directly exposed to the weather. Nothing is more curious than to observe these insects patiently bringing load after load of mud and forming cylindrical

cells, which, no matter how shapeless they may be on the outside, are clean and smooth within. If the location is a favorable one, and a number of specimens are at work building nests, the observer will also see that no two specimens work exactly alike. While all examples make nests which in the long run are similar, yet in the actual work of building, each has its own way of doing things. In storing the nests with small spiders or caterpillars, this difference in individual work will still further appear, and while some examples are stupid in their way of getting work done, others are correspondingly handy. Where nests are plentiful, cells can be opened from time to time, and it will usually be noted that while the stored insects are motionless, they are yet alive. They have been stung and paralyzed, and the poison that was injected into them has also a preservative effect. It is easy in this way, also, to observe the gradual development of the wasp larva; and when the last particle of stored food has been devoured, the change into the pupal stage takes place.

I have said nothing of aquatic insects, because few of these are accessible without special collecting apparatus. But there is at least one species which, in summer, is available in most sections of the country—I refer to the mosquito. Wherever these insects occur, it will be easy to secure the life-cycle of the common house species. If an uncovered rain barrel is available, the supply of wrigglers is assured. If there is no such barrel, a pail of water set in a shady place in the back yard will answer the purpose, if a handful of sod or some old, decaying leaves are put into it. Eggboats appear promptly, and may be, if desired, transferred to a fruit jar half filled with water over a layer of garden soil. Young wrigglers appear in about twenty-four hours, and in a week the pupæ will be ready. The antics of the wrigglers will be a source of much amusement, and their method of feeding and breathing, getting air from above the surface and food from below it, will prove distinctly interesting. A child who has once watched a mosquito develop from egg to adult will never believe that dense vegetation or tall grass on uplands is responsible for the hordes that are sometimes found there.

Of course children, like adults, differ in their natural ability to see things; but almost any of them, after they have been taught that there is nothing to be feared from insects, will find something that is worth watching. Insects lend themselves well to experiments such as children are sometimes inclined to make. They are not only numerous, but their nervous organization is not such as to warrant the belief that they feel any well-marked sensation such as we term pain. I do not mean to assert that insects have no sense of feeling. On the contrary, in some cases the tactile sense is very highly developed; but I do mean that the sensation of pain, as we know it, is almost non-existent. In fact, the insect organization, while in its essential points like that of the higher animals, is in its development carried along lines so different, that we are in no position to judge insect sensations from our own experience.

In closing, I have found that it needs only a little stimulation to make

children see things. A child can be shown a fact, and if that fact be explained, and it be indicated that there are other facts that may be observed, the observation will almost surely follow; and when the habit of observation is once formed, it is rarely lost.

TEACHING BIOLOGY FROM LIVING PLANTS AND ANIMALS WITH A PROJECTION MICROSCOPE

A DEMONSTRATION OF APPARATUS AND METHODS WITH LIVING SPECIMENS

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[AN ABSTRACT]

This actual demonstration of work done in a Chicago high-school laboratory, with apparatus and specimens brought from that laboratory, supplements a paper, "The Projection Microscope: Its Possibilities and Value in Teaching Biology," read before the Department of Science Instruction of the National Educational Association at the Minneapolis meeting, 1902, and printed in full in the minutes of that meeting at page 771.¹ A powerful projection microscope using an electric arc light threw upon a screen highly magnified images of live plants and animals which were mounted in water in small glass cells. The objects were magnified from a few hundred to over 5,000 diameters, by 1-inch, $\frac{3}{4}$ -inch, $\frac{1}{2}$ -inch, and $\frac{1}{12}$ -inch oil immersion objectives. All the details of structure of the live organisms were visible to each member of the audience, demonstrating how the instructor directs the students as they observe and study, or make drawings of, objects projected on a screen. All saw the best specimen at the same time and in the best focus. Live plants and animals were used because they are more interesting and instructive, and exhibit normal colors, form, and structure. The brilliant living-charts observed on the screen exhibited all the motions, and many of the obscure vital phenomena, of the plants and animals, thus demonstrating the central fact in biological study; *i. e.*, live protoplasm at work. From the hundreds of different species of small animals and plants common everywhere, which may be used in this way, typical species were shown including fresh water hydras and two of their common food animals, the water fleas daphnia and cyclops, an active young crayfish, gammarus, snails' eggs, water-spider, water-boatman, and water-beetles, nymph of the dragon-fly *Agrion*, planarian worms, leech, earthworms, larvæ of insects, tadpole, and among plants, *lemna*, *elodea* evolving oxygen, and a section of common white potato showing cells packed with starch grannules.

¹ Reprints of that paper may be had by enclosing postage and address to the author, A. H. Cole, 5715 Monroe ave., Chicago, Ill.

The following brief statements of the details of the demonstration of the score of organisms which were exhibited illustrate not only the methods of handling the various live animals and plants, but also the variety of structural parts and functional activities which were projected on the screen.

One of the most instructive species is the common earthworm. Two small ones were shown, one wriggling vigorously to demonstrate its normal motions and form, while the other was anesthetized with chloretone and showed no voluntary motions. By compressing the worm slightly in a special glass cell the worm's body appeared nearly transparent to the light from the electric arc used in the projection microscope and was five or six feet in diameter on the screen. The worm's esophagus, crop, gizzard, intestine, muscles of the body wall, septa, nephridia, dorsal vessel, and pulsating "hearts," actually pumping red blood, were clearly demonstrated. This gave the members of the audience, as it does the students in a class, a first-hand knowledge of the animal's form, motions, color, structure, and, what is most important of all, its vital organs in normal position and activity.

In a common pond-weed, *Elodea Canadensis*, cells of live protoplasm, colored green with chlorophyll, showed nature's real starch factories at work. When first projected, the plant showed no activity, but under the stimulus of the electric light the plant began to combine inorganic water and carbon dioxide into food, *i. e.*, starch, and bubbles of oxygen gas were seen escaping from the cut end of the stem. Starch grains in a slice of white potato were first demonstrated, then tested with iodine and finally boiled by the heat from the electric arc, after the cooling-tank had been removed from the projection microscope. Ice-cold water placed on the pond-weed while bubbles of oxygen were escaping caused its vital action and accompanying oxygen evolution to cease instantly, and was seen to kill the plant. This demonstrated (a) the fundamental phenomena of food production for all organic life, (b) the necessary solar energy, replaced in this experiment by light from the electric arc, and (c) the destructive effect of cold on growing protoplasm.

REPORT OF DEPARTMENT COMMITTEE ON PHYSICS COURSES

I. FIRST-YEAR COURSE IN PHYSICS ADOPTED BY THE DEPARTMENT OF SCIENCE INSTRUCTION OF THE NATIONAL EDUCATIONAL ASSOCIATION, 1905

Thirty-five of the following numbered exercises constitute the first year's course.

LIST OF EXERCISES

- A. Measurement of a straight line.
- B. The lines of the right triangle and the circle.
- C. Area of an oblique parallelogram.
- D. Volume of a rectangular body by displacement of water.

1. Weight of unit volume of a substance.
2. Lifting effect of water upon a body entirely immersed in it.
3. Specific gravity of a solid body that will sink in water.
4. Specific gravity of a block of wood by use of a sinker.
5. Weight of water displaced by a floating body.
6. Specific gravity by floating method.
7. Specific gravity of a liquid: two methods.
8. The straight lever: first class.
9. Center of gravity and weight of a lever.
10. Levers of the second and third classes.
11. Force exerted at the fulcrum of a lever.
12. Errors of a spring balance: study of a Jolly balance.
13. Three forces in one plane and all applied at one point: Parallelogram of forces.
14. Friction between solid bodies.
15. Coefficient of friction.
16. Use of photometer.
17. Images in a plane mirror.
18. Images formed by a convex cylindrical mirror.
19. Images formed by a concave cylindrical mirror.
20. Index of refraction of glass.
21. Index of refraction of water.
22. Focal length of a converging lens.
23. Relation of image-distance to object-distance: Conjugate foci of a lens.
24. Shape and size of a real image formed by a lens.
25. Virtual image formed by a lens.
26. Breaking strength of a wire.
27. Comparison of wires in breaking tests.
28. Elasticity: stretching.
29. Elasticity: bending. Effect of varying load.
30. Elasticity: bending. Effect of varying dimensions.
31. Elasticity: twisting.
32. Specific gravity of a liquid by balancing columns.
33. Compressibility of air: Boyle's law.
34. Density of air.
35. Four forces at right angles in one plane.
36. Comparison of masses by acceleration test.
37. Action and reaction: elastic collision.
38. Elastic collision continued: inelastic collision.
39. Testing a mercury-thermometer.
40. Linear expansion of a solid.
41. Increase of pressure of a gas heated at constant volume.
42. Increase of volume in a gas heated under constant pressure.
43. Specific heat.
44. Latent heat of melting ice.
45. Determination of the dew-point. Lowering of wet bulb thermometer by different liquids.
46. Latent heat of vaporization.
47. Velocity of sound in open air.
48. Wave length of sound.
49. Number of vibrations per second of a tuning fork.
50. Lines of force: (a) one-bar magnet, (b) two-bar magnets.
51. Single-fluid galvanic cell.
52. Study of a two-fluid galvanic cell.

53. Lines of magnetic force about the galvanoscope.
54. Resistance of wires by substitution: different lengths.
55. Resistance of wires by substitution: cross-section and multiple arc.
56. Measurement of resistance with the Wheatstone bridge.
57. Change of resistance with change of temperature.
58. Battery resistance.
59. Telegraph sounder and key.
60. Electric motor.
61. The dynamo.
62. Study of pulleys with continuous cord.
63. Inclined plane force parallel to incline.
64. General laws of equilibrium in a plane. Four or more forces acting at different points of application, no two forces parallel.
65. Study of the statics of a crane or truss.
66. Study of the pendulum (law of lengths).
67. Study of multiple images: plane mirrors, parallel and at an angle.
68. Determination of wave-lengths of light.
69. Critical angle of glass or water.
70. Study of astronomical telescope or compound microscope.
71. Newton's law of cooling.
72. Determination of the boiling-point of alcohol by the direct method and by the vapor-pressure method.
73. Determination of the melting-points of some substances such as paraffine, wax, and naphthalene.
74. Electrostatic series.
75. Electromagnet: Study of poles and field in relation to direction of current.
76. Electric bell.
77. Electro-chemical series.
78. Electrotyping or electroplating.
79. Study of the charging and discharging of a simple storage-cell, using a voltameter and an ammeter.
80. Law of current induction.

II. A SECOND YEAR OF PHYSICS FOR HIGH SCHOOLS

INTRODUCTION

The course here outlined is intended to follow in the high school a regular course in elementary physics such as is outlined above. The regular elementary course is given usually during the third year of the high school. This new course would naturally be given during the fourth year.

The course has been planned for boys and girls whether preparing for college or not, but it is recommended that only those pupils take it who have shown exceptional ability in the elementary course.

The material of this course includes those topics, found in the standard elementary textbooks, that are generally omitted in giving the elementary course. Besides this, there has been included some additional elementary material of exceptional interest and importance.

In making use of this second-year course, it is suggested that the teacher keep in mind the general purpose as indicated by the *topics*. Lecture demon-

strations, laboratory experiments, and numerical problems are to be used principally for the purpose of elucidating the topics discussed and are not to be treated as ends in themselves.

As it will be impossible to cover in one year all the material mentioned, the course has been made very broad with a view to a choice of topics in accordance with the needs and facilities of local conditions. It is recommended that, during a year, with five or more periods a week, there be presented a selection of topics represented by thirty laboratory experiments, appropriate lecture demonstrations, simple numerical problems, and discussions bearing upon practical and theoretical applications. In making this selection, it is further recommended that, in order to preserve balance in the course, each of the sections lettered A, B, C, etc., be represented by at least two laboratory experiments.

OUTLINE

(Selections to be made as explained in introduction. Exp. indicates an experiment in the laboratory by the pupil. Dem. indicates a demonstration by the teacher.)

A. PROPERTIES OF MATTER, AND MOLECULAR PHYSICS

1. *Magnitude.*

- Exp. 1. Estimation of tenths and hundredths of a division.
- Exp. 2. Use of micrometer caliper.
- Exp. 3. Spherometer. Curvatures of a meniscus lens.
- Exp. 4. Optical lever (improved form). Very minute measurements.

2. *Weight and the laws of gravitation.*

- Exp. 5. Accurate determination of the weight of an object by the method of double weighing of Gauss. Allow for the buoyancy of the atmosphere.
Discuss the mechanics of the balance.
Discuss Boys' method of determining the mass of the earth.

3. *Compressibility.*

- Exp. 6. Determine the compressibility of water.

4. *Ductility.*

- Dem. 1. Draw down thick wire to thin with wire-drawing plate.
Discuss Wollaston's method for extremely fine wires.
Discuss manufacture of lead wire, lead pipe, and tin-lined lead pipe.

5. *Malleability.*

- Dem. 2. Beat out pure gold.
- Dem. 3. Exhibit transparency of gold leaf.
Discuss the process of rolling.
Discuss the process of spinning.

6. *Viscosity.*

- Dem. 4. Exhibit in progress Kelvin's experiment with shoemaker's wax, corks, and bullets.
- Exp. 7. Determine the viscosity of water.
Discuss relation of viscosity to lubricating qualities of oils.

7. *Crystallization.*

- Dem. 5. Sulphur from fusion.
- Dem. 6. Alum from solution.
- Dem. 7. Iodine by sublimation.
Discuss very briefly the fundamental crystalline forms.
Discuss purification by crystallization.

8. *Tenacity.*

(Refer to first year exp. on tenacity of wires.)

Exp. 8. Transverse breaking strength of whitewood; laws of breadth, thickness, and length.

Discuss briefly tensile and compressile strains in beams and girders.

Simple problems.

(Elasticity may be studied here if it has not already been done so during the first year.)

9. *Surface tension and capillarity.*

Exp. 9. Measure surface tension of soap water.

a) Either by method of wire rectangle and balance,

b) Or by rise in capillary tube.

Exp. 10. Study of law of diameter of capillary tubes, and law of distance of capillary plates.

Dem. 8. Various.

Discuss many of the everyday illustrations.

10. *Diffusion of gases and liquids.*

Dem. 9. Various.

Discuss prevalent false notions regarding the spread of odors.

Discuss very briefly the phenomenon of osmotic pressure.

B. MECHANICS OF SOLIDS

11. *Absolute units of force and energy in the metric and British systems.*

Discuss dyne and poundal as a special case in which coefficients reduce to unity in *dynamic* effects.

Simple problems.

12. *Equilibrium in a plane: general laws.*

Exp. 11. Four or more *non-parallel* forces (no three of which intersect at a point) applied by means of spring balances at the corners of a wire frame—

a) Find algebraic sum of moments with respect to any point.

b) Find algebraic sum of components of the forces in two given directions at right angles with each other.

Discuss familiar illustrations of equilibrium in a plane.

Problems worked graphically.

Exp. 12. Statics of crane or truss.

13. *Circular motion: centripetal and centrifugal force.*

Dem. 10. Various.

Exp. 13. Study of centripetal and centrifugal force in conical pendulum quantitatively.

Discuss applications, pointing out in each case the centripetal and centrifugal force.

Simple problems.

14. *The pendulum and its use in measuring the force of gravity.*

(Law of length studied during the first year).

Dem. 11. Iron pendulum, magnet.

Dem. 12. Interchangeability of centers of suspension and oscillation.

Exp. 14. Value of g with Kater's pendulum, using method of coincidences (optical or electrical).

Discuss briefly effect of motion and shape of earth on apparent direction and amount of gravity; also the effect of mountain ranges and the irregularities in the density of strata.

(Hydrostatics usually fairly well developed during the first year.)

C. PNEUMATICS

15. *Special method of measuring atmospheric pressure.*

Exp. 15. Smithsonian barometer, vernier. Use of correction tables for capillarity and for expansion of mercury and scale.

Dem. 13. Study of mechanism of aneroid barometer.

Exp. 16. Measure with fine aneroid the difference in level of two window sills, and verify with tape.

Discuss hypsometry.

(Density of dry air and Boyle's law studied during first year.)

D. ENERGY AND ITS TRANSFORMATIONS

16. *Mechanical energy.*

Exp. 17. Compare energy stored in spring as measured by work done in compressing or bending it, with the energy as measured by work done on mass projected vertically by the spring. (Height.)

Exp. 18. Ditto, but mass projected horizontally. (Velocity.)

Exp. 19. Efficiency of a set of pulleys.

Exp. 20. Efficiency of a water motor.

Discuss water turbines.

17. *Relation of heat energy to mechanical energy.*

Dem. 14. Heat developed by compressing air.

Discuss case where intermolecular force is absent.

Discuss incandescence of meteorites.

Dem. 15. Heat absorbed by the expansion of air. Formation of clouds.

Discuss application of certain ice-machines.

Discuss cause of low temperature at high altitudes in the atmosphere.

Exp. 21. Determine mechanical equivalent of heat.

Exp. 22. Determine efficiency of hot-air motor, using data of Experiment 23 a).

Discuss applications and illustrations.

Simple problems.

18. *Relation of heat energy to chemical energy.*

Exp. 23. Heat of combustion of one of the following:

a) Illuminating gas (Junker's calorimeter very satisfactory).

b) Hydrogen (Junker's calorimeter).

Discuss applications.

Simple problems.

19. *Relation of heat energy to electrical energy.*

Exp. 24. Determine calories of heat energy developed by the consumption of one watt-second of electrical energy.

Discuss electrical heating devices.

Simple problems.

Exp. 25. Thermo-battery run with gas flame (Guelcher or other form).

a) Determine cost of one kilo-watt hour, using gas meter.

b) Determine, by calculation from data of exp. 23 a) the fraction of heat energy of flame converted into electrical energy during maximum output.

20. *Relation of electrical energy to mechanical energy.*

Exp. 26. Determine total efficiency of electric motor at various loads.

21. *Relation of electrical energy to chemical energy.*

Exp. 27. a) With platinum electrodes very near each other in acidulated water, determine minimum voltage that will maintain a constant evolution of gas.

- b) Pass a current of about 5 or 10 amperes for about 15 minutes and measure hydrogen evolved. Compare watt-seconds of effective electrical energy consumed with the chemical energy liberated (use data of Experiment 23 b) and Experiment 24).

22. *Discuss general subject of conservation of energy.*

E. SOUND

23. *Vibration.*

- Exp. 28. Determine frequency of vibration of tuning fork to within one-fifth of 1 per cent.

Discuss simple harmonic motion.

Discuss the mechanics of vibration.

(Laws of vibration of strings studied during first year.)

24. *Sound waves.*

- Dem. 16. Exhibit lantern slides of the photographic work of Boys and Wood on sound waves.

- Exp. 29. Determine velocity of sound in air directly (if not during first year).

- Exp. 30. Determine velocity of sound in metal rods, using longitudinal vibration, a sonometer, and a known tuning fork.

- Exp. 31. Determine velocity of sound in hydrogen or carbon dioxide, using Kundt's tube.

Discuss velocity in relation to elasticity and density.

Simple problems.

Discuss very simply the kinematics and dynamics of sound waves.

- Dem. 17. Illustrate Doppler's principle by swinging high-pitch tuning fork.

Discuss applications.

25. *Interference of sound waves: beats.*

- Dem. 18. Various.

- Exp. 32. Determine frequency of fork by comparing with known fork by means of beats.

- Dem. 19. Show properties of sensitive flame.

- Exp. 33. Measure wave-length of inaudible whistle by Rayleigh's method (stationary waves by selection; sensitive flame).

Discuss certain failures of fog signals.

- Dem. 20. Show different tones with two tin flutes.

Discuss relation of beats, difference tones, and overtones to harmony and discord, and then in this new light discuss the structure of the diatonic scale.

(Sympathetic resonance studied during first year.)

26. *Overtones.* (Overtones of strings studied first year.)

- Dem. 21. Overtones of open and closed organ pipes.

- Dem. 22. Overtones of Chladni plates.

- Dem. 23. Overtones of oboe (even and odd), and of clarinet (odd).

- Exp. 34. Determine overtones of metal rod vibrating transversely.

27. *Musical instruments.*

- Dem. 24. Study the acoustics of some common instruments not studied above, such as the flute, the cornet, and the reed organ or harmonium, tin horns, xylophone and bell.

28. *Timbre.*

- Exp. 35. Let group of pupils and the instructor using a set of Helmholtz's resonators, determine the approximate relative strength of the overtones of several vowel tones.

(They lie in the neighborhood of the "characteristic tones.")

- Dem. 25. Brief study of developed phonograph records.

F. LIGHT

29. *Refraction: refractive power.*
 - Exp. 36. Angle of a prism; spectrometer.
 - Exp. 37. Index of refraction; prism, spectrometer.
 - Exp. 38. Determine longitudinal spherical aberration of plano-convex lens in both aspects, using sodium light.
 - Exp. 39. Determine critical angle in glass or in water.
30. *Dispersion: dispersive power.*
 - Dem. 26. Show difference in dispersive powers of flint and crown glass.
 - Dem. 27. Achromatic prism.
 - Exp. 40. Determine the chromatic aberration of a plano-convex lens. Use deep ruby glass and copper ammonio-sulphate. Cover central portion of lens.
 - Dem. 28. Direct-vision prism.
 - Dem. 29. Achromatic lens.
 - Discuss very briefly modern photographic lenses, telescopes, and microscopes.
 - Dem. 30. Principle of rainbow.
31. *Spectroscopy.*
 - Dem. 31. Show in lantern absorption spectra of various media.
 - Exp. 41. Plot line spectra of Na, Li, K, Tl, and Sr.
 - Exp. 42. Identify metals in a mixture by physical analysis.
 - Dem. 32. Reversal of Na line.
 - Exp. 43. Plot Fraunhofer's lines.
32. *Color sensations.*
 - Dem. 33. Primary and secondary hues with lantern color mixer.
 - Exp. 44. Determine color equations with Maxwell's discs.
33. *Retinal fatigue and other ordinary disturbances.*
 - Exp. 45. Determine approximate period of persistence of vision for different degrees of illumination.
 - Discuss the kinetoscope, and every-day illustrations.
 - Dem. 34. After-images and allied phenomena.
 - Dem. 35. Simultaneous color contrast.
 - Dem. 36. Successive color contrast.
 - Discuss application to color schemes.
34. *Interference of light.*
 - Dem. 37. Newton's rings.
 - Dem. 38. Various illustrations of colors of thin plates.
 - Exp. 46. Determine wave-length of Na light with Newton's rings apparatus.
 - Use spherometer to measure curvature of lens.
 - Dem. 39. Fresnel's biprism.
35. *Diffraction of light.*
 - Dem. 40. Diffraction phenomena using various obstacles (with arc light and oblique flat plaster screen the effects may be shown to several pupils at once).
 - Exp. 47. Measure wave-length of Na light with grating.
36. *Double refraction of light.*
 - Dem. 41. Iceland spar.
37. *Polarization of light.*
 - Dem. 42. Show polarization of reflected and refracted beams.
 - Dem. 43. Nicol prism and tourmaline.
 - Exp. 48. Determine angle of polarization of black glass.
 - Dem. 44. Selenite and mica in polariscope; explain colors.
 - Dem. 45. Study in polariscope the color phenomena displayed by glass strained by mechanical force; by unequal heating; by imperfect annealing. Explain.

G. HEAT

38. *Heat energy.* (Calorimetry in relation to latent heat and to specific heat is studied during the first year.)
See section D divisions 17, 18, 19, for material under this heading.
39. *Expansion.* (Studied in part during first year—such parts omitted here.)
- Exp. 49. Calibration of thermometer.
 - Exp. 50. Absolute expansion of mercury.
 - Exp. 51. Expansion of mercury relative to glass.
 - Dem. 46. Maximum and minimum thermometers, weather bureau pattern, clinical thermometer.
 - Dem. 47. Recording thermometer, Bourdon gauge type.
 - Dem. 48. Metallic thermometers and thermostats.
Discuss temperature regulation in buildings.
Discuss common systems of heating and ventilating large buildings.
 - Dem. 49. Balance wheel of watch and compensation pendulums.
 - Dem. 50. Prince Rupert's drops and Bologna flask.
Discuss importance of annealing glass.
40. *Regelation.*
- Dem. 51. Two blocks of ice.
 - Dem. 52. Ice and wire.
Discuss applications.
41. *Saturated and unsaturated vapors.*
- Dem. 53. Ether in barometer, warm water.
 - Exp. 52. Curve of vapor pressure of water from 25° to 100° C.
 - Exp. 53. Vapor density of alcohol (Victor Meyer's method).
Discuss applications.
42. *Infra-red rays.*
- Dem. 54. Radiation from various substances.
 - Dem. 55. Surface absorption.
 - Dem. 56. Reflection of dark heat-waves.
 - Dem. 57. Diathermancy.
 - Exp. 54. Newton's law of cooling, small differences of temperature.
 - Exp. 55. Determine relative radiating power of various substances.
 - Exp. 56. Determine relative diathermancy of glass and rock salt.
 - Dem. 58. Law of inverse squares, Tyndall's method.
 - Dem. 59. Radiometer.
 - Exp. 57. Inverse squares with radiometer, using several gas or candle flames to calibrate the speed of the radiometer.
Discuss many of the everyday illustrations of radiation and absorption.

H. ELECTRICITY AND MAGNETISM

43. *Static electricity.* (Develop elementary portions of the subject omitted during the first year.)
44. *Magnetic effects of the electric current: magnets and magnetic fields.*
- Dem. 60. Lines of force about current-bearing wire; iron filings.
 - Dem. 61. Lines of force—two wires—currents in same direction.
 - Dem. 62. Lines of force—two wires—currents in opposite directions.
 - Dem. 63. Mutual action of two current-bearing wires in all relative positions.
 - Dem. 64. Single loop sets with its plane east and west.
 - Dem. 65. Helix sets north and south.
 - Dem. 66. Lines of force about helix; effect of introducing iron core.
 - Dem. 67. Magnet deflected by current (first year).
 - Dem. 68. Current-bearing wire deflected by magnetic field.
Discuss the above phenomena in the light of Ampere's theory of magnetism, and also of the theory of the interaction of lines of force.

- Dem. 69. Magnetic induction in earth's field.
- Exp. 58. Determine angle of dip.
- Exp. 59. Determine value of $M \times H$ } Calculate M and H.
- Exp. 60. Determine value of $M + H$ }
- Dem. 70. Magnetic cut-out.
- Dem. 71. Hotel and elevators annunciators.
- Dem. 72. Magnetic door latch.
- Dem. 73. Automatic regulating arc lamp.
- Dem. 74. Standard forms of ammeter, voltmeter and wattmeter.
- Dem. 75. Paramagnetic and diamagnetic substances.
- Exp. 61. Hysteresis curve of iron.
- (Exp. 26, Section D). Efficiency of a motor.
- Discuss the motor more thoroughly than during the first year.
45. *Heat effects of the electric current.*
- (Exp. 24, Section D). Relation of a calorie to a joule.
- Dem. 76. Relation of a diameter of wire to temperature produced with a given voltage, and again with a given amperage.
- Discuss many of the modern applications of the heating effect of the electric current to domestic purposes.
- Exp. 62. Watts per candle of incandescent lamp run at different voltages.
- Exp. 63. Temperature co-efficient of resistance of copper, iron, and of Ia Ia metal (Hermann Boker, Duane St., New York).
- Dem. 77. Nernst lamp glower with and without ballast. Use either alternating or rapidly reversed current. Heat with Bunsen.
- Dem. 78. Construction of Nernst lamp.
- Dem. 79. Cooper-Hewitt lamp.
46. *Thermo-electricity.*
- Dem. 80. Simple juncture of iron and copper; neutral point and reversal of E. M. F.
- Dem. 81. Thermo-pile (Melloni form).
- Exp. 64. Make a thermo-electric diagram of two metals such as iron and copper. (Exp. 25, Section D.) Efficiency and cost of output of thermo-battery.
47. *Chemical effects of the electric current.*
- Dem. 82. Electroplating, electrotyping, and electric etching of copper.
- Exp. 65. Faraday's law. Show in what way the weights of hydrogen (calculated from observed volume) and of silver set free by the same current (unmeasured) in the same time (unmeasured) are related to the combining weights of those elements.
- Exp. 66. Determine the electro-chemical equivalent of copper or silver, using a Weston standard ammeter.
- Dem. 83. Principle of the storage cell—two lead plates in dilute acid, electric bell or motor.
- Discuss the value of accumulators in central stations
- Discuss the arrangements in an electric automobile.
48. *Electrical measurements.*
- Exp. 67. Verify approximately Ohm's law by any suitable method (beware in the proof of a hidden assumption of the law itself).
- Discuss the practical establishment of the fundamental units upon the basis of a standard resistance and a standard cell.
- Deduce law of Wheatstone's bridge from Ohm's law.
- Deduce formula for resistance of wires in parallel from Ohm's law.
- Exp. 68. Verify experimentally law of Wheatstone's bridge.
- Exp. 69. Verify experimentally formulas for resistance of group of wires in parallel.
- Exp. 70. Verify experimentally law of best arrangement of battery cells with a given external resistance.

Discuss distinction between arrangement for best output, and arrangement for best efficiency of battery.

Simple problems.

Deduce formula for currents in branches of divided circuit.

- Exp. 71. Verify formula for current in branches of divided circuit.
(Exp. 63, Topic No. 45.) Temperature coefficients of resistance.
- Exp. 72. Determine E. M. F. and internal resistance of Daniell cell with resistance box and standard voltmeter (make corrections).
- Exp. 73. Determine E. M. F. and internal resistance of Daniell cell with resistance box and standard ammeter (make corrections).
- Exp. 74. Determine the E. M. F. and internal resistance of a Daniell cell with a voltmeter and an ammeter (make corrections).
- Exp. 75. Determine internal resistance of Daniell cell by Mance's method.
- Exp. 76. Determine resistance of the galvanometer by Kelvin's method.
- Exp. 77. Determine the specific resistance of some electrolyte.
- Exp. 78. Determine capacity of a condenser by comparison with a standard capacity.
- Exp. 79. Determine the coefficient of self-induction of a coil by comparison with a standard.
- Exp. 80. Determine frequency of an alternating current. Use sonometer and known tuning fork.
49. *Long electro-magnetic waves.*
- Dem. 84. Absorption, reflection, refraction, polarization, and interference of electro-magnetic waves.
- Dem. 85. Wireless telegraphy without ground connections.
Discuss function of conducting surface of the sea in guiding waves in practical wireless telegraphy.
- Exp. 81. Measure resistance of coherer in both stages.
50. *Electric discharges through gases.*
- Dem. 86. Study discharge thru tube of variable vacuum.
- Dem. 87. Cathode rays; heat focus.
- Dem. 88. Cathode rays; magnetic deflection.
- Dem. 89. Cathode rays; electrostatic deflection.
- Dem. 90. Cathode rays; phosphorescence.
- Dem. 91. Cathode rays; generation of Roentgen rays at anti-cathode.
Discuss in the light of the electron theory.
51. *Roentgen rays.*
- Dem. 92. Photographic action of rays.
- Dem. 93. Phosphorescing action of rays.
- Dem. 94. Discharging action of rays. Contrast with discharging action of ultra-violet light.
- Dem. 95. Relative penetrability with Roentgen rays.
52. *Radio-activity of radium.*
- Dem. 96. Lantern slide showing magnetic deflection of α and β rays, and non-deflection of γ rays.
- Dem. 97. Self-luminescence of radium-barium-chloride.
- Dem. 98. Phosphorescent action on barium platino-cyanide and on Willemite.
- Dem. 99. Spinthariscopes.
- Dem. 100. Photographic action and relative penetration.
- Dem. 101. Discharging action.

Department Committee { FRANK M. GILLEY, Chelsea, Mass., *Chairman*.
ERNEST R. VON NARDROFF, Brooklyn, N. Y.
W. E. TOWER, Chicago, Ill.

DEPARTMENT OF SCHOOL ADMINISTRATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY, JULY 5, 1905

The meeting was called to order by the secretary, who announced the unavoidable absence of the president; and, upon motion, Harvey H. Hubbert, member of the Board of Education of Philadelphia, was selected to preside.

William George Bruce then read a paper on "Recent Progress in School Administration." It was discussed by John A. McCall, Grand Rapids, Mich.

A. L. Bixby, member of the Board of Education, Lincoln, Nebr., sent word that he had been stricken with illness during the journey and was unable to be present.

Frank H. Sommer, member of the Board of Education, Newark, N. J., read a paper on "Shall the State Regulate Teachers' Salaries?" The discussion was led by H. H. Hubbert, followed by E. E. Reed, member of the Board of Education, Camden, N. J.; Thomas T. Tynan, state superintendent of Wyoming; superintendent George W. Phillips, Scranton, Pa.; State Superintendent J. W. Olsen, of Minnesota; Mr. A. C. Willison, Cumberland, Md.; and Miss Harriet T. Treadwell, Chicago, Ill.

Miss Treadwell moved that this body ask the program committee to make the subject of teachers' salaries one to be discussed before the general sessions next year. The motion was carried.

Adjourned.

SECOND SESSION.—THURSDAY, JULY 6

The meeting opened with Mr. Charles S. Foss in the chair.

Mr. Seymour Davis, of Philadelphia, read a paper on "Recent Progress in School Architecture." The discussion was led by William R. Broughton, Bloomfield, N. J. He was followed by E. Hermann Arnold, New Haven, Conn.

C. B. J. Snyder, superintendent of school buildings for the Board of Education of New York, read a paper on "Needed Legislation in School Architecture." Discussions were participated in by Messrs. William George Bruce, Milwaukee, Wis.; John A. Hartpence, Trenton, N. J.; J. D. Simpkins; James A. Foshay, Los Angeles, Cal.; Superintendent George W. Phillips, Scranton, Pa., and others.

E. Hermann Arnold, New Haven, Conn., moved that the subject of school architecture be recommended for discussion at the general sessions next year, and at the meeting of the Department of Superintendence next winter. Carried.

The selection of department officers was referred to the Executive Committee of the National Educational Association, with the following recommendations:

For *President*—A. L. Bixby, member of the Board of Education, Lincoln, Nebr.

For *Vice-President*—Mrs. Pauline Steinem, member of the Board of Education, Toledo, Ohio.

For *Secretary*—William George Bruce, Milwaukee, Wis.

After extending thanks to Messrs. Snyder and Davis, and the local committees, the meeting adjourned.

WILLIAM GEORGE BRUCE, *Secretary*.

PAPERS AND DISCUSSIONS

RECENT PROGRESS IN SCHOOL ADMINISTRATION

WM. GEO. BRUCE, EDITOR, "AMERICAN SCHOOL BOARD JOURNAL,"
MILWAUKEE, WIS.

The history of school administration consists in a succession of tendencies and departures which have found their permanent acceptance or rejection, as common judgment or popular opinion may have dictated.

There has been a constant effort to secure thru the aid of legislation such laws as would be likely to insure abler, cleaner, and more representative school boards. These efforts have from time to time been crowned with success and have resulted in better school buildings, a more serviceable equipment, more practical courses of study, a higher standard of teaching ability—and, in brief, better schools. Thus, the administrative side of American popular education has experienced the same degree of progress that has characterized the pedagogical side.

As a system of administration, modern school boards represent the achievements of many minds, having grown from the simple to the complex in order to adapt themselves to the various and varying demands of education and the exigencies of time and locality.

The past year may be set down as a notable one in the field of school administration. Tendencies which have existed for several years have found full expression in the adoption of new measures and laws. These tendencies may be enumerated in the following order: (1) A clearer division between the business and professional functions in school administrative labors. (2) The recognition of school superintendency labors as a distinctive profession requiring natural and acquired attributes. (3) The increasing demand for professionally trained teachers and a more adequate compensation for their services. (4) The acceptance of expert service in the adoption of schoolhouse plans and state regulation of sanitary requirements for new school buildings.

Perhaps no state in the Union has ever had to grapple with the subject of school administration on such a large scale as came within the lot of the state of Ohio within the past year. When the supreme court of that state wiped out every school board in the state, as being unconstitutional, it devolved upon the legislature to frame a law which would insure uniformity, and at the same time embody the more progressive ideas on the subject of school administration. The task, considering that the press, the pulpit, the schoolmaster, and the school-board member, to say nothing of the numberless faddists and reformers, all took a hand in framing model school-board laws, became an enormous one. The difficult problem, however, was solved, and the following contains the principal provisions of the law:

The maximum school levy is fixed at 12 mills. Villages, special districts and townships shall have a board of five, elected at large. A subdirector, with only suggestive power, is provided for the townships. In villages the board appoints the teachers upon the recommendation of the superintendent. Cities are divided into two classes. The 66 cities with a population of less than 50,000 are organized with a board of not less than three or more than seven elected at large. In the five large cities, Cleveland, Cincinnati, Columbus, Toledo, and Dayton, the elastic or option plan will prevail. This provides for a board of not less than two or more than seven elected at large, and not less than two or more than thirty elected by subdistricts. This permits Cincinnati to retain its large board of thirty-two, and Cleveland can have a board of seven, as now, but at least two must be elected by the subdistricts.

The city districts are empowered to employ a business director elected by the board. This is permissive. The superintendent is elected for five years. He appoints the teachers, subject to confirmation by the board. No teacher can be elected for a longer term than four years. The superintendent discharges, but teachers may appeal to the board.

In cities below 50,000 the present board decides the number of members for the future board. This decision stands until the next federal census. In the five larger cities the present boards decide the number, and also what proportion shall be elected at large and how many from wards. This means, for instance, that the present Columbus board of education decides whether there shall be a small board of five, three elected at large and two by subdistricts, a board of twelve by subdistricts and two at large, or go the full limit and elect thirty by subdistricts and seven at large.

The city of Philadelphia, which has a general, and a number of so-called sectional, school boards has modified its school law. The change brings into life three distinctive administrative departments, which are headed by a superintendent of instruction, a superintendent of buildings, and a superintendent of supplies. The several boards retain their legislative powers and are less dependent upon other municipal branches of government in matters of public expenditures.

In the field of school administration, as applied to the larger cities, the change made at Milwaukee from an appointive to an elective school-board system, is a most interesting one, in that it discards a most unique system, and substitutes one which embodies the most modern ideas on the subject. The old system provided for a bipartisan school commission of four members appointed by the mayor. This commission in turn appointed the school board, one member from each of the twenty-three wards of the city. The new system not only reduces the membership of the board from twenty-three to twelve, but enlarges its powers to an unusual degree. Its tenure of office is lengthened to six years. It will control the architecture and construction of school buildings as well as the selection of sites. Besides this, it will be no longer subject to ultimation of a city council or a board of public works in

financial matters. It will have the authority to inaugurate bond issues. It will control the employment and dismissal of a thousand people and the expenditure of a million dollars.

Here is food for speculation! The transformation from an appointive to an elective system, from a large to a small membership, from short to long tenure, from limited to enlarged authority, suggests the apprehensive question of success or failure. The answer is found in the experience of other cities. Public sentiment alone decides. If the progressive citizenship of a community takes the lead in the creation of a board of education, the ward-heeler gracefully retires and success is achieved. If the same lack of popular discrimination between candidate and candidate, which now obtains in the selection of the average city council or county board, should prevail, failure will be recorded. It then remains to be demonstrated whether the citizenship of Milwaukee is equal to an intensely modern system of school administration.

The school board must be assured of a higher type of membership than that found in other local legislative bodies, in order to attain the largest measure of usefulness. It deals with the practical and theoretical machinery governing popular education, and every duty which it performs must be in the interest of the child—the future citizen. Therefore no elective school-board system, however well planned as to membership, scope, and authority, can become efficient unless founded upon a wholesome public sentiment. It all reduces itself to the question of men rather than method, and the public must exercise discriminating care in selecting only men who are unselfish, high-minded, and competent.

This becomes doubly essential where the membership of a board has been reduced in numbers, where the powers have been enlarged and the tenure of office lengthened. The smaller bodies can remain undisturbedly corrupt for a longer period than can larger bodies. The larger bodies are usually less exclusive, more cumbersome of action, but, owing to their demonstrative and loquacious character, their labors are more vividly exposed to the public eye. It therefore logically follows that the merchant and the manufacturer, the professional man and the mechanic, the class of men who have hitherto paid little or no attention to local elective contests, must take the lead in the selection of a school board that shall be a positive force in the direction of popular education.

I may also point to a bad piece of legislation. The board of education of Wilmington, Del., under a new law, is now composed of thirteen members (instead of twenty-four as heretofore). One member from each ward is elected for a term of four years, and the president is elected at large. This makes the board a partisan one in every particular. There was no legislation affecting the function of the superintendent. Salary, term of office, duties, and authority are to be defined by the board. The financial side of the school administration is lodged with the city council; the board must have all its bills approved by councils before they can be paid by the city treasurer. The

board also has power to appoint a business manager to take charge of the business side of the schools.

My discussion would be incomplete did I not touch at least upon the gratifying impetus which has been to the selection of better schoolhouse plans. This subject will be discussed by two of the greatest schoolhouse experts of the country at tomorrow's meeting. Suffice it for me to say that school boards have during the past year not only recognized the importance of preparing a fixed program for the construction of a new building, but have also called in impartial expert advice on the selection of plans. Such experts as Mr. C. B. J. Snyder, architect and superintendent of school buildings for the board of education of Greater New York, Mr. William B. Ittner, architect for the school board of St. Louis, Mo., and others, have been called to several cities to select schoolhouse plans. Experience has demonstrated that this method is certain to secure schoolhouse plans that are practical and economical, utilitarian in character, and economical in cost.

The law just enacted by the legislature of Pennsylvania establishes strict rules to be applied in the construction of new school buildings in the matter of heating, ventilation, and sanitation. The state of New York has enacted a similar law.

Speaking prospectively, it is safe to say that the progress which has been manifested during the past year will continue during the next with increasing intensity. The new laws enacted may not prove perfect in operation, but a readiness to eliminate undesirable improvements will tend to bring American school administrative labors to their highest state of efficiency.

SHALL THE STATE REGULATE TEACHERS' SALARIES?

FRANK H. SOMMER, MEMBER OF BOARD OF EDUCATION, NEWARK, N. J.

I recently had in my possession a collection of excerpts from various writings in appreciation of the importance to the state of the work of the teacher. As I turned page after page, it seemed to me that the chorus of appreciation ever grew, and that the resources of all tongues had been exhausted in the effort to give appreciative expression to the importance of the profession of the teacher. It seemed to me that here at least was one class of public servants the value of whose service to the state was unquestioned, and whose skillful and faithful performance of its work had met with deserved recognition.

A little later, and while the effect of my examination of this collection was still vivid, there came to my hands the report of the Committee on Salaries, Tenures, and Pensions of School-Teachers of this Association. I turned to this report with interest, for there I expected to find that appreciation had taken a form more substantial than words. To my dismay, I found embodied in a mass of statistics this statement, referring to a table contained therein, involving a comparison of the earnings of municipal employees—laborers

on street and sewer work—with the earnings of women teachers in the elementary schools of some forty-eight cities in various parts of the country:

On the basis of fifty weeks of work during the year, the earnings of the laborers would in nearly every city exceed those of the lowest-paid elementary teacher. The exceptions to this are only four—Chicago, Ill., Columbus, Ga., Meridian, Miss., and Washington, D. C. In the cases of Columbus and Meridian, all the laborers are, of course, colored, while the teachers are white. In many cases the laborer's pay is greatly in excess of the teachers' minimum.

So astounding seemed this statement that I feared that some grave error had been committed; but as I scanned the figures and compared them with other data, the conviction was borne in upon me that here there was no error, and that the statement, startling tho it was, was fully supported by the facts.

These few lines of this report blotted out for me the pages of words of appreciation, and there came before me the picture of a bright-faced child entering one of our elementary schools, passing to one of our secondary schools, and then on into a normal and training school, maintained thruout by the self-denial of others; passing again into our elementary schools, and there devoting herself to the work of preparing others to take their places in the citizenship of this republic, until her hair, first lustrous brown, became streaked with gray and later a crown of snow-white; until her head, once proudly held erect, was lowered by the burden of advancing years, and the face, once glowing with health, took on a startling pallor; compelled, long past the age of useful endeavor, to keep up the effort to teach; and—finally surrendering and seeking provision for the few remaining years of life at the hands of others, or petitioning for the state or municipal aid. And why? The answer echoes and re-echoes. She gave to her life's work years of preparation; upon the faithful performance of that life-work the welfare of the state was dependent; in its performance, always on public view, she was obliged to live according to the standards of those about her; and a grateful people bestowed upon her, in reward, the munificent compensation of its unskilled labor in street and sewer work, scarcely sufficing for the bare necessities of life, and admitting of no provision for declining years.

You who are members of our educational boards must bear testimony to the truth of this picture; for have you not time and again been called upon to deal with a teacher who had served the community well, but whose days of usefulness, thru advancing years, was past; whose continuance in the schools worked positive harm? And yet have you closed the portals of the schools to her? I dare say not. And was this not due to the fact that your heart revolted at the thought of turning adrift a faithful public servant, who, thru no fault of her own, was without means of future sustenance?

Words of appreciation are not to be decried, but "actions speak louder than words," and in our treatment of the teachers of our common schools it would seem that we as a people had been guilty of "lip-service."

How comes it that the conditions set forth in this report exist? How comes it that action does not square with word? Why is it that, with increased

and steadily increasing requirements in the preparation for the work of the teacher, with teaching raised to the level of other professions, with a steady increase in the cost of the necessities of life, with compensation in other occupations and professions tending upward, the compensation of the teacher is measured by that paid to unskilled labor?

Running over the statutes of our states, I find that, as a general rule, while the fixing of the compensation of teachers is the function of a local educational board, yet the funds available for payment are provided and limited by another municipal body, and that, therefore, this function of the educational board is not independent, but is limited.

As the result of inquiry, I find that local boards of education, as a rule, have been alive to the conditions which have been pointed out, but that oftentimes their efforts to better these conditions have been rendered futile by the action of the municipal body intrusted with the apportionment of municipal funds.

When the sphere of woman's activity was limited; when of the professions that of the teacher alone was open to her; when the requirements for teachers were of anything but an exacting nature, the standard of compensation for teachers was fixed; but as other occupations and professions have been opened to her, and as the requirements for teachers have become more and more exacting, our municipal bodies, upon which falls the duty of providing funds for payment, have been slow to make provision that would admit of increasing the standard of compensation. In great part this is due to that bane of municipal authorities—the tax-rate, upon the maintenance of which at a low level continuance in power is deemed to be dependent, and to the fact that, from the standpoint of political expediency, the item “for teachers salaries” in a tax budget seems more readily to admit of reduction than some others.

In these conditions we have another illustration of the verity of the statement made by Bryce in his *The American Commonwealth*: “There is no denying that the government of cities is the one conspicuous failure of the United States.” The maintenance and regulation of the schools are primarily a function of the state; this function it has in part delegated to the municipalities. They have been remiss in their duty to provide a “living wage” for the maintenance of the teaching corps, and naught seems to remain save for the state to interfere and enforce the performance by the municipalities of this obligation.

In several states steps in this direction have been taken. Indiana, Maryland, Mississippi, New York, Pennsylvania, and West Virginia have placed upon their statute-books laws establishing a minimum salary to be paid to teachers.

The statute applying to the city of New York is analyzed in the report of the Committee on Salaries, Tenures, and Pensions, and suggestions for the amendment thereof are made, which are well worthy of study.

The enactment of statutes merely establishing a minimum salary for all

teachers will not suffice to correct the evil conditions which we have considered. Such statutes should contain provisions, applicable to the more populous municipalities, requiring the payment, at the end of fixed periods of adjudged meritorious service, of a specified minimum salary yearly, in addition to the prescribed minimum salary, in order that continuous meritorious service receive recognition.

Such statutes might also with advantage require the adoption by the local boards in the more populous municipalities of regular schedules of salaries, with provision for a fixed regular increase for merit and additional length of service; the consideration of the revision of such schedules at the expiration of stated periods of years at a special meeting, action upon the subject of the revision thereof to be taken only at a subsequent meeting held after the lapse of a stated period of time; and that, pending such required periodical action upon the question of the revision of such schedules, no alteration be made therein without the consent of three-fourths of the members of the local board at a meeting specially called for that purpose.

Legislation along these lines will be of little avail, however, so long as the power is vested in a local body to limit arbitrarily the funds available for the payment of teachers' salaries, and the scheme of legislation requires for its completeness a statute fixing a minimum sum to be raised annually for the payment of teachers' salaries, basing this sum upon a percentage of tax-ratables upon school attendance, or fixing it by other means, as may best serve under the varying conditions which prevail in the several states.

From the adoption of legislation along these general lines there will result:

The fixing of a standard below which compensation cannot fall.

The assuring of recognition of continuous meritorious service in increased compensation.

The classification of the teaching force and the adoption of uniform schedules applicable to each class.

The maintenance of these schedules for a fixed period, broken in upon only when three-fourths of the local board shall consent in special meeting.

The consideration of the revision of these schedules at stated intervals.

The separation of funds for the payment of salaries from the general educational appropriation.

The protection of salary schedules against relapse owing to other public demands.

I am not sufficiently optimistic to believe that this plan, or any other calculated to produce these results, will meet with ready acceptance by our legislative Solons. To bring about its acceptance, in part or in whole, will require a campaign of education.

In this connection it has occurred to me that our legislatures may perhaps be persuaded, with comparatively little effort, to furnish indirectly some measure of relief by the enactment of statutes requiring that all tax-bills state the total amount of the levy, and that the appropriations for payment of teachers' salaries and for general educational purposes appear as separate items.

Such statutory requirements cannot but have a wholesome effect upon the officials intrusted with the appropriation of the community funds, and would incidentally furnish, thru the comparisons made possible, ammunition for the campaign.

DISCUSSION

HARVEY H. HUBBERT, member of the Board of Education, Philadelphia, Pa.—The question of teachers' salaries is one which has from the advent of the more modern school system elicited profound interest and discussion, agitated both teacher and educational authorities, and, we may assert with entire confidence, has never been adequately adjusted by any educational system of administration.

From the early or primitive days, when the teacher boarded around among the district school trustees or commissioners, and oftentimes relinquished the entire monthly stipend for very scanty fare and the privilege of living, down to this year of our Lord, the salary of the teacher has been the most vexatious and difficult problem which has confronted school authorities everywhere; and this discussion of today is the strongest evidence we could present that the question is as problematical as ever, and as far from a satisfactory adjustment. We would not have it inferred that no progress has been made toward a more substantial recognition of the teacher's services and worth; for we must all admit that the years of effort have resulted in a more adequate salary scale. This is particularly true of our larger cities, where appropriations have been sufficiently munificent to warrant liberal compensation for the teacher, enabling those of both sexes to enter the profession with the view of making it their life-work; but because this liberality and opportunity exist only in a limited degree, when considered in relation to the large army of teachers thruout the land, the obligation is still a very heavy one to use every honorable effort to bring the average level more nearly up to that of the best-paid class. The teacher of the poorer school district is just as important, in the consideration of this subject, as any other; and when we consider the high responsibility, the moral obligation, and the sacrificial spirit which pervade the life and control the motives of the faithful teacher in every place and station, then, in all reason, why should not the remuneration be as commensurate with the responsibilities in one place as in another? We are exacting more in the way of preparation and training from the teacher of today, and the pedagogical equipment is far greater and more thoro, than ever before; and it is therefore only logical that the teacher should be exacting in the demand for a more just compensation, which shall be a fitting return for the years devoted to study preparation for the work. Many who are doing noble work in training children for the duties of life, and implanting the seeds of knowledge which are to bear the fruit of wisdom in after-life, are receiving for the splendid effort less per day than some of the unskilled toilers in the multifarious vocations of the busy world. It is because of the negligence and disregard of these obligations toward the teacher that we have suggestions like that presented for our consideration today, and, as in the case of many social problems, which are difficult of solution, for the betterment of the people, the state is appealed to as the last resort of relief, when all other plans fail to bring about better conditions, and legislatures are petitioned and importuned to write into the laws of the commonwealth such imperative provisions and requirements as shall secure results which individual and collective personal efforts in a community have utterly failed to accomplish.

But state intervention and legislative enactment do not always prove successful as a panacea for social wrongs, and we should weigh well any proposition which claims to raise the standard of teachers' salaries. Before an appeal is made to that source of relief, and while we fully recognize the need, and admit every claim of the underpaid

teacher, we cannot accept the theory that the only relief rests with the state. I shall submit, briefly, some of our objections to this plan.

The state by legislation cannot secure a uniform scale of salaries by the control and distribution of all the school revenues of the school districts therein, so as to give equal pay for a uniform service; for by this plan, one can readily perceive, the result would be the reduction of the better pay of the teacher in the cities and more populous school districts, in order to raise the average to a higher level of the whole teaching force of the state. This plan would work injustice to the class receiving the better salaries, and create a storm of opposition in that quarter which would be almost irresistible.

If, on the other hand, an adjustment was to be based upon a graded system whereby the claims of the teacher in the more populous district, with a larger school appropriation, were to be treated in any way paramount to those in the poorer districts, in point of school revenue, the same disparity which now exists between these two classes would be continued, and a discrimination would be perpetuated by law which would violate the basic principle of all state and national legislation, *viz.*, "Equal rights before the law."

If it is also proposed to require the state to supplement the school district revenues for public education by larger appropriations to the sparsely settled and poorer localities, and withholding from cities and more opulent districts a corresponding reduction in the school gratuity, then a just charge of unfair discrimination would be held against the authorities, and, further than this, the outlay would have to be so increased that the state revenues would be inadequate to meet the liabilities, and the financial burden would become a serious one in the fiscal operations of the municipality.

For the reasons which I have enumerated, the regulation of teachers' salaries by the state is, in my judgment, impracticable, and fraught with insurmountable obstacles and difficulties.

But you may ask: Can the state do nothing to enforce a more liberal treatment of the underpaid teacher, and put upon the school districts a binding obligation to pay a more just remuneration to the teacher? I believe there is one practicable method by which it can, and that is by a legislative enactment which shall fix a good, liberal minimum salary, below which no teacher in the state shall be employed. We have such a law in my own beloved state of Pennsylvania, and it is working with great practicable success. No school district can employ a school-teacher in Pennsylvania below the legal minimum; and we advise the representatives present from any state having no such law to put one on your statute-books without delay, and be sure to fix the minimum high enough to cause to fade out the blush of shame which may have become a burning crimson, from the continued injustice to that good and faithful public servant, conservator of juvenile morality, and supreme factor in education—the teacher.

RECENT PROGRESS IN SCHOOL ARCHITECTURE

SEYMOUR DAVIS, PHILADELPHIA, PA.

The old ideas of school construction, with the poor ventilation, inadequately lighted rooms, and their many other inconveniences, are rapidly being discarded. In many of the new buildings are incorporated the scientific principles of modern school architecture. This development of recent years has extended to every part of the civilized world, not only on the vital points just referred to, but in all points of construction. We have but to glance over the prize essay of Dr. Alcott, written in 1831, to find that his ideal for a schoolroom

was one lighted on opposite sides. George B. Emerson, in 1842, advised less than 118 cubic feet of air per pupil in schoolrooms. Burrowes published in 1855 a treatise in which the heating and ventilating of schools was gone into in great detail, and for a room to accommodate fifty pupils he allowed vent-ducts only ten by eighteen inches.

These gentlemen were the authorities of their day, and their suggestions in the construction of school buildings were widely circulated and followed; but the revolution in all matters pertaining to school construction and administration has changed the requirements for the modern school. A great factor in the advance of school work is due to the public demand for better things. Our school commissioners require that buildings shall be planned on correct architectural and sanitary lines; and so long as this educational movement advances, we can expect still greater progress.

Our new buildings are being properly equipped, and are hygienically and architecturally in keeping with the advance in education. Heating, ventilation, and sanitation have been reduced to such an exact science that there can be no excuse for an inadequately ventilated, poorly heated, or unsanitary school building. The sanitary conditions of the schoolroom having such an influence for good or bad upon the health and morals of the children, and bearing such weight in the success of the teacher, it is to the interest of everybody to be satisfied only with the best that science can produce.

The details of the modern school plan should be as carefully considered as the details of a hospital. It is encouraging to note that the school boards of the present day make themselves familiar with what is best in school-planning, the result being that each year we see buildings that are better planned, better constructed, and properly designed, at an initial cost not greatly in excess of that under the old requirements.

Laws governing schoolhouse construction.—Certain countries, states, and cities are fortunate in possessing laws governing the planning and construction of their school buildings. To assure these laws being carried into effect, it is required that plans be submitted to competent heads of departments for approval before any contracts are entered into. These laws are doing much good toward the development of school architecture, and their influence extends far beyond their own jurisdiction, neighboring states and cities benefiting by their influence. For example: An architect who has designed a building under the foregoing restrictions, or a superintendent who under them has planned its details, when called upon to assist in the erection of a new building, in communities not possessing such laws, naturally uses his influence to secure the best.

The laws controlling school construction succeed in establishing good conditions for the safety and health of pupils and teachers. This includes the fireproofing of stairs and other parts of the building; the placing, construction, and number of exits; fire towers and outside escapes; the square feet of floor area and cubic feet of space that shall be allotted to each occupant

in schoolrooms; the minimum height of ceilings; the amount of outside glass area; the proper lighting of the schoolrooms; the swinging of doors; construction of ceilings; heating, ventilation, sanitation; and other points of equal importance.

The underlying principles of modern school architecture may be divided into several different heads, such as the orientation, planning, construction, designing and equipment.

Selection of sites.—The building site must be well considered, especially in respect to proper sanitary surroundings. Every precaution should be taken to avoid the possibility of dampness. The future possibility of obstructing the sunlight, and the hazard of having surrounding buildings in close proximity, should not be overlooked. The best-arranged plan will be a failure if these questions are not properly considered and solved. If the conditions are such that surrounding buildings preclude the proper lighting of schoolrooms, then reflecting prisms may be used to advantage. I do not recommend them, however, except as temporary assistance for old buildings. In a new building, if such conditions exist, I would prefer to design the rooms narrower, and place in the rooms lighted from one side a less number of desks. This brings up the old question of the exact number of pupils that should be accommodated in the schoolrooms used for the graded pupils. The tendency is to make forty pupils the maximum for any one room, especially in primary grades; and there are many good arguments in its favor.

In arranging a plan, much depends upon the size of the ground allotted to the building, the number of pupils to be accommodated, and their grade. An elementary rule is to avoid light wells, and use light courts as sparingly as possible, and never where the sunlight cannot at some hour of the day find its way to each room. The successful plan is the simplest in its disposition of corridors and rooms. Where possible, the entrances for the boys and girls should be near the ground level, avoiding the long flights of outside steps.

Basement, exits, etc.—Keep the basement well out of ground. This space, if properly lighted, is valuable for playrooms, manual-training, and other like rooms, but is lost for successful use unless this condition is complied with. When the building is two stories in height, a high basement can be made to add materially to its dignity and architectural appearance. Ground-floor entrances should open into a commodious rotunda, and the rotunda should communicate with the principal rooms on this floor, including locker-rooms, toilet-rooms (if placed in the building), and also the stairs leading to the floors above. Besides these ground-floor entrances, one or more entrances should be provided from grade direct to the first floor. All stairways should be so planned that the bottom flights end in close proximity to the outside entrances. They should be of ample width, easy of ascent, with intermediate landings wide enough to avoid jamming or crowding; they should be fire-proof and always well lighted.

Corridors and class-rooms.—Corridors must be generous in width, bright,

and with as few turns or breaks in the walls as possible. Hat- and coat-rooms for the lower grades are properly placed when adjoining to and communicating with the schoolroom; but for the higher grades it is frequently more convenient to centralize them. Cloak-rooms must be ventilated and receive direct light. Their surrounding walls should extend to the ceiling, and the rooms provided with a separate compartment for each pupil.

A schoolroom having its length a little less than one and one-half times its width is well proportioned and admits of a good arrangement of desks on the long axis. Thirty-two feet in length allows eight desks to a row and ample space for the teacher, who can, without effort, speak to a pupil at this distance. Twenty-three feet is a satisfactory width, which allows of five rows of seats and generous aisles. A room 23 by 32 feet approximates 18 square feet of floor area to each of the forty pupils, and with a story height of 12 feet gives 200 cubic feet of air space for each pupil.

The English, French, and Dutch school laws, published for the guidance of architects in planning school buildings, call for a lesser width of room, some fixing the height equal to two-thirds of its width plus the thickness of the walls in which the windows are placed. To obtain the best of results, the schoolroom should be 13 feet high. Some advocate a greater height, but I believe it inadvisable, as it unnecessarily adds to the expense of construction and increases the distance in traveling from floor to floor.

Lighting.—Seldom does it happen that too much light is secured. The greatest amount should unquestionably come from the left of the pupil. In corner rooms, where it is desirable to place windows at the rear, they should be placed near the angle, in order that teachers may face wall surfaces as much as possible. The upper portions of windows furnish the most desirable light; therefore the windows should extend close to the ceiling. The glass surface should not be less than one-fifth of the floor area. The inside vertical jambs should be flared, and the windows should be spaced in the walls at regular intervals. Transoms and circular head windows are to be avoided, as they obstruct the light. A few wide windows are preferable to a number of smaller ones. Wood wainscoting should be eliminated from the schoolroom. By keeping the window-sills, chalk-tray, and chair-rail at the same height, together with the picture-mold, a division of the walls is secured that is both effective and economical. A large unobstructed area of slate black-board is essential to the schoolroom. The space immediately back of the teacher's desk is especially valuable for this purpose, and should be kept free from obstruction.

Sanitation.—Double sash and weather stripping are to be recommended in cold climates; while they add somewhat to the initial cost of construction, they save in fuel and add to the comfort of those occupying the room.

No schoolroom is complete without a teacher's book closet, provided with shelves and hooks. Every school building should be planned for a teacher's room, properly equipped, where in cases of emergency it can be used as a temporary hospital.

The plumbing should have the most careful consideration, as the health of the children may be affected if this work is not properly installed. Tests of the plumbing should be made at stated intervals. The sanitariums, if placed in the building, should be automatic in their flushing, and ventilated independently of other parts of the building.

Heating and ventilation.—Pupils in class- and study-rooms should be supplied with not less than 30 cubic feet of fresh air per minute, and an equal amount of vitiated air should be exhausted to the atmosphere at a point most extreme from where the fresh air is taken into the building. To do this successfully, and at the same time obtain properly warmed air, a mechanical system of indirect heating and ventilation must be installed in buildings containing more than four class-rooms with both supply and exhaust fans, and where steam is used for the motive power the exhaust can be utilized as supplementary heat to temper the air before passing over the heating surface. Where furnaces are used to warm the fresh air, the exhaust from the motive power can be used to advantage by direct radiation, to heat the rooms used for administration work, which allows of their comfortable use without starting the fans. In designing the heating and ventilating apparatus, economical results can be secured by revolving the air in the building until occupied, and also by controlling the tempered and warm air delivered to the rooms.

Assembly rooms.—In buildings devoted, wholly or in part, to the higher branches of education, the plan naturally becomes more complex, but the general principles of school-planning remain the same. Such buildings are larger and more pretentious, the details of which should have the most careful thought and study. It is necessary to plan for the assembling of all pupils at certain intervals, to provide for the diversified class work, together with accommodations for the society and athletic work, all of which are important. It is in this class of building that you will frequently find accommodated the administrative branch of the schools, rooms for the board of education, the secretary, and the superintendent. This department should be of easy access to the public, and provided with toilets, and fireproof vaults, rooms for the unpacking, sorting, marking, and storage of supplies. The assembly-room, owing to its large floor area, naturally dominates the plan. This room should be placed on the first floor, where it is easy of access, and where any danger in dismissing large assemblages is reduced to the minimum. There is also the advantage of simplicity of construction and economy of space.

The plan of the assembly-room depends largely upon the purposes for which it is to be used. It can be of the amphitheater pattern, with galleries, where commencement and institute meetings may be held; or it may be much simpler in form, when used solely for the daily opening and closing exercises. By placing the scientific branches and other departments of special work on the top floor, the lower floors are left for a good arrangement of class-, study-, and recitation-rooms.

The Reading High School.—It may be of interest to describe here a high-school building, now under construction at Reading, Pa., in which the plan has been most carefully studied. It is one of a very large number of similar buildings that are now contemplated or in course of construction.

The Reading building, which is to accommodate eight hundred boys, is three stories and basement in height, thoroly fireproof. The auditorium is placed on the first floor, with dividing partitions, giving a total seating capacity of fifteen hundred. Two of these divisions may be used for large class-rooms, and the two center divisions for lecture- and assembly-rooms. On the first floor are also provided rooms for the library, visitors, principal, and faculty; also class-rooms and cloak-rooms. The second floor is entirely devoted to class- and recitation-rooms, and the gallery of the assembly-room. The third floor is divided into laboratories, with their class- and lecture-rooms, commercial, banking-, and typewriting-rooms, and professors' private rooms, drawing- and modeling-rooms, and room for photography.

The basement accommodates, besides the rooms for manual training, lunch, and drill-rooms, and rooms for athletics, the necessary space for the heating and ventilating plant, consisting of a double-fan combination steam and warm-air heating and ventilating apparatus, with a complete system for regulating the temperature in all parts of the building.

The construction thruout is the best. The exterior is of granite, brick, and terra-cotta. The interior is of iron and concrete construction, with metal and hollow tile partitions. The floors and walls of corridors, cloak-rooms, and toilets are of white tile. The stairs are built of iron and slate; soapstone is used for the finish of walls in class-rooms, and the floors are of narrow maple boards. The little woodwork used is of quartered oak. Each corridor is equipped with sanitary drinking-fountains, fire-lines, janitor's closets, and supply-rooms.

Modes of construction.—The construction of the modern school building, where possible, should be fireproof. Where sufficient funds are not available, every precaution should be taken to make the building slow-burning. This can be accomplished, to a large extent, by using metal studs and lath in place of wood stripping and wood partitions, and supporting the ends of all beams on masonry walls. With this construction, together with the use of fireproof stairs built between brick walls, the building is made safe; but the many annoyances due to the shrinking of wood would not be overcome. These, however, can be greatly reduced by subjecting the building to a good trial of the heating plant for a few weeks before the building is plastered.

I have stated before that the school building should be as carefully planned as a hospital. It also should be as carefully constructed and finished; avoiding everything that is difficult to keep clean, finishing the floors above the basement in schoolrooms with narrow hard lumber, and the walls with a smooth tinted surface. The walls of cloak-rooms, toilets, halls, and basement rooms should be wainscoted with enamel brick.

The finish building materials should be non-absorbent; combustible materials should only be used where absolutely necessary, and all unnecessary projections which catch the dust should be avoided.

A dignified exterior.—As to the exterior, it should be simple and refined in design, materials only being used that are substantial and lasting; and each building should have that dignity and beauty obtained by simple and straightforward means, without sacrificing economy of the requirements of utility. The beauty of the building should reside in its proportions, and in the lines and grouping of the doors and windows, without superfluous ornamentation.

It is not necessary or desirable to go into an elaborate expenditure of money in the construction or equipment of school buildings. They should be built well and equipped substantially. The desire to surround the children with the beautiful during their receptive age can be materially assisted by supplying each building with a well-selected collection of beautiful pictures and casts.

In closing, I will make a plea for the enactment of more effective legislation pertaining to the erecting of our school buildings, and in this legislation I would suggest that provision be made for a fire-limit of forty feet or over, including streets and alleys, between the building and the adjoining properties. Such a law would not only protect the building from outside fire, but would always assure the proper lighting and air space, and would be the means of adding to the architectural effectiveness of the structure.

DISCUSSION

E. H. ARNOLD, director of New Haven Normal School of Gymnastics, New Haven, Conn.—Great progress has been made in the last few years along practically all lines of school architecture. I am afraid I can not say as much of the advance made in the construction of gymnasia. To be sure, physical training is a newcomer in a great many of our schools, and the experience in construction of gymnasia is therefore limited. Most gymnasia constructed have been gymnasia in colleges, preparatory schools, Y. M. C. A.'s, and kindred organizations. Unfortunately, there has been with the introduction of physical training in public high- and grammar-schools, wherein class work in physical training is the only kind of work practical, and where, therefore, the conditions for teaching gymnastics differ greatly from the conditions prevailing in gymnasia of colleges, etc., where usually individual work is done, imitation of gymnasia of colleges, etc. This imitation without discrimination has not only been unfortunate for the teaching of gymnastics, but it has also perpetuated some very grave errors made in the construction of the gymnasia of some of our leading universities; errors not relating to the adaptability of the gymnasium to class-room work, but errors in ventilation, heating, and lighting; that is to say, in the very fundamentals of sanitary construction of gymnasia. Having personally inspected a great many gymnasia thruout the country, and having looked over sketch plans of over one hundred gymnasia, I am impressed by the fact that a type of high- or grammar-school gymnasium has not developed, and does not at the present time seem to be developing. If a great deal of unnecessary expense and failure of the efficiency of physical training are to be guarded against, it is time that such a type should be evolved. If school authorities, architects, and directors of physical training co-operate,

there is no apparent reason why such a result could not speedily be accomplished. Not being an architect, but a specialist in physical training, I may be pardoned for thrusting upon you some advice which may not appear to be wisdom. I hold that for grammar schools provision for an outdoor gymnasium is paramount. A spacious school yard is practically all that is needed to begin with. The ingenuity of the physical trainer and the zeal of the children should, with the co-operation of the manual-training department, transform the school yard into an outdoor gymnasium equipped, without expense, with all that is needed for outdoor gymnastics, games, and athletics. Wherever possible, there should be added to this a sun-and rain-shelter in the shape of a lightly constructed shed borne by high pillars with a glass side or two, disappearing, if possible, above or under ground. This will serve the purpose of a gymnasium, except on the very coldest days, all the year around and in almost any clime.

Indoor gymnasia should be spacious, in keeping with the size of the classes that are to make use of the gymnasium. They should be unobstructed by pillars, at least fifteen feet high, twenty if possible. A running-track is needed in high schools only. A sufficiency of light, preferably from all sides, and good provision for ventilating and heating, are essentials. It is at once apparent that the basement will usually not offer these conditions. A desirable height can usually not be given a gymnasium in the basement. Ventilation and heating, as well as lighting, of a basement gymnasium are difficult. Pillars are practically unavoidable, if very heavy iron truss work is not put in, and this will make the expense of construction of the schoolhouse a goodly sum higher. From the standpoint of economy, therefore, the basement gymnasium is once more undesirable. The proper place for the gymnasium in high- or grammar-schools is in the garret. This place offers sufficient space which can usually not be used to greater advantage for any other purpose. This situation offers practically ideal conditions for lighting and ventilation. Pillars are easily avoided, sufficient height readily obtainable. The only objection to placing the gymnasium on the top floor of a school building has been the noise attendant upon gymnastic and athletic practice, and the jarring of the building by class work. With the advance in "deadening," noises can be muffled and the jar abolished. The construction of a gymnasium for school purposes needs practically to pay no attention to disposition of apparatus in it beyond two provisions. The first is that in the rafter- or beamwork overhead, be it of iron or wooden construction, be it open or concealed, sufficient facilities for hanging apparatus, such as rings, poles, ladders, etc., should be given. In the second place, round the walls on the side of the gymnasium there should be inlaid into the iron- or brickwork heavy wooden planks; one tier near the base, one about five feet, and, if possible, one about ten feet, from the floor. This done, the gymnasium may be turned over to the director of physical training, who, if at all competent, can make use of the unlimited chance to fasten apparatus overhead and on the sides of the building to suit the purposes of his teaching.

NEEDED LEGISLATION IN SCHOOL ARCHITECTURE

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Is legislation desirable which shall have for its object the establishment of certain minimum requirements which shall be observed in the design and construction of school buildings? Those who are aware of the results obtained when certain fixed principles in schoolhouse design have been carried out, either voluntary or otherwise, unhesitatingly answer in the affirmative. The

negative is from the non-observant, or those to whom the subject has not been fairly presented.

The last twenty-five years have witnessed a complete change in the design and methods of construction of buildings, both public and private, thruout the entire country. Attention became first fixed in the commercial world upon the possibility of an increased return on investments thru the reduction in fire hazard and of maintenance, thru the free use of fire-resisting materials, the logical development of which was the "skyscraper" with its incombustible walls, floors, partitions, and stairways. Almost simultaneously, loss of life thru fire in places of public assemblage created the demand that such buildings should also be built of fireproof materials, with numerous stairways and exits.

The influence of this movement was felt by the school authorities of several of our larger cities, who reached the conclusion that, if these improved methods of design and construction paid from the commercial standpoint, then they could also be applied to the public school buildings, not only as an economical measure, but to make more safe and secure the lives of the children who were to occupy them. In all of these matters private enterprise led the way, and legislation followed.

The immediate effect of this change in policy was the placing of the problems involved in the hands of skilled architects, who proceeded to introduce design as one of the elements entering into modern work.

Progress in heating and ventilating has been much less rapid. Many years ago the state of Massachusetts enacted a law which applied to the construction of public buildings and schoolhouses—inserted in an act regulating the employment of labor—requiring that such buildings should be kept and maintained in a proper sanitary condition, and that they should be ventilated in such a proper manner that the air should not become so exhausted as to be injurious to the health of the persons present therein, provided it could be done without incurring unreasonable expense, and placing the enforcement in the hands of the Massachusetts district police. The chief of police, after consultation, issued a notice setting the standard of ventilation as the supply of 30 cubic feet of fresh air per person per minute. The net result to not only the commonwealth of Massachusetts but to the entire country, was most beneficial, for it encouraged that great class of intelligent school people to demand that the physical welfare of the child should also be cared for, since it had direct bearing upon its mental capacity for study.

The word "legislation" has a formidable sound, but when it is applied to schoolhouse design and construction, there are but three points upon which I should seek to obtain the indiscriminating power of the all-compelling law:

1. Requirements as to the lighting and size of class-rooms; also ventilation of the supply of a given number of cubic feet of fresh air per person per minute, and the removal of vitiated air.

2. Stairways, exits, and fire-escapes; their size, number, and construction.

3. Boiler, heat, and vent flues; smoke, steam, and hot-air pipes; their location and construction.

Health is placed of first importance, and this includes the conservation of the physical and mental energy of the child. Both experience and investigation show most clearly that nothing so quickly and surely saps the mental vigor of a child at study as bad air. Extensive experiments have been made both here and abroad to determine the correct amount of fresh air per minute which should be supplied to an individual. The variations in the findings were doubtless caused by the difference in local conditions, but an inspection of plants actually installed in this country show uniformly good results with a supply of 30 cubic feet of warmed fresh air per pupil per minute. It is a requirement which can easily be met, and has been accepted by the architectural and engineering professions as standard practice.

Denial cannot be made but that the first cost of installation and the cost of maintenance will exceed that of a system installed for heating purposes only, and that there are many who deem ventilation, especially in a schoolroom, as unnecessary; but the benefit to be obtained by the installation of a proper heating and ventilating apparatus is so great as rapidly to convert unbelievers, provided they do not sit as a school board, thus holding the purse-strings and, because the advantages of a ventilated schoolroom are personally unknown to them, refuse to permit its being embodied in the plans.

Legislation is the only remedy. Class-rooms should be designed to afford 15 square feet of floor space and 200 cubic feet of air space for each pupil, with windows opening to the outer light and air, and of an area equal to not less than one-fifth of the floor space.

The second item, that of stairways, exits, and fire-escapes, comes next in importance, and has to do with the security or safety of adults as well as the child in case of fire or panic. There has been expended under my supervision upward of \$1,200,000 to correct defective stairways, exits, and fire-escapes in the public-school buildings of the city of New York, and it will require nearly as much more before the job is complete, 90 per cent. of which could have been saved if the buildings had been properly planned. It is this knowledge of the enormous expense involved and the danger incurred that leads me to dwell so forcibly upon this item, as these same defects are found in public-school buildings thruout the country.

It is not so much the height of tread and the width of riser in a stairway that need cause trouble and apprehension, but it is the presence of circular stairs, winders, or diagonal steps at the point of change of direction in a stairway. These in themselves are bad enough, but of equal importance are the number, width, and location of stairways, which should be regulated by the greatest number of individuals which may be called upon to use them from any one point at a given time.

The recitation of a simple illustration of the violation of this principle which I was called upon to correct will bring to the mind of each one a parallel

example with which he is familiar. A school building was erected three stories high, of the usual character, with fourteen class-rooms—six each on the first and second floors, and two on the third, the balance of the space on this floor being an assembly hall seating 650. It was designed and used not only for the pupils of the school, but for lecture or other purposes, whereby the adult population of the neighborhood filled the room at times to overflowing. The building was non-fireproof, even to the stairways, and while there were four of these up to the second floor, yet two had been stopped off at that level so as not to "spoil" the assembly hall. The exit from this room was possible only thru one large set of double doors at the rear, giving out upon a central landing, from which led two flights of wood stairways four feet wide. The state law required a fire-escape, which had been supplied, of the usual design—open lattice balconies at the level of the window-sill, with one straight or vertical ladder. It was the same old story—the architect had complied with the wishes of his clients, who insisted that he should plan the building to suit their ideas or yield the work to another man, they being seemingly blind to the realization that a building of such design was a menace to the life and well-being of every person in its neighborhood.

The location of stairways with reference to their accessibility in an assembly hall, and the rapid dismissal of those gathered there by widely separated exits, are of just as much importance as the number of stairways; in fact, the two factors are interdependent. Wide corridors will not alone cause a panic-stricken assemblage to calm its fears; it is an unreasoning mass, seeking only exit to the open, where it believes safety alone to be had.

The erection of a fire-escape on the exterior of a school building is to be deplored, since its use is not familiar to the child. In fact, in the majority of cases nothing short of an athlete or a fear-crazed person could make a safe descent to the ground. They darken the rooms, are exposed to the weather, and at once stamp the building as improperly designed, or such would not be required. Proper planning and construction will increase the expense but slightly, and in return there will be had absolute safety.

Each stairway and its inclosing walls should be of fireproof materials, shut off at each floor by fireproof partitions and doors, fitted with automatic springs and checks. The building is not only made safe for use, but the noise of operation of the school is reduced to a minimum, and the interior is made more comfortable in cold weather, with a smaller consumption of fuel.

One of the simplest and best forms of fireproof stair-treads is of oak or maple planking, secured to an iron plate. They will last as long as slate, as far as wear is concerned, and will endure fire and water, and yet give a secure footing for the firemen long after slate and other similar materials have been shattered from their effects.

All exit doors should open outwardly, and no door should open immediately upon a stairway, but upon a proper landing, of a width at least equal to that of the door.

These requirements would not bother the school boards where the need is only for a one-story building, but when a community has reached that period of growth where two-, three-, or four-story school buildings are required, it has also reached the point where it can and should be brought to recognize the advantage of proper design and construction.

The third item of location and construction of boiler, heat, and vent flues, smoke, steam, and hot-air pipes, has to do with the safety of the pupils, but also goes further and protects the taxpayer against loss of his investment in the construction of a school building.

Viewed from a purely commercial standpoint, no school board can afford to assume the risk of erecting a non-fireproof school building of more than one story in height. But the time is not yet ripe for them willingly to adopt any such idea, save in the three or four of the largest cities in the country. I do not, therefore, propose legislation now even for slow-burning construction, but to confine ourselves to purely preventive measures.

Mr. William George Bruce, of Milwaukee, in a letter early this year stated that during the past winter he had kept a record of schoolhouse fires, and estimates the total loss at upward of \$1,627,000, which is also a fair estimate of the annual loss for several past years. Nearly every one of these fires may be traced to a violation of good practice in the installation of the work included in this third item.

The inclosing brickwork of all boilers and furnace flues should never be less than 8 inches thick at any point, and in almost every case the inside 4 inches should be of firebrick laid in fire clay for a distance of 25 feet from the source of heat; all other smoke flues should have not less than 4 inches of brickwork, and be lined from bottom to top with terra-cotta or cast-iron flue linings. No joist, beam, floor, or woodwork of any description should be placed within one inch of the exterior of any boiler, furnace, or other smoke flue; wood furring should never be nailed to a chimney breast, but the work should be studded off so as to keep a clear space of one inch. Similar instructions and increased distances between the woodwork and steam, hot-air, and other pipes should also be observed.

The majority of fires are ascribed to defective flues, when in reality the real trouble arose, not from the character of the brickwork as executed by the mason, but from the fact that the carpenter insisted on hugging the flues too close with his woodwork, not hesitating to nail furring, sheathing, and studding directly thereto, and at the roof frequently cutting out the brickwork and inserting blocking for his framing. The disaster is sure to come sooner or later.

There is a fourth item which might well be made the subject of legislation, were the time ripe—that of placing the selection and acquisition of school sites absolutely in the hands of the school boards, thru either purchase or condemnation. Everyone is familiar with the intense bitterness with which the efforts of a school board to accomplish this part of its work is often accom-

panied. Example after example could be cited where the wrangling of their elders robbed the children of school facilities for months and often years. The school board should be vested with absolute power in this respect, and when it determines that the needs of a community are such that a school site shall be selected in a certain neighborhood, it should have the right to purchase, if possible, at a price based upon the assessed valuation for the preceding three years; or, if the owner will not sell at a reasonable price, or declines to sell at all, then the board should be vested with the power to lay the matter before the nearest court of record, which would appoint commissioners of estimate who, after taking the testimony of the owner as to the value, and calling experts, if necessary, in rebuttal, would fix and determine the price to be paid, subject to the approval of the court, which should have power to review the findings, and if necessary to set them aside, if, for any reason, it would appear to be for the best interests of the public that such should be done. The centering of responsibility in a school board would reduce the probability of misuse of power of its members to a minimum, and if there be malfeasance, the criminal laws of all communities are such that wrongdoing would meet prompt punishment.

All of these suggestions, excepting that of the purchase or condemnation of school sites, are probably within the province of every school board to adopt, and doubtless many would do so, were they at all certain that they would be sustained by the taxpayer. This has been recognized by the legislatures of several states, which have placed laws upon their statute-books with the idea of assisting the school boards in this work, altho the state of New York was the first to enact a law which was specific in its requirements. It was as an amendment to the school law of the state, and is as follows:

STATE OF NEW YORK

An Act to amend the consolidated school law, relative to proper sanitation, ventilation, and protection from fire of schoolhouses.

No schoolhouse shall hereafter be erected in any city of the third class, or in any incorporated village or school district, of this state, and no addition to a school building in any such place shall hereafter be erected, the cost of which shall exceed \$500, until the plans and specifications for the same shall have been submitted to the commissioner of education and his approval indorsed thereon. Such plans and specifications shall show in detail the ventilation, heating, and lighting of such buildings. Such commissioner of education shall not approve any plans for the erection of any school building or addition thereto, unless the same shall provide at least 15 square feet of floor space and 200 cubic feet of air space for each pupil to be accommodated in each study- or recitation-room therein, and no such plans shall be approved by him unless provision is made therein for assuring at least 30 cubic feet of pure air every minute per pupil, and the facilities for exhausting the foul or vitiated air therein shall be positive and independent of atmospheric changes. No tax voted by a district meeting or other competent authority in any such city, village, or school district, exceeding the sum of \$500, shall be levied by the trustees until the commissioner of education shall certify that the plans and specifications for the same comply with the provisions of this act. All schoolhouses for which plans and detailed statements shall be filed and approved, as required by this act, shall have all halls, doors, stairways, seats, passage-ways, and aisles, and all lighting and heating

appliances and apparatus, arranged to facilitate egress in cases of fire or accident, and to afford the requisite and proper accommodations for public protection in such cases. All exit doors shall open outwardly, and shall, if double doors be used, fasten with movable bolts operated simultaneously by one handle, from the inner face of the door. No staircase shall be constructed with wider steps in lieu of a platform, but shall be constructed with straight runs, changes in direction being made by platforms. No doors shall open immediately upon a flight of stairs, but a landing at least the width of the door shall be provided between such stairs and such doorway.

The passage of this law was only after eight years of unsuccessful effort on the part of the Engineering Society which was responsible for its introduction, and which next moved on the legislature of the state of Pennsylvania. Here, as in New York, the hearty co-operation of the members of this Association resulted in the enactment of a law containing the most of the essential features now under discussion.

The law is as follows:

AN ACT

Entitled an Act for the purpose of governing the construction of public-school buildings in order that the health, sight, and comfort of all pupils may be protected.

WHEREAS, It is of great importance to the people of this commonwealth that public-school buildings hereafter erected by any board of education, school trustees, or school directors shall be properly heated, lighted, and ventilated:

SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, that, in order that due care may be exercised in the heating, lighting, and ventilating of public-school buildings hereafter erected, no schoolhouse shall be erected by any board of education or school district in this state, the cost of which shall exceed \$4,000, until the plans and specifications for the same shall show in detail the proper heating, lighting, and ventilating of such building.

SEC. 2. Light shall be admitted from the left, or from the left and rear, of classrooms, and the total light area must, unless strengthened by the use of reflecting lenses, equal at least 25 per cent. of the floor space.

SEC. 3. Schoolhouses shall have in each class-room at least 15 square feet of floor space and not less than 200 cubic feet of air space per pupil, and shall provide for an approved system of heating and ventilation, by means of which each class-room shall be supplied with fresh air at the rate of not less than 30 cubic feet per minute for each pupil, and warmed to maintain an average temperature of 70° F. during the coldest weather.

SEC. 4. All acts or parts of acts inconsistent herewith are hereby repealed.

Neither of the laws above quoted contains all of the provisions which are deemed needful, but, as a beginning, they cannot be regarded as other than most admirable. They have been quoted in full that the members of this Association may see what actually has been accomplished thru the assistance of its members, and as indicating most truly that similar results can be obtained in every state in the Union, now that two of the leading ones have set their seal of approval thereon.

DISCUSSION

JOHN A. HARTPENCE, Trenton, N. J.—In the discussion of this subject it is to be assumed—and, I think, correctly—that the term “school architecture” does not relate merely to form, contour, appearance, and style, but that it embraces everything neces-

sarily involved in the construction and equipment of a well-appointed school building; that it has reference not only to beauty of form and proportion, but to adaptation to the ends and purposes for which such buildings are erected, as well.

Now, in my opinion, the legislation which is needed in relation to school architecture is but little. Indeed, the only legislative action that is even justifiable is that which is taken in the exercise of the so-called "police power." The state is vitally concerned in the health and safety of the great group of school children that may exist within its domain. Such legislation respecting school architecture as may be necessary to safeguard those conditions is a legitimate exercise of the police power, and is eminently proper; but after that it seems to me that the whole matter should be left to the natural intelligence and good judgment of those whose interests are directly concerned, which attributes must be presumed to be present in every community to a degree sufficient to produce satisfactory results.

The natural tendency of legislative regulation is toward bureaucratic supervision and control. This is inevitable. Our subject therefore raises fairly and squarely the broad economic question of the presence or absence of local control of local administrative matters. There is neither time nor space within the restricted limits of this paper to discuss the situation, but I cannot refrain from at least this passing reference to its tremendous importance, and to voice a warning against rushing into legislative regulation of school architecture. While there may be a present apparent advantage, in the end it may react against us.

As I have already stated, the legislation which I deem necessary and desirable is that which simply throws a safeguard around the health and safety of the pupils in the schools. Under the term "health" may be considered: (1) heating; (2) lighting; (3) ventilation; (4) sanitation; and (5) comfort and convenience, in so far as they may be regarded as being conducive to a normal physical and mental condition. Under "safety" may be classed: (1) construction and location of stairways; (2) fireproofing; (3) fire-escapes; and (4) nature and location of boilers in connection with heating and ventilating systems.

In many of the United States there is legislation regulating these matters, notably in Massachusetts, New York, Pennsylvania, and New Jersey. The general school law of New Jersey is regarded as being very complete in this respect, and I have therefore used it as the basis of this discussion. The law provides, *inter alia*, that, (1) to insure proper heating, lighting, ventilating, and other hygienic conditions of public-school buildings, all plans and specifications for any such building shall be submitted to the state board of education for approval; (2) light shall be admitted into class-rooms from the left, or from the left and rear, and the light area shall be at least 20 per cent. of the floor space; (3) there shall be at least 18 square feet of floor space, and not less than 200 cubic feet of air space, per pupil, and class-rooms shall be supplied with fresh air at the rate of not less than 30 cubic feet per minute for each pupil; (4) stairways shall be conveniently located and easy of ascent and descent; (5) doors leading from class-rooms into corridors and from corridors into the street shall open outwards; (6) ceilings shall be constructed of metal or of plaster on metal lath; (7) certain sanitary accommodations shall be provided. All these come within the test that has been suggested, and, as a proper exercise of the police power, are uncriticisable. Other provisions might be added without violating the principle involved, and in view of some experience and investigation along this line I venture to suggest the following:

Authorities agree that a fixed and uniform temperature in class-rooms is essential to health. It seems to be the consensus of opinion, also, that this result cannot be attained with any system of direct heating, if at the same time proper ventilation is to be secured. The provision of the law relating to ventilation would seem to preclude any system of direct heating exclusively, and to establish the indirect, altho the direct may still be used successfully to supplement the indirect. But there is no provision regarding a uniform

temperature. If this be an essential, and its attainment be possible, then I believe there should be legislation to insure its operation. I would suggest, therefore, legislative action requiring automatic heat regulation, such as may be secured at the present time, for instance, by the use of the thermostat.

All stairways should be so located and constructed as to be absolutely safe for use by even the youngest pupils. This may be of minor importance, but should nevertheless receive legislative attention.

The present commercial value of fireproofing materials renders their use in school buildings impracticable. So far as possible, however, buildings should be fireproof. As a reasonable compromise I would suggest making the first story, all stairways, and the vent flues as nearly fireproof as they can be made.

All school buildings should be equipped with safe and practical fire-escapes.

Sanitary plumbing is an essential, concerning which there should be direct legislation.

It is true that in New Jersey these last three matters are to an extent regulated by municipal boards and other state departments. But the school legislation is practically silent regarding them, and hence it is possible to secure the approval of plans by the state board of education without their containing provisions therefor, and it is left to the chance of other departments enforcing such regulations as may exist.

In most heating and ventilating systems boilers are necessary to the operation of some part of the apparatus. These are usually located in the basement of the building. The result of an explosion during school hours would be most disastrous. There should be legislative regulation requiring boilers to be located separately and apart from the main building, or in such other manner that no harm could result from an explosion.

There are other important matters of school architecture which might be treated here to an advantage, but, the discussion being restricted to the subject in its relation to needed legislation, they would hardly be germane. It is to be regretted that the topic itself should have so narrowed the discussion.

I have endeavored to present in the briefest possible manner but a few simple suggestions along what I conceive to be practical and proper lines of legislative action respecting school architecture. I trust the presentation may not have been entirely devoid of interest.

LIBRARY DEPARTMENT

SECRETARY'S MINUTES

FIRST SESSION.—THURSDAY, JULY 6, 1905

The department met in the auditorium of the Public Library of Asbury Park, at 2:30 P. M., and was called to order by the president, Charles P. Cary, of Wisconsin.

The president then read a paper on "Libraries and Library Privileges for Villages and Rural Communities." Discussion was opened by James H. Canfield, of New York; followed by Miss Dickey, of Chicago; President J. N. Wilkinson, of Kansas; Dr. Tuttle, of New York; W. Scott, of Boston.

A second paper was presented by James H. Canfield, of New York, in the form of a report on "Instruction in Library Work for Normal and Secondary Schools." Discussion was opened by E. D. Phillips, of Missouri; followed by Dr. Tuttle, of New York.

The paper of James H. Canfield is withheld from publication in the volume for extension into a special report to be published in pamphlet form.

A third paper was presented by Miss Florence M. Hopkins, Detroit, Mich., on "Method of Instruction in the Use of High-School Libraries." Discussion was opened by Mr. Halleck, of Louisville, Ky., followed by Mr. Discourt, Pittsburg, Pa., and Miss Shroyer, of Dayton, Ohio.

Time was given Mr. Scott, Boston, Mass., to present the subject of the "Library Post Law."

The president appointed the following committees:

COMMITTEE ON NOMINATIONS

James H. Canfield, New York, N. Y. Edwin W. Gaillard, New York, N. Y.
Martin Hensel, Columbus, Ohio.

COMMITTEE ON RESOLUTIONS

Reuben Post Halleck, Louisville, Ky. Miss Signa E. Shroyer, Dayton, Ohio.
Miss Helen L. Dickey, Chicago, Ill.

The session then adjourned.

SECOND SESSION.—FRIDAY, JULY 7

The department met at the same place, at 9:30 A. M.; the president in the chair. The Committee on Nominations reported as follows:

For *President*—J. N. Wilkinson, Emporia, Kans.

For *Vice-President*—Edwin White Gaillard, New York, N. Y.

For *Secretary*—Miss Grace Salisbury, Whitewater, Wis.

The secretary was instructed to cast the ballot for these officers, which was done, and they were declared the officers of the department for the coming year.

The first paper of the session was presented by Robert H. Wright, Baltimore, Md., on "How to Make the Library Useful to High-School Pupils." This was discussed by Miss Jones, of Kansas.

The second paper was presented by President G. Stanley Hall, of Massachusetts, on the theme "What Young People Read and What They Should Read."

The third paper was presented by Percival Chubb, of New York, on the "Value and Place of Fairy-Stories in the Education of Children."

It was voted to have no discussion of either of these papers, because of the early lunch and other arrangements made necessary by the coming of President Roosevelt.

The Committee on Resolutions reported as follows:

Resolved, That the Library Department of the National Educational Association earnestly indorses the proposition presented by Mr. Scott in the efforts made to secure the transmission of library books intended for general circulation at a rate not to exceed one cent per pound for postage.

Resolved, That it is the sense of this department that all teachers should learn at least the elementary essentials of library administration and circulation.

Resolved, That it is the opinion of this body that all teachers should do some expert work in that branch of child study which leads to ascertaining the reading tastes of children of various ages, and that they should endeavor to minister intelligently to these tastes by becoming acquainted at first hand with the contents of as many as possible of the books recommended.

Resolved, That individually and as a body we will do all we can to encourage state aid to libraries, including the work of library commissions, interstate library loans, and extension work.

Resolved, That the members of this department urge the officers of the American Library Association and of the National Educational Association to take measures to secure either a joint meeting of the two associations or meetings which shall be so near each other as to time and place as to permit the interchange of members and programs, in the interest of co-ordinating the public schools and the public libraries.

The resolutions were unanimously adopted, and the department then adjourned.

RUTH YEOMANS, *Acting Secretary*.

PAPERS AND DISCUSSIONS

LIBRARIES AND LIBRARY PRIVILEGES FOR VILLAGES AND RURAL COMMUNITIES

C. P. CARY, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION, MADISON, WIS.

One of the most important problems in library work at the present time is that of giving library privileges to the citizens of rural communities. Libraries have become an essential part of our educational system. If it is necessary that our people be taught to read in childhood, and thru adult life, they should have the opportunity to use this power to the best advantage for themselves and the community in which they live. The children in the large cities, and in nearly all of the smaller cities, of the country are given library privileges thru the public libraries, and most of them also have access to school libraries. The children of the rural communities generally have access to school libraries only, and most of the latter are very scant.

The general problem at present seems to me, therefore, to be that of supplying better library privileges to school children and adults in rural communities.

The United States Census Bulletin No. 16, for the year 1900, gives the number of people living in unincorporated places in this country as 40,299,600, or 52.9 per cent. of the total population. Careful observers are agreed

that the people in rural communities, having fewer distractions, read books more carefully and thoroly, and talk them over more in the families, than do the people in the cities. It is evident, too, that if the books in such communities are carefully selected, the reading of the people may be confined to volumes that are not only popular, but have great intrinsic merit. The smaller the community, the greater may be the comparative influence of the best books.

In spite of these facts, however, nearly all of the millions of dollars that are going annually to the support of libraries are expended in the cities and villages, and nearly all the wealth of thought and enterprise that is used to advance library interests flow in the same direction. It would seem desirable, therefore, to call attention to the fact of the need of greater effort to aid people of the rural communities, and of suggesting a practicable method of accomplishing the results we desire.

In the cities we have public libraries, and to a greater or less extent school libraries. Adults do not use the school libraries. It often happens that the enthusiasm of teachers for library work is so great that good school libraries may be found by the side of good public libraries, even in the smaller cities. In the small villages and hamlets we can secure reasonable library privileges only by a union of effort. By library privileges I mean not only access to books, but the aid of persons trained in guiding students and readers to the wealth of matter that is available to all at a slight expenditure of money.

Federal and state governments, municipal and national organizations and libraries, have great quantities of valuable information in printed form, which is freely and cheerfully given to all earnest students who will apply for it thru the usual channels. It is not to be expected that the average isolated citizen should know of all of this material, but it seems not to be too much to ask that each community should have some person who could aid inquirers. This means a trained librarian, but we cannot at present have public libraries with trained librarians in charge in the smaller places.

If we can, however, broaden the scope of the school library in hamlets and districts where the schools have been consolidated to include something of the work done by the public libraries of the cities, we can not only magnify the work of the school, but we can make it in the best sense the intellectual center of the community. It would seem possible so to arrange the building and the teaching force that in most places where the schools have from two to five departments, one room may be set apart for a library which shall be both a public and a school library, and one of the teachers selected with this purpose in view may be able to devote part of her time to the library. And here we meet another problem. Methods of library administration and the general principles and details of library economy have been formulated by people who are in charge of great libraries. Our library schools are maintained for the training of educated people, and their courses of instruction are prepared to train such persons to take places in large libraries. Occasionally

students are trained nominally to have charge of small libraries: but by small libraries are meant those in smaller cities, and no account is taken of the needs of the still smaller places and rural communities. In the few text-books and articles which treat on library economy in small communities, little effort is made, so far as I am aware, to plan work especially designed to meet these needs. These library schools have courses which require one or two years of training. There are a few "summer schools of library science" which give brief courses, but these take the methods of classification and administration which are suitable for large libraries, and present those points which are considered essential in small libraries.

The problems of administration which confront the person in charge of a library of from 300 to 1,200 volumes, where she can know practically the contents of all the books, and has personal contact with each of the library patrons, knowing frequently not only the patron, but his or her home surroundings, are very different from those in a large library, where no librarian can have an intimate knowledge of either the books or the borrowers.

It seems to me that we need a simple system of cataloging and classifying, of keeping the records and recommended lists of books, made directly for the purposes of these rural (combination) public and school libraries, and that the instruction in library science given by librarians in normal schools should be so modified as to fit some of the graduates of the schools to fill the position of librarian in such libraries. The state departments of education are constantly receiving requests from teachers for aid in classification and cataloging in the school libraries. Library commissions are receiving similar requests. It is not too much to say that the larger share of advice that such teachers receive from trained librarians and from the text-books on library science bewilders rather than enlightens. There is altogether too much machinery for the purpose.

As I have stated, the small library, whose books are so few that the librarian, and quite a number of its patrons, can find almost any volume in the dark, makes very different requirements on the organizer from those of the large library. It is very important, however, that the librarian should have an even wider training than the ordinary librarian in the method of securing information from the great institutions of the country.

As one instance of available material that would be useful in many rural communities, allow me to cite the literature issued by the Department of Agriculture at Washington. Each year this department expends hundreds of thousands of dollars in investigations of subjects of the utmost importance to farmers. The results of these investigations are published in bulletins, which are sent either without cost, or at a nominal cost, to all applicants. It is a singular fact that only a small share of the people who would be most benefited by this information send for these bulletins. The department is very anxious to reach the farmers with its publications, and not only supplies sets of these bulletins and of its yearbooks to public libraries which are free

to farmers, but also gives the necessary printed cards to make this literature of the most use. Where there is a small library in a rural community which has this literature and the printed catalog cards, a farmer can not only examine the literature, but, after finding that which is of the most value for his purpose, can secure copies for himself without cost, or at small cost.

I cite this as only one of the many examples which might be given to show how a person with a few weeks' training might aid the people of her community without subjecting them to much expense.

I think this whole subject merits a careful investigation by this department. to find some means of providing courses of training for teachers to fill such positions as we have just been considering. Library schools and library summer schools might very properly provide courses for teachers, and the librarians in normal schools might well provide a somewhat different course in library training from that ordinarily given. In preparing the system to be used in these small libraries, there should be a conference of well-trained librarians and teachers, and of librarians who are thereby familiar with the needs of the rural districts.

The report on library training for normal schools, which closes this afternoon's program, is exactly on the line of this demand for simple methods, and is therefore peculiarly timely and interesting.

DISCUSSION

JAMES H. CANFIELD, librarian of Columbia University, New York city.—Mr. Canfield spoke briefly of the work done in New York state, in an effort to advance the interests of rural libraries and the rural schools. The state has been divided into eleven districts, in each of which library institutes are held each spring. New York city, Brooklyn, and Buffalo each forms a district by itself, and each is able to care for itself. The remaining eight districts are under the care of the New York State Library Association.

A library club is organized in each district, officers and members of which devote themselves to the library interests of the district and are especially charged with the preparations for the library institute. At these institutes at least three sessions are held, two for instruction and one of a more public character. The instructional sessions are given to a discussion and explanation of simple methods, desirable chiefly in the small libraries. The purpose of these discussions and of this instruction is not so much to master the details of library economy as to secure efficiency and power in the administration of whatever collection of books has been made. At the evening or popular sessions, addresses are made by local speakers, and by at least one of the institute committee, appointed by the State Library Association.

MISS DICKEY, Chicago, Ill., spoke of the library institute work in Illinois, recently started along much the same lines as those followed in New York, only with fewer meetings thus far. Last year three institutes were held, which were very acceptable to the librarians in rural communities. There is no question but that this work will be extended.

J. N. WILKINSON, of the State Normal School at Emporia, Kans., spoke briefly of the work done in the normal school, by which all possible library information is carried to the teachers of the state. A nine-week library school is held each summer. Constant effort is being made to co-ordinate the public library and the public school.

DR. TUTTLE, of New York, asked how a public library might be organized in small towns, and spoke of the difficulties encountered in such a village in Missouri. He spoke of many different efforts which had been made, none of them even reasonably successful.

DR. CANFIELD suggested that an excellent nucleus of both books and interest might be established by the union of the several Sunday-school libraries of the village. He also called attention to the fact that assistance might be had from the state library commission.

MR. SCOTT, of Boston, spoke of a town in Connecticut that began its library work with an address by a prominent outside librarian. This aroused sufficient interest to secure a vote of town aid at the next election.

METHODS OF INSTRUCTION IN THE USE OF HIGH-SCHOOL LIBRARIES

MISS FLORENCE M. HOPKINS, LIBRARIAN, CENTRAL HIGH SCHOOL,
DETROIT, MICH.

The full importance of the school library in our educational system has not as yet been generally realized. The public is in the habit of considering the library simply as a depository for books. When references are desired by the average user of the library, the librarian is consulted, as one would consult any bureau of information. She is expected to give the best possible direction, whether general or special, on any subject, at a moment's notice, to anyone who takes the pains to inquire. Her advice is generally unquestioned by the inexperienced, with never a wistful expression for the power of self-direction. Our thought of the place of the library in education has not yet included the importance of training students to be intelligent and independent in the use of these vast collections, when they wish to guide themselves to material on unfamiliar subjects. To use a library intelligently should be a mark of good scholarship and general culture. Its field of usefulness is both general and special, and a sharp distinction should be made between the two.

De Quincey has classified literature for us in a clear and satisfactory way, by separating it into the literature of power and the literature of knowledge. The literature of power, the world's great literatures, those expressions of the poet and the seer which awaken and quicken the spiritual power of the soul, is intrusted to a special knighthood for its interpretation. It is often hidden from view, as was the Holy Grail. Those who would see it must, like Sir Galahad, be pure in heart. To these only can it reveal its beauty and impart its life-giving power.

The other and lower division of literature, the literature of knowledge, embraces our books of science, of history, of statistics, and the many reference-books necessary to the intelligent reader. Much of this kind of material is a sealed book to many who would gladly profit by it, if they knew how readily it could be found in our libraries. Some means should be devised whereby the public may be impressed with the fact that specialists are constantly at

work indexing the useful knowledge of the world; that national and international support is given to much of this indexing; that our libraries of America are associated together, having a well-endowed publishing board, whose aim it is to make accessible valuable material otherwise buried; that our Library of Congress has a bibliographical division and a printed card-catalog division. It has become practically necessary to have an index to indexes, and a course of lectures on both.

A well-selected and a well-cataloged library is a university for the public; or, to put it more strongly and quote Carlyle: "A university is but a great collection of books." How is the intelligent citizen to be trained to appreciate the privileges offered to him by these library universities, unless our schools interest themselves in the matter of systematic instruction in their use?

Everywhere in the world of affairs we see that the practical problem is to educate the people to the point of seeing a need, and then acquaint them with that which is suited to fill the need. A university sends out extension lecturers; a church sends out missionaries; a book merchant recognizes that if new books are to sell, they must be placed where they will be seen and examined; our libraries are beginning to open their shelves to the public and, like the book merchant, accept the loss from theft and carelessness as incident to a wise investment. But this is not enough, if more can be done. Delivery stations, branch libraries, open shelves, are great steps in advance; but now one more step is clearly before us, namely, lectures acquainting the people with the treasures in the library and the opportunity it offers for independent study. In the conference of the American Library Association at St. Louis, Mr. Jast, of England, said: "I am inclined to attribute more value to the library lecture than to any other kind of extension work, if it be the right kind of lecture."

In each department of education, except the library, a special teacher is employed to bring the student into direct relation with the subject. Physical culture, manual training, music, art, have all been so recognized. Is not the time now ripe for a step forward in library work also, with a plea that it, too, may find a place in our curricula, that some provision be made for training students in the use of guides, and catalogs, and indexes, which shall serve to direct them through the maze of library classification, and lead them quickly to the information desired? It is only within the past few years that special training has been considered necessary for the librarian. Now any live community realizes that the one who is to be steward of the learning of the ages must have other qualifications than a mere love of books. In the light of prophecy, then, let us state that our educational bodies will soon recognize that a pupil's training for independent study requires a deeper acquaintance with a library than the mere method of drawing a book, the author and title of which have been given to him by his teacher.

The University of Michigan is beginning to require that each high school on its diploma list must have a library, with a yearly appropriation for increase.

The next step should be that the entrance qualifications require an intelligent understanding of recognized reference guides. If some such simple and perfectly possible requirement were to be made by our universities, a course of instruction in this far-reaching and much-needed work would soon follow in our high schools.

Through the hearty co-operation of the school authorities, and the teachers of English in the Detroit Central High School, an effort has been made to systematize the teaching of simple reference points. This work does not require as much time as at first would seem necessary. It requires, rather, system and care. One English lesson a term, which can hardly be seriously missed from the regular work, is entirely devoted to the study of library aids. The work is graded, and is correlated with the regular grading of the English courses which embrace all the students of the school, numbering about two thousand. Library talk, Course 1, is given to all students taking English one; Course 2, to those taking English 2, etc., throughout the eight English courses included in the four years of high-school work. As each course is given, books to be examined for that course are transferred to some room outside of the library, are shown to the class, and their leading characteristics explained. We all know what a help it is in finding a book for ourselves to have seen the outside of it before. All illustrations and lists of books explained are printed to save time from note-taking, and to insure correct notes. Each talk is forty-five minutes long, and is given during the student's study period. A set of questions, which necessitates the use of the books and points explained, follows each talk. The English teacher requires that these questions be worked out in the library, by each student. They are handed to her in writing, are corrected, and the whole credited as one recitation. The work thus becomes required. Of course, the books and points given are simple, and adapted to students of high-school age.

A general outline of the plan is indicated below:

Course 1, given to students who have just entered the high school, covers the following simple points: the use of an ordinary index, including such abbreviations as *ib.*, *seq.*; the dash between pages or the heavy type as indicating the prominent pages; different indexes in the same book; an index to a work in more than one volume; an index to an atlas and a city map, together with street guides of a city directory; the use of a concordance; and a brief explanation of the *Poole's Index*.

Course 2 explains the use of a card catalog, together with a brief explanation of the general classification of libraries, simply to make the student more intelligent in his thought regarding the necessary arrangement of books for convenient use. The student is also introduced to a few reference-books, intended to be of service to him in the first stages of his reference work, such as Lippincott's *Biographical Dictionary* and *Gazetteer of the World*, the *Century Dictionary of Names*, Harper's *Classical Dictionary*, the Champlin series of *Young Folk's Cyclopædias*, and the Appendix to *Webster's Dictionary*.

Course 3, given to students beginning their second year of high-school work, is mainly devoted to periodical indexes. The *Poole*, briefly explained in Course 1, is carefully reviewed, and attention is called to the need of watching dates, especially if the subject is of recent interest. An explanation of the *Reader's Guide*, and the *Library Index*, as indexing current magazines, is added. The index to *St. Nicholas* is also explained as a guide to much material often desired by young people. A word of explanation regarding the preface, the publisher, and the date of the book is given. The nature of the following reference-books is explained: Harper's *Book of Facts*, Wheeler's *Familiar Allusions*, and the Brewer series of reference-books.

Course 4 is devoted to simple bibliography. Attention is called to the valuable bibliographical references often found in a good text-book of the subject, and to references at the end of articles in the best encyclopædias. The *A. L. A. Index to General Literature* is carefully explained as a guide to bibliography and as a companion to *Poole*. Its value as an index to scattered material is shown by illustrating its method of indexing by subject the chapters of composite books; such reports as those of Smithsonian Institution, many of the state government reports, and reports of the meetings of prominent societies. The boy's interest is assured when he learns that his beloved debate may be considered simple bibliography. Never has an explanation of Brooking's and Ringwalt's *Briefs for Debate* failed to bring a number of boys to the desk, later, for that "little yellow book on debates." *Pros and Cons*, Matson's *References for Literary Workers*, Baker's *Guide to Best Fiction*, Granger's *Index to Poetry*; Warner's *Library of the World's Best Literature*, follow in this course. Larned's *History for Ready Reference* is explained as a bibliography of general history. In a note, attention is called to the bibliographies frequently published in the bulletin of our leading public libraries, and by the Library of Congress; and to special bibliographies of certain subjects, such as Larned for United States history, Brooks for municipal government, *Yearbook of Social Progress* edited by Josiah Strong.

Course 5, given to students beginning their third year of high-school work, consists of the study of annuals and similar reference-books. The newspaper annual is explained and illustrated by showing some of the many reference problems answered in the *World* and other almanacs of our leading daily papers. Yearly reference-books, such as *Hazell's Annual*, *Whitaker's Almanac*, and *Statesman's Yearbook*, are illustrated and explained. The biographical annuals, *Who's Who*, and *Who's Who in America*, are added. The *Annual Literary Index* is carefully explained as being a yearly supplement to both the *Poole's Index* and the *A. L. A. Index to General Literature*, and as a guide to bibliographies and the daily newspaper files. The reports of city officers and the city manual are mentioned, as are the state "Manuals" or "Blue Books."

Course 6 includes dictionaries and encyclopædias, special indexes, and cyclopædias or dictionaries of special subjects. The *Genealogical Index*, the

index to state laws as compiled by the New York State Library, the *A. L. A. Catalogue of Eight Thousand Volumes*, and the *A. L. A. Guide to the Study and Use of Reference Books* are given as special indexes. The *Publisher's Weekly*, the *Trade List Annual*, the *United States Catalog of Books in Print*, and the *Cumulative Book Index*, are explained as giving the publisher, price, and edition of books arranged by author, title, and subject. The use of the four volumes of the printed catalog of our public library is carefully illustrated by dates, and the principle of the card catalog is reviewed. The new publication of the *Book Review Digest* is given as a guide to book reviews.

Course 7, given to students beginning their last year of high-school work, is confined to a few of the reference publications of the United States government, such as the *Document Catalogue*, the *Congressional Record*, the *Congressional Directory*, *Statistical Abstract*, *Census Abstract*, *Statistical Atlas*, *Labor Bulletins*; consular reports, regular and special; some of the publications of the departments of State, Agriculture, Interior, and Commerce and Labor.

Course 8 is given to the graduating class, and is a review of the preceding seven courses, with drill in classifying reference points.

The work has been carried on for two and a half years. Enough has been done to make us feel that the experiment is well worth while, and to hope that opportunities may be found for extending the work to include more than mere reference points.

Two plans for future development are fondly cherished. One is the classification, in an attractive way, of common allusions which every high-school student should know. Some poem, essay, or short story, with the allusion as subject, would be mentioned. Take "Balder," for example; this allusion should be known by the average high-school student. For those who know it, well and good. For those who do not, keep it as a good suggestion for their next request for "something to read," and refer them to *Norse Stories* by Mabie, or Arnold's poem "Balder Dead." If the reference is learned during the term, or is known before, some system of credit should be devised. The allusions would be graded, beginning with the most familiar. A student's reading could thus be helped by suggestion, an appeal made to his pride, in general culture, and his sense of justice satisfied by recognizing the educational value of good reading.

The other plan longed for is a browsing course. Everyone who has had the privilege while young of browsing in a well-selected home library will testify to the priceless influence unconsciously left upon the mind. It should be our aim to create something of this delicate atmosphere in our school libraries. A browsing course would have a twofold purpose: first, to acquaint the student in a very general way with good books in the different branches of human knowledge; and, second, to protect his reading habit by giving him a wide field from which to choose. Think for a moment of what it might mean if the excellent selection of eight thousand volumes chosen by the American Library Association were placed in our high schools, simply for the purpose of encouraging browsing among good books. Let the student's required

work be so planned that time would be allowed him frequently to visit this collection. Much latitude would be given for individuality, yet, at the same time, it should be required that he examine at least the best books in each classification. The surface knowledge of a book has educational value, provided surface knowledge and real knowledge are kept in sharp distinction by the student himself. It is a matter of general intelligence to know who has best translated Homer and Dante, who are authorities in American history, whether or not any remarkable work is being written in geology or philosophy, who has written the best biography of Lincoln, even if these subjects never absorb us. A student of science is too likely to visit only the shelves of science; a student of art, only the books of art. Darwin regretted that in his later years he had lost the power to enjoy poetry. Browning's optimism goes so far as to say:

I want to know a butcher paints,
A baker rhymes, for his pursuit.

Very few students who pass through our universities have a general acquaintance with a wide range of books. Our curricula are so overcrowded with specialities that we have no time for real education. So many definite things are prescribed that the student has no life left with which to find his own individuality. Hours of credit and the commercial value of a degree have become task-masters to the extent of excluding time and opportunity for the student to determine the real place for which nature has fitted him. We have forgotten that

Truth is within ourselves. It takes no rise
From outward things, whate'er you may believe.
There is an inmost center in us all,
Where truth abides in fulness. And to know
Rather consists in opening out a way
Whence the imprisoned splendor may escape,
Than in effecting entry for a light
Supposed to be without.

A course devoted to the aim of giving an intelligent idea of good books in the different branches of human knowledge would not prevent the specialist from the study of his technical subject, nor necessarily encourage diletantism in literature. It might guide the diletante to a specialty, and the specialist to broader sympathies.

But the best results of such a course would not come from the knowledge thus gained. It would come rather from the delicate influence of the literature of power. The most fruitful moments of one's education are those spent with the choice minds of the world, gathering from favorite sources that which quickens the better self and tends to lead one into the life more abundant. After the working part of such a browsing course was over, and the student free to choose from the many books handled that one with which he wished to spend his leisure time, he would undoubtedly experience the same untrammelled delight as did Aurora Leigh, in the garret of books left her by her father:

We get no good by being ungenerous, even to a book,
And calculating profits—so much help
By so much reading. It is rather when
We gloriously forget ourselves, and plunge
Soul-forward, headlong, into a book's profound,
Impassioned for its beauty and salt of truth—
'Tis then we get the right good of a book.

And when his times are ripe he, too, may chance upon the poets.

And at poetry's divine first finger touch
Let go convention, and spring up surprised,
Convicted of the great eternities
Before two worlds.

DISCUSSION

REUBEN POST HALLECK, Louisville, Ky., urged that the pupils in high schools be given some definite work to do in the library. This is the best method of teaching the pupils the place and value and use of the library. In the Louisville Boys' High School, students who are especially interested in books are chosen to act as pupil-librarians, and are given entire charge of the library during certain hours of each day.

In this age of shortened working hours, when the leisure of all men is increasing, it is very desirable that the boys and girls be taught how to use and how to love books. The library habit should be formed during school life.

MR. DISCURT, Pittsburg, Pa., spoke briefly of the high-school library of Pittsburg, which he said contained 7,000 or 8,000 books which were practically useless. An entire class of pupils will be given the same topic to look up in the library, and this creates a demand so much greater than any possible supply that the majority of the pupils turn away discouraged and without securing material or making progress. He said that a school library handled in this way, without judgment and appreciation of the conditions under which pupils must work, is perfectly useless.

MISS SHROYER, Dayton, Ohio, said that in their high-school library there had been the same difficulty, but a meeting of the teachers and the librarian had been held, the matter had been thoroly discussed, and now pupils are assigned different topics and there are sufficient authorities for all.

MR. SCOTT, Boston, Mass., in presenting the subject of the Library Post Law, said that it is hoped that in the near future library books may be circulated thru the mails at a one-cent-per-pound rate, as magazines and newspapers are circulated now. In this way an easy connection with a great library would be possible to any who might desire this. He detailed at some length the work of the committee, which is now making every possible effort to secure the passage of an act of Congress providing for these special mail rates.

HOW TO MAKE THE LIBRARY USEFUL TO HIGH-SCHOOL PUPILS

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So long as education is progressive there will arise new problems, questions that need special study. These subjects never come to the front until after they have been thought over and talked about for a long time by many teachers.

How to use the library was one of the first problems that presented themselves to me when I entered this profession. I soon found that one of the greatest aids to me in stimulating my classes was from the use of outside books. This set me to thinking, and I admit freely that my thought moved very slowly from how the library may serve the teacher to how it may be useful to the pupils.

The library stands in a twofold relation to the teacher. If he has trouble creating interest in his subject, his salvation is in the library. On the other hand, if he can create more interest in his work than the text will satisfy, he can send his pupils to the library for collateral reading. In either case the question may be the same, to-wit, how the teacher may use the library to get the best results as teacher from the standpoint of teacher. I do not mean that the pupil is not benefited. He is. And if the man can never advance to a higher ideal than that, he will still be far superior to the average teacher. But there is a higher aim than, How shall I use the library to help me teach? and that is: How shall the pupils use the library to help them grow? When this point is reached, we lose ourselves in those taught and become real teachers. And this is the question that confronts us this morning.

The fundamental principle of all pedagogy may be summed up in the one word "interest." The teacher must be interested in his subject, the student in his work; for without these the teacher cannot teach and the student will not study. We will grant the first; the second often has to be created, and the library is of untold help in this creation. This necessitates an examination of the library. It should contain a collection of books of such a nature that the pupil can find in it help to him in any of his studies. The books should be grouped under their several heads in some such way as follows: Take history for example. All the ancient history should be in one collection, European in another, English in a third, American in a fourth, biography in a fifth, etc. There should be a trained librarian who must be familiar with all the books. Lastly, the students must have free access to the shelves. Yet all of this is not enough, tho we too often think it is.

I knew an old man who by the means of engines, pipes, and shafting arranged a machine for perpetual motion. He had everything necessary but the power. But he did not realize that engines, pipes, and shafting within themselves cannot generate power, and so he died a poor man—having spent his means, energy, and life in a vain endeavor. So it is too often with us and our libraries: we have the equipment and expect that to make the machine go. Just as old Mr. Armstrong failed to take the last step with his machinery, just so we too often fail to put in the power. Just as today you may pass his old homestead and find pieces of pipes, etc., scattered hither and thither, just so we may pass into many schools and find library books scattered about and of no use to anyone. I have seen fragments of each of these perpetual-motion machines—utterly useless; and in each case it was because the last and most important step was never taken. The reason is

the same with both inventor and teacher: they think the machine is so constructed that it will generate within itself the motive power necessary to run it and turn out beneficial results. Nothing is useful except as it is used. It is by doing that we learn to do. We cannot hope to get from our libraries any more help than the energy we put into them. We need not expect to get students interested in libraries without making them use these libraries.

It is the duty of each teacher so to familiarize himself with the school library that he can assign topics, and, when necessary, give the references. This necessitates a personal knowledge of every book in the library on his subject.

Experience has taught me that the high-school teacher has a double problem to solve in connection with the use of the library. Pupils come to us who do not know how to acquire knowledge from books; others come who can acquire knowledge from the text, if the teacher follows the methods described in *The Art of Teaching* (White); but neither of these classes can acquire knowledge from books other than their texts. I think this is an evil that should be corrected in the grades; but, so long as it is not, it is a problem for the high schools. This problem should be solved in the first year. With this handicap the teacher will find much trouble in getting his pupils to master the details necessary for them to get the best results. He must get them interested in collateral reading. This can be done in several ways. The best is by assigning to each a subject suited to his stage of mental development. In each case give the title of the book and the author, and in some cases it is best to give the page. I have met with very good results from telling some interesting story to the class, then giving reference to the book where the story may be found. This year is the one in which the pupils have to learn how to learn in the library, and so they need the librarian. They have to learn where the books on different subjects are, how to use an index, etc. In short, they have to learn the library, and then how to use it. The librarian should be kept busy with the first-year pupils. I do not object to the method described in Dr. White's *The Art of Teaching*, pp. 127 and 128. But after the first year for the librarian to get the books and open them on tables for the pupils is to take from the pupils one of the very things the library is intended to cultivate, *i. e.*, the power to find data upon a given subject.

After the pupils have acquired the power of using the library, which should be done during their first year in the high school, then it is well in the subsequent years to use a variety of methods, differing somewhat in each branch of their work. I shall give the methods I use in history.

1. Give reference to a book that explains fully some point of the text. Have it read and a verbal report made. This gives a clear setting of the fact, and explains what is often not clear to the mind of the pupil.

2. Give reference to some special treatise on some period; say, Fiske's *The Critical Period in American History*. This has the same general effect as the first. I do not object to the use of historical novels. In fact, I find them of much value in explaining certain periods of history.

3. Assign topics, giving references. Have each reference looked up—letting the pupil find the books—and a report made in which the pupil tells what each author says. This broadens the view and helps the pupil to see the point in its many-sidedness. This helps wonderfully in teaching American history in connection with the events that led up to the Civil War. It enables the pupil to see that there are two sides to many questions, and that men may differ conscientiously; that each may believe with perfect honesty that he is right. History cannot be properly taught without this double point of view—without collateral reading.

4. Assign topics to look up, but do not give references. This leaves the pupil to himself and tests his power to get data unaided. Here he learns to use books of reference, indexes, etc. This is training him in research work and preparing him for the kind of work he is to do in after-years. It gives him his very best library training.

5. It is well to allow him some choice of subjects. Let him choose his own subject. In this way you can see his natural tendency in your subject. By this means I have found some pupils very fond of constitutional history; others, of the social side; while others still who are fond only of the more stirring events, such as military and naval exploits. This knowledge is necessary for the teacher in order properly to direct the pupil's reading.

These, in brief, are the methods I am using, and they have given fairly good results. It is necessary to have reports made; otherwise you do not know whether the pupil has done the work; and if every pupil is held responsible for the main points in each report, the best results are attained. This means the use of notebooks, and I think this the only satisfactory way to use notebooks.

There is still one other phase of this question that I must mention. Besides those books needed in connection with the class-room work, there should be a collection of newspapers, magazines, and periodicals sufficient for the pupils to keep up with all the current events of history, art, science, etc. There should be books, too, on all subjects that tend toward the cultivation of the fine arts—music, painting, sculpture, the sciences, etc. The pupils should be allowed to use the library for two hours each afternoon as an intellectual recreation hall; where they can come and browse about in the alcoves and upon the shelves, reading anything that appeals to the passing fancy, and in that way take a mental outing. By so doing they become fond of the library, and soon learn to spend their spare moments with great minds, instead of loitering upon the streets looking for amusement. It gives an opportunity to those who have developed a fondness for some one subject, in a measure at least, to feed that desire. It enables them to add to their general culture and to broaden their mental concepts, and also to keep up with what is going on in the world. These hours are to some the happiest hours of the day, and perhaps as beneficial as any.

WHAT CHILDREN DO READ AND WHAT THEY OUGHT TO READ

G. STANLEY HALL, PRESIDENT OF CLARK UNIVERSITY, WORCESTER, MASS.

As a student of modern hygiene, I am greatly concerned for the stomach of the modern girl. She has greatly improved, of late, in exercise, but I fear not in diet. Those who live on ice-cream, soda water, and bon bons, are victims of teaism or coffeeism, eat irregularly, and, altho their faces are full and their complexions may be normal, cannot possibly be well. If to this we add the methods of cooking which prevail in too many homes of the poor, the rich, and in the hotel kitchen, the case becomes yet graver.

Reading is the food of the mind, and the case here is, I fear, no better. Those who batten upon the modern novel, with its highly artificial and conventional treatment of ante-nuptial love, often treated in a somewhat risqué manner, cannot possibly know life, and the standpoints of romance and of actual practice are very happily now diverging. For five or six years I have spent much time in finding out, and in hasty perusal of scores of, the most popular books of this class. The sentiment is often mawkish, sometimes actually perverted, the situations very remote from real life or history; and now that we have the rudiments of a real psychology of the tender sentiment, the indictment against the modern novelist is increasingly grave. There are happily, however, faint signs—alas, too faint—of a new dispensation in this respect, and there are already a few healthy girls who can read good things, even tho they are not the very latest products of the press.

This applies largely to the reading of those in the later school age, or already past it; but the infection is descending the grades thru the high school even into the grammar school. For a girl in the early teens to be a passionate reader of what passes for the best of the popular novels is, I believe, calamitous for the development of the heart and the sentiment which are the essential things in life. All this the healthy boy utterly eschews at this age as something essentially unfit. The excuse is often made that there is some dearth of the right literature for girls. Many censuses lately made of the reading of this class of people show that they take very kindly to books meant for boys, and are in danger of accepting for themselves thereby, and all unconsciously, male ideals, and sometimes even wishing that they had been born boys. This, however, is far better, in my judgment, than the gushy love-story of the modern purveyor. The danger, however, is very great that the modern schoolgirl will early in life acquire false views of it, will make excessive and impossible demands upon it, which will cloud her life with discontent in the future. Indeed, there is a sense in which we may say that there is something wrong about a girl in the teens who is a gormandizer of books, not only of this objectionable class, but of any kind. Even tales like *Alice in Wonderland* and the *Water Babies* are a good way from the ideal, altho far above the common actuality.

When we turn to the reading of boys, the case is very different. They love books with more blood, action, adventure, and practical life in them. Girls rarely read books calculated to fit them for domestic life or womanly vocations of any kind. Boys do so far more often at the same age. Statistics show that the average boy reads less literature idealizing crime than is sometimes supposed, or than he did a decade or two ago; and even this vicious mental diet produces a harmful effect that is more effeminate in its effects than the gushy, mushy things girls suffer from. Both sexes have a period in the earlier, or perhaps the middle, teens when they are fascinated with reading—a kind of craze or intoxication of trying their wings in the great field of literature, to know what the great world is about in the pin-feather stage, just before they are ready to launch out upon it. The arduous work of the high school, as we know, distinctly tends to check this passion; sometimes doubtless for good, and sometimes otherwise. The dangers are great, and, I think, coming to be adequately and truly recognized, so that I will not dwell upon them, but proceed to attempt to answer the great question: What should our young people read?

First, they ought to be acquainted with the story-roots and leading motives of all the greatest and best literature in the world. I believe profoundly in résumés and epitomes. No literature is so classic in form that it should not be freely sacrificed to its contents. The Greek grammars, Homer, select tales from Thucydides, Herodotus, the *Nibelungen*, *Arthurian*, Dante, Shakespeare, and just a few score others would include all I mean. The modern school ought to hold itself really culpable if children are allowed to satisfy the laws requiring attendance without knowing something of these great moralizing powers in the world. They present every chief type of character and every great generic ethical situation in life, and thus inoculate the soul against temptation, and in its stress and strain pre-form right choices. Happily, we now have a choice little body of literature that attempts just this thing; for nearly all the authors need it, and these should form the staple of school work and of reading outside. The maxim, "Art for art's sake," has absolutely no place in education; for there is only one standard of merit in the reading of school children, and that is its moral value. The good book, and that with a moral that strikes the child in faith, or indeed that is obvious, never produces the deeper effects. These always come by the method of indirection, and are subtly insinuated by suggestion. Mr. Bigg says we should have a school Bible made of such material. Again, statistics show a progressive ignorance on the part of American school children of the old and the New Testaments, which are not known enough even for the purposes of intelligent understanding of literary allusions. A Scripture anthology and outlines of sacred history should, and will soon, be provided to meet this need.

History means story, and the young child normally approaches it by the path of the narrative and biography. The French have lately shown us how both history and morals can be taught at once in their courses for citizenship

and virtue. French history has been ransacked for tales of great deeds and traits calculated to inspire as well as to interest the young, and societies have been formed with medals to inculcate and to reward acts of virtue suggested by this course, which, under the lay system of instruction which now prevails there, as it long has done here, lays upon the school the necessity of teaching righteousness independently of religion. The history teacher even in the high school is often too universitized in methods and ideals to recognize this need, so that, in fact, this great topic, the arsenal of all recorded experience of the race, is treated in a scholastic and unfruitful way by those who have forgotten that the chief object of teaching, not only history, but everything else, to the young, is to improve and strengthen character, without which mere knowledge is worthless.

Third, girls, and especially boys, ought to read in the field of nature and modern science. Interest normally begins with life, perhaps with primitive man under the simple conditions of savagery, and with animals; but in the middle teens the normal boy has almost a passion for frontier questions. He wishes to know about the conditions of the sun, moon, stars, boundaries of space, the nature of ether, atoms, X-rays, and radium; perhaps even the nature of ions, the origin of life, evolution, the latest discoveries in electricity, the wonders of modern machinery; perhaps the way conjurers perform their tricks, the secrets of nature as explored by the microscope, kite, top, battery, retort, etc. There is no ultimate question in which the most expert mind is interested, which the callowest youth of normal parts cannot himself glimpse. I have tried for some years to collect the popular books, tho not many of the articles, upon these topics, out of which a good course of reading for such use could be constructed.

Fourth, in our instruction in modern, and even in ancient, languages we should strive to focus interest essentially upon the subject-matter; and here I have a great heresy to propose, viz., that of rapid cursory reading that is not thoro, that slips the chief difficulties at first, but gives the pupil's mind a constant and dominant interest in story, and makes that the motive of learning the vocabulary. All novices should be read with and to. No lessons should ever be set in any foreign language at first, and the comments of the teacher should be directed to the historical, moral, scientific contents of the subject-matter. I have known university boys to get up a pretty fair knowledge of Italian and Spanish, because they had a special interest in matter which could be found only in those languages. Hereto the principle of content is forever dominant over form, and should never be lost sight off. The modern high-school boy or girl who has read thoroly his precious few score or even hundreds of pages of a modern or an ancient language according to the prescription—thoro, accurate, leaving nothing unmastered, and with frequent reviews—is first learning the language by the most wasteful and uneconomic way, and is therefore more liable to cut it dead afterward, feeling nothing of the inspiration of the literature to which it is sought to give him a key.

Finally, what shall be said of the now hard-worked method of running down all kinds of subjects in a library? Much, I believe, both favorable and unfavorable. The habit of superficial acquaintance with very many subjects for theme-writing, debate, or pooling in class for the benefit of others is, I believe, an excellent one. It gives the student the command of the resources of a library, and habituates him to make use of it later in life, for all kinds of purposes. To have learned that, if one wishes to know anything—a process, a political question, something about any aspect of nature, costume, any kind of allusion, or even out-of-the-way topic—one can get help from a library, is of itself a precious education. It is often said that the value of schooling, even thru college, is best measured by the number and intensity of interests generated, and not by the knowledge actually attained; but this is abortive without the habit of feeling. As Emerson says: If you have the most fleeting interest in anything whatever, you are grieving the Holy Spirit if you do not run to the library with all possible speed to feed that interest before it cools. On the other hand, the dangers of the new library work are those of distraction. Pupils who consult shelves for one topic are often led by a more superficial interest to gratify lower tastes. But even here, I think, good predominates. A Frenchman has said that to love the smell of books is one element of education; to take them in the hand, to glance at the title-page, thumb them thru to see the pictures or chapter-headings, enlarges one's sense of the range of knowledge, and gives a wholesome and appetizing sense of ignorance.

I plead, therefore, for a recognition of the value of superficiality as one of the goods *per se* in this field; a knowledge that is all extent, with not much intensity. This is the form in which all knowledge begins. If it is not respectable, then the profession of the librarian itself is not so. I have sometimes almost wondered if there is not a microbe not yet detected which may infect the pupil with a slow-burning fever of love of learning, which may be caught by merely walking thru alcoves, getting a little of the dust of the shelves upon the fingers, clothes, and in the nostrils. A German writer, Professor Jaeger, says that the soul is a smell. If so, perhaps it is the library smell.

THE VALUE AND PLACE OF FAIRY STORIES IN THE EDUCATION OF CHILDREN

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Modern pedagogy is often portentously solemn; it needs the wholesome and enlivening ministrations of the comic spirit. I would humbly suggest that, as a step in this direction, it should seek saving grace in an investigation of children's humor. The subject, so far as I can discover, has received little attention. It does not seem to have been sufficiently realized by our learned pedagogs what an indispensable key to childhood humor is, and what an

indispensable part of the equipment and the defensive armor of the teacher a sense of humor is. Might not our normal schools and pedagogical seminaries consider the possibility of a course on this subject—with the *Alices*, the *Golden Age*, *Uncle Remus*, *Midsummer Night's Dream*, etc., for texts?

Of the solemnity of some of our fellow-pedagogs we have periodical evidence in a recurring attack upon fairy-tales, and their frivolous kindred, the myth, the fable, and the legend. We need go no farther back than to that inspired scoundrel, Rousseau—over whom the comic spirit always waxes riotous; nor farther forward than to that grave Rabbi, Herbert Spencer, for reminding instances of protest against their use in education. In general, we may let good Miss Edgeworth speak for this class of protestants: "Even if children do prefer fairy-tales, is this a reason why their minds should be filled with fantastic visions instead of useful knowledge?" In reply to which, the following little dialogue from Hans Andersen would seem to be pertinent:

"Do you know only one story?" asked the rats.

"Only one," said the fir tree. "I heard it on the happiest evening of my life."

"We think it a miserable story," said the rats. "Can't you tell one about bacon or tallow in the storeroom? . . . Many thanks to you then"—and off they marched.

I take it that I am called upon today not to allow our solemn protestants to march off without a word or two of defense or counter-protest from those of us who consider them mistaken; the more so, as the sturdy utilitarians who would fatten our little ones on this substantial diet of "bacon and tallow in the storeroom"—"useful knowledge" is Miss Edgeworth's phrase—seem to be numerous and sometimes distinguished. (I believe that even President Eliot has placed himself under suspicion.) I shall, then, address myself first and chiefly to what comes first in the title assigned to me—namely, the "value" of fairy-stories and folk-stories in the education of children—and shall try to show that they have certain specific and important values. Then I shall have a few words to say concerning the practical question of their place and use in school work.

By way of preliminary, let me remark that, as this is to be a very general treatment of my theme, I shall not attempt to differentiate strictly the "fairy-story" and "folk-story" from each other, or from other species of the same genus—the myth, the legend or saga, the nursery tale or *Märchen*, the fable, the droll, the beast-tale, and so on. As Mr. Hartland uses the term in his *Science of Fairy Tales*, a fairy-story is a form of folk-story; so is a legend. His definition is: "fairy-stories are traditionary narratives not in their present form relating to beings held to be divine, nor to cosmological or national events, but in which the supernatural plays an essential part." Mr. Hartland's emphasis falls on the word "traditionary": he excludes the "literary fairy-story" of Andersen, Brabourne, Macdonald, and, I suppose, of Perrault; in fact, even Grimm would not go unquestioned from his standpoint. For my purpose it will be unnecessary to press his distinction. I am concerned chiefly with the one characteristic which all these, as forms of folk-story,

have in common, and seems, more than anything else, to render them objectionable to all virtuous "sticklers for facts;" that is, the supernatural or miraculous element. It is by reason of this that they are held to be untrue and unreal, so that they give children a false idea of life and the forces with which they have to reckon in the world. If this view is sound, if thru fairy-stories we are giving children a false conception of life and of their relations to the world, then all other reasons in favor of the fairy-story are outweighed.

Everything depends in this issue upon our getting a right point of view. And the right point of view here, I contend, is not that of the child, but of the human being. A child study that is divorced from adult study leads us—has led us—into all sorts of pedagogical absurdities. Our latter-day "pedagogical child" is just as misleading and impossible an abstraction as the "economic man" of an outworn political economy.

From this larger point of view the consideration to be borne in mind is that the interest in myths, legends, and fairy-stories is not one that restricts itself to childhood, is not a phenomenon of childhood merely. The child's delight in these things is no merely passing phase of development; it continues and repeats itself in some measure with every adult who enjoys his Homer or his Vergil, his Keats or his Tennyson. The mythopœic faculty endures as a permanent stratification in the spiritual life of the race. We are still mythopœic. Shelley is so in the "Cloud" or the "Prometheus Bound;" Mr. Moody (our youngest singer of promise) is in the "Fire-Bringer." The mythopœic is a continuing mode of poetic apprehension and interpretation. Or, to pass from myth to legend, that also endures and flourishes among us: the Sagas of the elder world have been retold and resung for us, with all their supernatural adhesions by Wagner and Morris and Lady Gregory. Similarly, the old fairy-stories have been retold and reinterpreted for adult delight by Tennyson, Christina Rossetti, Maeterlinck, and others. It is fair to say that Grimm and Andersen, Carroll and Kingsley, Harris and Kipling, are the joy alike of old and young. The proper view, then, is to see in the myth-making and myth-loving propensities of the child rudimentary forms of that power of imaginative transfiguration of fact to ideal ends which is the gift of the poet and the seer. These forms of expression endure because they embody abiding attitudes and moods of the human spirit. In fact, the animistic and anthropomorphic tendency of the myth-maker and fairy storyteller survives in our common habit of personification and metaphorical interpretation whenever we speak of the voice of the sea or the whisper of the woods.

All poetry is feigning; and it is chiefly a matter of degree that distinguishes the animism of childhood from that of the adult. The credulous realism of the child who believes in Lady Moon, becomes the basis of our adult enjoyment of Milton's exquisite humanization of the moon:

Oft as if her head she bowed,
Stooping through a fleecy cloud;

or his lovely image of her in "Comus" as a sad votarist in palmer's weeds. It is for the delight of us aged children that Shakespeare bids Oberon discourse to us of how he once

. . . sat upon a promontory
And heard a mermaid on a dolphin's back
Uttering such dulcet and harmonious breath
That the rude sea grew civil at her song,
And certain stars shot madly from their spheres
To hear the sea-maid's music;

or that Matthew Arnold appeals to the eternal childlike in us by the enchantments of his "Forsaken Merman."

This anthropomorphizing tendency, we may be sure, is ineradicable; and men will continue to speak of the "Father of Spirits," tho this is but a metaphor, and of "Mother Earth," because only by such language can he put himself on human terms with them and be brought imaginatively near to them.

In the second place, so far as the supernatural element in these products is concerned, I contend that fairy-tales do but express in hyperbole those innumerable phenomena in nature and in human life that have a fairy-like improbability and waywardness about them. He is to be commiserated who does not know the mood in which the world seems to be the abode of the fairy-powers which our forbears saw in the grassy rings in which the little people footed it featly overnight, and in all the innumerable freaks of nature's handiwork—her strange grotesque creatures and growths, her quaint distortions and arabesques, her miscarriages and misfits; or, in the human world, the lunatics and lovers of the poet's characterization, the fools (God's fools) and simpletons of human kind. The mood in which one feels this fairy-like appeal of the world to one's imagination is the mood in which Shakespeare wrote his *Midsummer Night's Dream* or *The Tempest*. It is the mood in which the sculptors adorned the great Gothic cathedrals with their grotesques. It is the mood which finds its rational outcome in a reverent recognition of the wonder and mystery into which we are born; so that we can say with Prospero that "We are such stuff as dreams are made of, and our little life is rounded with a sleep." To eliminate it would be to eliminate *Hamlet* with its unbelievable ghosts, *Macbeth* with its impossible witches, *The Ancient Mariner* with its phantoms, and *Faust* with its fantastical scenery.

There is another objection sometimes urged against these old myths and stories, namely, that they are pagan, and that we ought not to introduce children to religion thru pagan forms. The logical outcome of this position would be that from which our stalwart Puritan ancestors did not shrink—the elimination of all our great feasts, which are pagan in origin and still largely pagan in ritual and legend: Christmas and Easter, May Day and Hallowe'en; in fact, it would involve us in changing the names of our days of the week and of our months. This anti-pagan argument is not to be taken seriously.

Human ingenuity has discovered many other perverse reasons for excluding fairy-tales from our education, but I will go no farther in search of them. Having dealt with those which are most commonly urged, I shall go on now to put briefly, in positive form, the reasons why I should give an important place to fairy-stories and legends.

Most writers begin with the argument from recapitulation, which says that the history of the child of today recapitulates that of the race. The child in its early years exhibits the same myth-making tendencies as the race exhibited in its childhood; therefore it should be fed on the food proper to the needs of this myth-making period. This naturalistic theory needs supplementing by an idealistic one. The child is not only a creature of the past, and swept by its impulses; it is a prophet of the future, a fashioner of ideals which breathe "the spirit of the years to come." This future is the main matter for the educator. It is his business to select from the miscellaneous outcroppings of the past those tendencies which will issue in the ideal man of his conception. So, then, we should in a liberal way select such material out of the legacy of the past in myths and legend as will be contributory to the ideal we have in mind—an ideal not too sharply or absolutely defined, but held in a large, free way to allow for our own shortness of vision. I shall proceed, then, to indicate what I conceive to be the educational ends which fairy-stories may satisfy.

In the first place, fairy-tales help the child in taking first steps toward the assertion of his own spiritual lordship—the prerogative of mind over matter. These fairy powers and agencies which transcend our ordinary limitations of time and space exhibit the human mind dealing ignorantly, but royally, with material facts in the interest of its own hopes and fears, its loves and aspirations. Psychology explains this triumph of imagination over fact by saying that, whereas for memory and perception the meaning of anything—event or incident—is subordinated to the existence of the thing, for imagination, on the contrary, the process is reversed: the existence of the thing is subordinated to its meaning. The great princes and potentates that dominate in these stories, unhampered by material necessity, and with access to unlimited forces, are the imagination's expressions of the supremacy of human prowess over brute fact. By and by the child will discover human limitations, and the material necessity which hedges him in; but he may retain in the domain of the spirit the essence of this first spiritual audacity of his in the only conviction that gives meaning to spiritual freedom—his absolute control of his own spiritual destiny. He need never be spiritually crushed, tho you pile Pelion upon Ossa to crush him; he has dominion over his own will and acts.

In the second place, fairy-stories are an aid not only to the development of a free spirit, but to the idealizing tendency at the heart of man—the passion for perfection. These heroes—and they are nearly always worthy fellows—limn in a large, salient way certain types of human excellence. They bring home the fact that there is something for human courage and skill to strive

for. It is a crude ideal no doubt at first; but imagination steadily works to dissolve out of the hard concreteness of fact and experience the ideal elements with which it is mixed. I remember how a little girl very near to me responded one day to her fondling mother's hope that the child might grow up a strong and kind-hearted and fearless woman; and might then marry fortunately and become some good man's loving wife. The child was silent a moment; and then, looking into her mother's face, she asked wistfully: "A princess, mamma?" Yes, bless her heart! a princess—a right royal-hearted woman, with the high-minded pride and conscious power of old-time heroic princesses; and one would go on to hope that, repeating the experience of the Sleeping Beauty, all of her slumbering powers might one day be quickened into new life by the kiss of the much-loving prince who should overleap every obstacle to win her. We all have a prince or a princess lurking somewhere in our house of many mansions who at times ventures forth to beckon us to some high enterprise.

By and by the fairy-prince fades before the hero and heroine of the saga and the legend, and, later on, before the audible stride of the great historic hero—martyr and prophet and sage. The steps are natural—Aladdin and Dick Whittington, Jason and Jack o' the Beanstalk, Roland and Arthur, Columbus and the voyaging Pilgrims, William the Silent and George Washington. Only by having taken the first steps do the last acquire full significance, and the veritable heroes of history take on the halo which the idealizing habit throws around admired figures. These heroes of early childhood have been drawn large, as becomes childhood—giants, genii, large-limbed heroes. Later on, the child escapes the tyranny of size, which is merely a rude mode of emphasis.

Thirdly, these fairy-tales are art-products which bring before the child universal truths—poetic truths. The function of art is to express, not fact, bare unilluminated fact, but "the disimprisoned soul of fact." The method may be the natural or the supernatural; the actors may be men or angels, dwarfs or giants, elves or goblins, witches or genii, animals or trees; they may one and all be used to the same end of revealing the deeper relationships and truths of life—the charm of virtue and manhood, the ugliness of vice, the fascinating power of character, the sway of engaging personality. Those who object to fairy-tales because they are not true are blind to the kind of truth which art expresses. What is less true to fact than the world to which Shakespeare introduces us—men and women speaking as men and women never spoke, the actions of years crowded into a two hours' traffic upon the stage? And yet the great plays carry with them a sense of utmost, inmost reality; the facts are all impressively true to the laws of man's spiritual being.

With my next and last point I have no time to deal; I can refer only very briefly to it. The supreme service which fairy-tales perform is that of cultivating the emotional and imaginative powers. The imagination is the master-faculty, according to Wordsworth and Ruskin. Men are what they are by

reason of what the Bible speaks of as "the imaginations of their hearts"—the images set up in the temple of the heart which command worship and service, and in the interest of which men pass their days and spend their energies. I would take time here to express—I hope for teachers generally—my sense of the value of Dr. Stanley Hall's great service in emphasizing the need of more emotion in education. Our education is over-intellectualized. It runs to brains and cleverness. In this it only follows the drift of our age. This is an era of cleverness. Our art manifests an astonishing cleverness mainly; it is not the outcome of massed and abounding emotion. Our literature, too, is the outcome of the same sort of capacity that is accomplishing great results in our industrial and commercial activities. Education follows suit; it likewise lacks emotional richness. Now it is art that mediates emotion—literary art, first and foremost; hence the special value of fairy-stories for the emotional development of children.

Such, then, are the values I find in fairy-stories for the young: they embody and communicate the man-child's first rude assertion of the lordship of mind, and subserve the development of a later sense of spiritual freedom and autonomy; they are expressive, as all art is expressive, of the idealistic hunger at the heart of man; again, as forms of art, they select and co-ordinate those facts which bring out the spiritual meanings of life—that is, they release from the unsifted materials of experience the imprisoned "soul of fact;" and, not only do they embody the basic moral insights and interpretations of childlike man, but they express the simple and larger emotions, and so feed the heart of the child; they quicken, too, the imagination—that master-faculty without which the imaginative sympathy which is man's highest moral endowment fails of fruition; they are an aid to culture by giving an outlook upon all nations and kindreds, all countries and conditions of life; and, finally, along with their allied forms of literary invention, the myth, saga, fable, etc., they are a condition of understanding the innumerable allusions with which the literature of the world is studded.

I have here neglected other general values which the teacher of English would emphasize in a more specialized treatment of this theme—language values of various kinds; but the present occasion hardly calls for an excursus into this field.

And, now, to take what little time is left for a consideration of the utilization of fairy-stories in school life. The folk-lorist and anthropologist do not find, I have said, any well-defined stratification of the myth, the saga, and the fairy-story; I think that the educator must acknowledge a similar uncertainty as regards the child. Children vary very much as to their interest in these different species of imaginative tales, according to their home influence and temperament. The nursery tale and fairy-story make strongest appeal first, I think. They exhibit a ruder artistry and a simpler order of conceptions than the classic myth. The myth seems to yield its best results in the third and fourth years of school life; and because mythology and mythological illusion

are so deeply woven into the fabric of our literature, the interest is more continuous and pervasive than the interest in the fairy-story, which is seldom vigorous after the eleventh or twelfth year. The simplest forms of all three—fairy-story, myth, and fable—may find place in the first three years of school; the fable—without the pulpit tag upon it—finds its greatest acceptance in the second year. *Alice*, the *Jungle Book*, *Uncle Remus*, seem to “go” anywhere. I know many big boys of forty and upwards who delight in them still.

As to the way of handling fairy-stories, it would be well to take a hint from Mr. Hartland’s distinction between the traditionary and the literary forms of the fairy-story. Let us handle the traditionary story (which is the more important for literary and pedagogical purposes) in the traditionary way: let it be something that is told and not read; let its appeal be to the ear and eye by all the methods of the old-time story-teller. The stories should remain fluid, vital, assuming no set form of language, associated forever in the child’s mind with the story circle and the cozy corner or mama’s and papa’s lap. In that way we avoid the danger of verbal slavishness on the part of the child. These stories do not exist in any classic form; and most of the versions one finds in the schoolbooks are poor or intolerable. (The one-syllable versions and such like monstrosities are simply murderous. No librarian should give them shelf-room, save in his chamber of horrors.) The material must be worked over by the teacher in accordance with the principles of the art of story-telling.

In the next place, let the characters of the stories be companionable presences for the child: people to be talked about and with, and to be imitated and resuscitated as children will naturally revive them in dramatic play. Encourage what the psychologists call the dissociative imagination by detaching scenes, episodes, characters, from their setting. This is very valuable training for the imagination.

As for the telling, we must borrow what we can from the art of the story-tellers of the days when story-telling flourished. Better than a deal of prescription is this suggestive sketch of Agatuzza Nessia, the old woman from whom Dr. Pitre gathered so many stories in his rich collection—seventy years old, a mother, grandmother, and great-grandmother, who had never forgotten the innumerable tales told by her own mother.

She cannot read, but she knows so many things that no one else knows, and repeats them with a propriety of tongue that is a pleasure to hear. . . . If the tale turns upon a vessel that has to make a voyage, she utters, without remarking it, or without seeming to do so, sailors’ phrases and words which only seamen are acquainted with. If the heroine arrives, poor and desolate, at a baker’s and takes a place there, Messia’s language is so completely that of the trade that you would believe the baking of bread had been her business. . . . Her narration consists, more than in words, in the restless movement of the eyes, the waving of the arms, the gestures of the whole person which rises, walks around the room, bends, and is again uplifted; making her voice now soft, now excited, now fearful, now sweet, now hoarse, as it portrays the voices of the various personages, and the action which these are performing.¹

¹ Quoted by Hartland, pp. 9-11.

That is the ideal method of quickening the emotional and imaginative nature of the child. It suggests that it is a mistake for the teacher to sit when telling a story: she must move, gesture, sing, dance, as occasion demands. In short, she must be an imaginative and emotional person herself, and help us to get into our lives more of that warmth and color of the impassioned soul which are so depressingly lacking in our schools—and outside of them; inside of them doubtless, because outside.

Conceived of in this way, I believe that the fairy-story and its kindred—legend, myth, fable—have a great future before them. A wondrous wealth of material drawn from all quarters of the world, especially the Orient, is being gathered for us; and we shall make use of this increasingly as the cloud cast upon us by the triumphant realism and materialism of the past fifty years withdraws from off our spirits. One of our greatest critics has characterized the glorious outburst of poetic splendor of the early nineteenth century as the “renascence of wonder.” There are some signs of another such renascence. The so-called “Celtic renascence” is of good augury: the best work of Mr. Yeats and Miss McLeod, and the classic remaking of the *Legends of Cuchulain* by Lady Gregory, invest with new magic the fairy way of looking upon life. For—let this be my last word—the fairy-story will always have a place in the heart of man, because there is so much that is fairy-like in life. As long as the human race endures, its finer spirits, smitten by the beauty and wonder of the world, will weave their web of phantasy about it; and all those who believe that the vision and the dream have their place in life with the getting and spending, the toiling and striving, will both cherish for themselves all the lovely imaginings and reveries of these spellbound souls, and will see to it that the child enjoys the heritage which comes to it out of the great unconquered child-heart of the race.

DEPARTMENT OF SPECIAL EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—WEDNESDAY MORNING, JULY 5, 1905

The department was opened at 9:30 A. M. with a short introductory speech by Dr. Henry J. Off, Philadelphia, Pa.

The address of the president, Miss Margaret Bancroft, of the Bancroft-Cox Training School, Haddonfield, N. J., followed.

"Physical Betterment of the Mentally Deficient" was the subject of a paper given by Dr. J. H. McKee, Philadelphia, Pa.

Dr. Mary E. Pogue, physician in charge of Oakleigh Educational Sanitarium for Nervous Diseases in Children, Lake Geneva, Wis., read a paper, "Concerning Our Limitations in Educating Mentally Deficient Children."

This was followed by a paper by Miss Anna C. Reinhardt, of the Garrett School for Little Deaf Children, Philadelphia, Pa.

"Class Work—Instruction of Blind Children" was the next number on the program. Miss Alice B. Fellows, principal of the National School for Defective Vision, Milwaukee, Wis., explained briefly the origin and scope of the work done in this school.

At the close of Miss Fellows' introductory remarks a class of children representing the school sang very sweetly, to a piano accompaniment by Miss Louise Belongia, also blind. An impersonation was then given very effectively by two little blind girls. This was followed by a reading exercise conducted by Miss Belongia, an assistant teacher. The New York point system was employed.

As a further demonstration of the quality of work done in the school, Miss Fellows conducted an exercise in ear-training.

The last number on the program was a paper on "The Schools for the Feeble-Minded," by E. R. Johnstone, superintendent of the State Training School for Feeble-Minded, Vineland, N. J.

The following Committee on Nominations was then named by the president:

Dr. F. W. Booth, Mount Airy, Philadelphia, Pa. Miss Cornelia D. Bingham, Chicago, Ill.
Miss Mary D. Carroll, New York city.

The president called the attention of those in attendance to the exhibit of manual and industrial training displayed in the annex of the auditorium. The pupils of the McCowan School for the Deaf (Chicago), the Pennsylvania Institution for the Blind (Philadelphia), and the Bancroft-Cox Training School for Feeble-Minded (Haddonfield, N. J.) had contributed their handiwork to this exhibit.

The meeting was adjourned until 9:30, Thursday morning.

SECOND SESSION.—THURSDAY MORNING, JULY 6

The president called the meeting to order at 10 A. M.

The first number presented was an informal talk by Dr. Weston D. Bayley, professor of nervous diseases in the Hahnemann College, Philadelphia, Pa., on the subject of "Cerebral Localization." No copy of this address was furnished in form for publication.

The president appointed as a Committee on Resolutions to report at the close of the meeting:

Miss Mary McCowan, Chicago, Ill. A. J. Winnie, Racine, Wis.
S. M. Green, St. Louis, Mo.

The president introduced Miss M. S. Zane, of the Garrett School for Little Deaf Children, Philadelphia, Pa. Miss Zane had in charge a class of deaf children from the school. The children engaged in conversation and rapid speech-reading under her direction.

Following this interesting exercise was a recitation by two blind children from Miss Fellows' school.

A very interesting paper was read by Miss Mary R. Campbell, graduate student in philosophy, Johns Hopkins University, Baltimore, Md., on "Extracts from a Report on a Recent Investigation in Sociology."

"All Disease is Crime" was the next paper, and was read by Arthur B. Linsley, registrar of Phillips Brooks School, Philadelphia, Pa. The discussion of this paper was led by Dr. E. G. Brown, medical examiner, public schools, New York city, followed by Principal A. J. Winnie, Jefferson School, Racine, Wis.

An address in memory of Frederick D. Morrison, Maryland School for the Blind, was given by Mr. Michael Anagnos, director of Perkins Institution, Boston, Mass. This was followed by a further tribute from Mr. William B. Wuaite, New York city.

Owing to the lateness of the hour, the round-table discussion, under the direction of Miss Mary T. McCowan, was deferred until the next annual meeting of the department.

The president called for the report of the Committee on Resolutions, which submitted the following:

RESOLUTIONS OF THANKS

Resolved, That the members of the Special Education Department of the National Educational Association desire to express their thanks to the following: to the Local Committee for their generosity in supplying all that was needful for the successful operation of this meeting, and for their unfailing courtesy and kindness; to Miss Bancroft for the able program rendered; to Miss Fellows and her class from Milwaukee; to Mrs. Garrett and her class from Philadelphia; to Mr. Allen, and others who contributed to the industrial and manual exhibit.

We feel that the papers given at this meeting are of a high order, and will prove of lasting benefit to those who are engaged in any line of special education.

We would, therefore, thru the committee, express our appreciation of all that we have received and enjoyed at this meeting.

Respectfully submitted,

MARY T. McCOWAN,
A. J. WINNIE,
S. M. GREEN,

Committee.

The chair appointed the following committee to select a commission whose business it should be to consider the question of countersigning diplomas, and conferring with the heads of state institutions regarding certain educational matters, and to advance scientific investigation regarding the various lines of special education, a report to be made at the next annual meeting:

W. D. Bayley, Philadelphia, Pa.
Miss M. T. McCowan, Chicago, Ill.

E. R. Johnstone, Vineland, N. J.
Miss Mary R. Campbell, Baltimore, Md.
S. M. Green, St. Louis, Mo.

The report of the Committee on Nominations was as follows:

For *President*—Miss Anna E. Schaffer, Madison, Wis.

For *Vice-President*—S. M. Green, St. Louis, Mo.

For *Secretary*—E. R. Johnstone, Vineland, N. J.

The report was duly accepted, and the persons nominated were declared elected as officers for the ensuing year.

Upon motion, the department adjourned.

ANNA E. SCHAFER, *Secretary.*

PAPERS AND DISCUSSIONS

PRESIDENT'S ADDRESS

MISS MARGARET BANCROFT, PRINCIPAL OF BANCROFT-COX TRAINING SCHOOL,
HADDONFIELD, N. J.

The physical health of the people of the world we conceive to be in the hands of enlightened and conscientious physicians. The physician can, by study, by scientific training, by interchange of ideas with others similarly interested, by advocating wise legislation, safeguard the sanitary interests of the community, the state, the nation; in just the same way the teachers of our land may stand as a great bulwark of strength and protection between the American people and threatening dangers resulting from inherited mental and moral weakness and disease. Just in proportion as they realize the importance of their mission and are suitably equipped for carrying it out, just in that proportion will the number of really efficient men and women increase, and the number of the inefficient, the incapable, correspondingly decrease. For long centuries the problems that face the teachers of normal children have been met and discussed, with varying degrees of intelligence, and valuable additions have been made to the educational principles that obtain in our schools and colleges today. It was reserved for comparatively recent times to direct attention to subnormal types of intellect, and to formulate principles adapted to the much more complex and difficult task of developing the powers latent in the intellectual and moral constitution of a relatively small, but numerically large, class of persons who come into the world handicapped by mental and moral deficiency. Moreover, as the importance of preventive measures is yearly becoming more fully realized in the medical profession, so in the educational field it is being more clearly apprehended that the general dissemination of certain fundamental principles will lead to a constantly diminishing number of children of defective mentality. The future parents of our nations need to know the cause and prevention of mental weakness and disease—a matter of even more vital importance in striking at the root of the evil than any or all of the curative agencies that devoted men and women have spent their lives in bringing to full efficiency in dealing with those who have already come into the world with this terrible handicap in the race of life.

As a result of my own experience and observation, I have ventured to offer a few suggestions that it may be well to consider. In the first place, to secure the best results from the work in which we are specially interested, we should introduce and maintain, as far as possible, strictly scientific methods. "Scientific thought," says Clifford, "is not an accompaniment or an addition to human progress; it is human progress itself." In pedagogy, as in any other science, we must ascertain our facts by the most careful observation, then

correlate and classify them. By so doing we shall secure a fund of knowledge which we can turn as a searchlight, if I may so express myself, upon many of the difficult problems of the day. Surely in no branch of the educational work of our country has there been so great progress during the last five years as in that in the department of special education. We have passed the stage in our history when teachers of normal children, and indeed people in general, looked upon us as engaged in inferior educational work. Even the great universities are now willing to acknowledge that they have much to learn from us, and their departments of psychology look to us for data to help them in solving some of their most interesting problems. Moreover, as a result of just such national meetings as that which now calls us together, the world at large more fully appreciates the necessity of the efficient mental and moral training of the youth of the present generation who will be the parents of the next, in order to prevent their offspring from entering the world with the heavy handicap of some physical or mental deficiency. The time is near at hand when our aims and, let us hope, our achievements will be seen in their true light as of vital importance to the well-being of the human race.

As a result of years of experience, I am convinced that no teacher should be intrusted with the care of subnormal children who has not had some years of experience in classes of children of the usually healthy mental type, and that such teachers shall have shown special powers of adaptability, insight, and sympathy, such as are constantly called for in dealing with the class of children in whom we are specially interested. Not inferior ability, not even average ability, but *the very best*, should be sought out to do the specially difficult work in our schools. In this connection I wish to indorse with great heartiness an idea for which Miss Campbell, of the University of Chicago, is responsible. Success in teaching children in our schools for the subnormal should receive the same recognition from the state in the way of testimonials for efficient work as is given to those who have taught successfully in the regular schools. This will encourage first-class teachers to seek positions in the schools in which we are interested; moreover, this is a matter of simple justice, and we must work for its accomplishment.

Another idea which I think should recommend itself to the fair-minded is that state institutions would be provided primarily for the indigent who at the same time are physically or mentally deficient. There are in the United States today thousands of feeble-minded children, not to speak of the deaf and the blind, for whom the heads of state institutions refuse to make provision on the plea of lack of room. Yet in these same institutions pay pupils are received for amounts ranging from \$500 to \$800. It would be far better, it seems to me, to provide for the indigent first, and divert such pay pupils to the small private homes where they could get that individual care and attention which will always and inevitably give such home schools an advantage over any public institution, where "herding" cannot be prevented,

with all its attendant evils. In these smaller schools the work is of a character for which women are peculiarly fitted, and there will always be a sufficient number of capable women to undertake such training, if only there be a reasonable assurance of ability to finance the schools.

Another fact needs to be impressed on the public mind, especially on the wealthy who are disposed to be philanthropic: there is a strong need of endowed schools; there is, perhaps, an even greater need of endowments for the support of investigators in both the private and public institutions—investigators who shall study the patients from the standpoint of psychology and medicine, and from the data thus collected secure knowledge for the guidance of future generations. We have reason to believe that, with increasing knowledge among the masses of our people, there will be a marked decrease in the number of children born into the world with the handicap of physical and mental deficiency. Our private and public institutions for the deaf, the blind, and the mentally deficient must work hand in hand; and money could not be better spent than in scientific research along these lines. The usual method of disseminating information in printed form might well be supplemented by stated public meetings at which those with expert knowledge could set forth, in the simplest and least technical language, information essential to those preparing for the duties of parentage. By such means we may hasten the time when the bitterness and broken hearts consequent on the advent of afflicted children shall be rare, if not wholly a thing of the unenlightened past.

Without undervaluing the work of our fellow-laborers all over the land in schools for normal children, we feel that we can magnify our own office; for are we not daily called upon to walk in the footsteps of Him who came into the world "to heal the broken-hearted, to preach deliverance to the captives, and the recovering of sight to the blind"—captives to ignorance and incapacity, blind to the beauties, the mysteries, the glories of nature and art, shut out from the rich realms to which their happier brothers and sisters have free and easy access? Every wise word you can utter, my friends, every plea you can advance in behalf of these afflicted children of our common Father, will be in the nature of a second evangel. May all that we say and do be prompted by a spirit of clear and reverent appreciation of the seriousness and importance of the work in which we are engaged.

THE PHYSICAL BETTERMENT OF THE MENTALLY DEFICIENT

DR. J. H. MCKEE, PHILADELPHIA, PA.

Tho the title of this paper restricts him to the physical aspect of a great subject, the writer wishes to disavow, at the outset, the charge of materialism. In the higher animals, at least, mind is manifest in the presence of a brain;

but the existence of a brain in no wise explains the presence of mentality. As Huxley says of the brain cells and fibers, "they are but as the shells and pebbles upon the seashore, showing where the waves have been." Nor is the brain alone concerned in the manifestations of intellection; on the contrary, it is but a latter-day truism to state that mental processes may be concerned in all bodily activities, controlling or influencing them in various ways, and being in turn inhibited or otherwise influenced by them.

To illustrate the vast, even causal, influences of physical conditions upon mind, one need but cite such instances of mental retardation as obtain in the presence of congenital blindness or deafness. Or, to take a concrete, tho wholly different example, picture poor Thomas Carlyle, his great mind blighted and distorted by his torments of dyspepsia.

To do our best work among the mentally deficient, it is not only important, it is absolutely imperative, that we should possess as complete knowledge as possible of our patient's physical condition. Such knowledge only comes by the long and arduous route that leads to all exact knowledge. But how interesting is this road from start to finish! Nor is the traveler upon it to be compared to an idle tourist; rather to the trained explorer bent on noble quest.

Some authorities have stated that there is no routine method for examining every child; that no method can supplant the trained eye, etc. Such are not the writer's opinions:

"Men must have plans.
When these die out of men,
They sink then into ruin and decay,
Into inanity."

In a somewhat extensive experience with children during the past thirteen years he has become convinced that there is but one way to know a child thoroly: *i. e.*, to examine him carefully from the crown of his head to the soles of his feet. And, having performed this task, judgment must not seldom be suspended until this gross examination has been supplemented by laboratory studies (the examination of urine, blood, sputum, cultures from the throat, etc.).

Indeed, in studying the physiques of the mentally deficient, such examinations are more important than in the case of their more favored brothers. For to understand a nervous disease, one must take a careful history, and must precede his nervous examination by a careful somatic or physical study. Take, for example, three people, each paralyzed upon the same side of the body. The nervous phenomena may be identical in all three, and yet the history and physical finds well show that one had a brain hemorrhage (apoplexy), the second a clot within his vessels (thrombosis), while in the third a portion of a diseased heart-valve has been washed into a cerebral artery (embolism).

In the presence of a mental condition, the difficulty of diagnosis may be

said to have reached the third degree; for the psychologic examination should be preceded by a careful study of physical and nervous phenomena.

Let us make such an examination together. In pursuing it, it will not be necessary to call upon authority nor to abstract rare cases from the literature. All that is here presented has come within the realm of the writer's experience.

1. *The hair*.—One need but mention the sparse, coarse hair of the cretin, to show the importance of such inspection. Again, the occipital bald spot is often an early evidence of rickets.

2. *The skull*.—Let us briefly mention the square or asymmetric skull of rickets; the large, globular head of hydrocephalus; the small, characteristically shaped microcephalic skull; the protrusion thru the skull of brain membranes, brain, or both; the areas of softened bone (cranio-tabes); or the deep syphilitic ulcers or scars of the scalp extending to the bone, and indicating present or former necrosis of it.

3. *The face*.—The pasty complexion of the cretin; the more or less characteristic facial expressions or lack of expressions attending the various forms of mental deficiency; the different expressions of the partially blind and of the deaf; the enormous cheek bones of akromegaly, are all worthy of notice.

4. *The eye*.—The slant of the eye may bespeak the Mongolian; exophthalmos may mean much; the marked squint may mean that the patient is seeing a world distorted; one may note the ravages of gonorrheal ophthalmia or the scars resulting from corneal ulcers; inequalities of the pupil may denote meningitis or some focal brain lesions; the congenital cataract or anomalies of the lens may appear; the eye grounds may tell us of amaurotic family idiocy, of brain tumor, or of Bright's disease.

5. *The nose*.—Its broadened bridge and poor streams of air through the nostrils may direct attention to adenoids. Its broken-down bridge (saddle-back nose) may furnish indubitable evidence of congenital syphilis. The hemorrhage from one nostril may mean a foreign body in the nose, nasal diphtheria, or syphilis. Bilateral hemorrhage may indicate adenoids, or it may have much the same significance of constitutional or local disease that it possesses in later life.

6. *The mouth*.—Oral breathing, whether in waking or sleeping hours, should always suggest adenoids. So should the crowded and distorted teeth, and the keel-shaped palate. One may note the characteristic syphilitic teeth. One may likewise detect the dental caries that accounts possibly for the patient's exacerbations of irritability. Other oral conditions to be noted are the large tongue of the cretin; the asymmetric or cleft palate, the latter so often associated with other physical anomalies and with mental deficiency. Acute inflammations of the mouth or throat may also be revealed in this systematic examination. Enlarged tonsils, particularly of the irregular variety, are common accompaniments of adenoids; but one should never rest with a mere inspection of the fauces and pharynx. Complete the examination by passing the index finger behind the soft palate, and so determine positively

the presence or absence of this important connection. Post-pharyngeal abscess may be detected in like manner.

7. *The ear*.—One should accustom oneself to the use of an aural speculum.

8. *The neck*.—Next the condition of the chains of lymph glands in the neck should be investigated. Indeed, the writer finds it rather convenient at this point to study the important accessible glands of the body (axillary, epitrochlear, inguinal, popliteal, etc.). Otherwise some chains may be forgotten. The enlarged lymphnodes may tell of syphilis, tuberculosis, Hodgskin's disease, or other infections. It is well known that the mentally deficient are particularly prone to tuberculosis. Nor should one leave the neck without endeavoring to feel the thyroid gland, and, if it is present, to note its size. Cretinism, goiter, congenital cysts or fistulæ, etc., may also be observed here. In the cretin the so-called "pods of fat" may be found just above the clavicles.

9. *The chest*.—Malformations of the chest may mean much to examiner and patient. Thus, the violin-shaped chest of rickets, the funnel-shape (*Triebter-brust*) of adenoids, both furnish striking evidence of their causes. Beading of the ribs (rickety-rosary), be it never so slight, should also be noted by the examiner. Congenital heart disease or anomalies of the great vessels may be associated with, or indeed the cause of, marked bodily and mental dwarfing. Lastly, with the mentally deficient it should never be forgotten that the physical signs of acute or chronic illness may be detected by a careful physical examination of the thorax, when no symptoms have pointed toward the existence of such diseases. In making these examinations, one should always bear in mind the possible existence of tuberculosis (either of lung or pleura), of pneumonia, and of valvular disease of the heart. Inspect, palpate, percuss, combine percussion with auscultation, measure when necessary; and when these preliminary methods have been followed, and not until then, listen to the breathing and the heart sounds. Study the blood-vessels, pulse, etc., in connection with the heart. To employ such measures means to minimize mistakes.

10. *The abdomen*.—Here the same diagnostic procedures serve us well. Auscultation, it is true, ceases to be a court of last resort, sinking into relative insignificance; but, combined with percussion, it may still yield evidence of considerable value. Some of the important conditions to be noted are as follows: the pot-belly of rickets or of cretinism; the retracted or scaphoid abdomen of meningitis; the protuberant umbilicus, enlarged veins, and protruding abdomen of tuberculous peritonitis; hernia of the umbilicus or groin; enlargement of the liver or spleen, as in syphilis, rickets, malaria, certain anemias, or acute infectious disease; the tenderness and muscular resistance of appendicitis, or the tenderness and gurgling of typhoid fever; abdominal tumors, particularly malignant growths of the kidney; distension of the urinary bladder; and enlargement of the hollow organs, or sagging downward of the same.

11. *The back*.—But no examination of the trunk is complete until one has examined the spine, and the great muscular masses of the back. Spina bifida (protrusion of spinal membranes, cord, or both); lateral curvature; Pott's disease (tuberculous disease of the spine), with angular deformity; and the marked concavity of the lumbar region seen in rickets and in cretinism, are all conditions of great importance. When examining the back, it is well to study the child's posture, which often throws much light upon diagnosis.

12. *The genitalia*.—Many anomalies of both male and female sexual organs may be observed in studying mentally deficient children; tho, on the ground of technicality, you shall be spared their enumeration. But one should mention the great importance of adhesions of either the foreskin, or its feminine analogue, the clitoris. Again, the vaginal discharges of little girls should be studied bacteriologically, for they may contain the dangerous organism of gonorrhea. The conveyance of this germ to the genitalia of others often takes place in children's wards; but, what is far more serious, infection of the patient's eyes, or of the eyes of others, means that destructive disease—gonorrheal ophthalmia.

13. *The limbs*.—Anomalies and malformations of the limbs are not uncommon among the mentally deficient. One should note the short extremities of the dwarf, or the lengthy ones of giantism; the distorted limbs of rickets (bowed legs, knock-knee, bowed radius, etc.); the inflammatory conditions, rheumatism, tuberculosis, or syphilis; the large bones of akromegaly; the stubby fingers of the cretin; the bowed little finger of the Mongolian; and, lastly, the various forms of club-feet. In the hemiplegic and diplegic, club-feet are quite the rule. In the presence of wasting diseases, the skin upon the insides of the thighs and arms often hangs in loose folds, suggesting "the lean and slippered pantaloons."

14. Now that the patient has been fully exposed, make a careful inspection of the skin surface, searching for scars, the presence of eruptive diseases, birth marks, etc.

15. Two photographs of the patient should be taken, one a front view, the other in profile. This valuable suggestion was made to the writer by Dr. Weir Mitchell, and in the future he intends following it.

16. The physical examination should be supplemented and completed by a study of the urine; and, if the need appears to exist, by a study of the blood, sputum, and stools; or a culture should be made from the throat.

Having pursued the physical study thus thoroly, how intelligently one may enter upon the nervous examination! Possibly the cause of the nervous or mental disease is already clear, and there remains but the localization of the same. The scheme for the nervous examination here appended has proved most useful to the writer. It is practically that of his distinguished friend, Professor William G. Spiller:

I. Phenomena of motion: (1) paresis and paralysis; (2) muscular co-ordination; (3) motor irritability (spasm, etc.); (4) bladder and rectum control; (5) state of the reflexes; (6) paradoxical contraction; (7) electrical excitation.

II. Sensory: (1) tactile sensibility; (2) sense of pain; (3) sense of temperature; (4) sense of locality; (5) delayed conduction of sensation; (6) after sensations; (7) muscle sense; (8) alterations in vision; (9) alterations in hearing.

III. Sensory-motor phenomena: where muscular actions are accompanied by pain, etc.

IV. Vaso-motor and trophic phenomena: blushing or pallor; sweating; bed sores, etc.

V. Mental: with these this paper has naught to do.

Spiller also mentions alterations in breathing and in the pulse, but these would have been noted in our systematic physical examination.

At the Bancroft-Cox School we endeavor to make *one* such systematic examination, recording the results at each weekly visit.

Scientific knowledge does not always give birth to immediate practical results; but no exact knowledge can be valueless. The direct value of such finds as those just enumerated is, however, at once apparent. Knowledge concerning the physical characters of the mentally deficient children means (1) that, within certain limits, backwardness and mental deficiency may be prevented; (2) that we develop the physique and the brain which the deficient child possesses, and that certain retarding influences may be removed; (3) that we may secure good indices of physical improvement or deterioration; (4) that, in the presence of acute disease, exact diagnoses may be made; (5) tho this is a departure from our subject, better prognoses may be made.

1. *Prevention.*—The results of parental tuberculosis, alcoholism, and syphilis (each accredited with a place in the production of deficient progeny) are largely physical results. Such recognition, propagandism, education of the masses, and eventual prohibitive legislation—these chapters we trust are what the future has in store for us. It is often stated that states cannot shoulder the responsibility and expense of the large army with the “blot upon the brain;” but the matter deeply concerns the state, and the knowledge of it once appreciated should lead to the formulation of wise preventive laws.

The conduct of a mother during her pregnancy involves not only psychic, but also physical problems. Never should the mother forget that she is acting for the welfare of two. Of particular importance at this time is the great question of nutrition.

Brain hemorrhage occurring during birth is of physical origin. The accoucheur of the future should be a highly trained specialist; and one of the things that he will recognize and teach is that far more harm may accrue from the prolonged labor, with its resulting infantile asphyxia, than from the use of obstetrical forceps in skilled hands.

The blindness that results from gonorrheal ophthalmia is again a wholly preventable physical condition.

Convulsions in infancy and childhood play an etiologic part; and arising, as they usually do, from reflex irritation, should they not be viewed as preventable? It is the writer's opinion that oft-repeated eclamptic (convulsive) seizures should be viewed as so many reflections upon parents, physician, or both.

Again, the early recognition of rickets or infantile syphilis may mean that the afflicted subject may become a normal child and adult, or that he may be classed eventually among the mentally deficient. As to syphilis, the writer has in mind a young woman whose corneal scars render her vision almost nil; whose deafness is dependent upon disease of the middle ear; whose perversions, mental and moral, have resulted from her insufficient and faulty education. And he never sees her, nor hears of her misdoings, that he does not think: All of this might have been prevented, had the disease been recognized in her infancy.

And rickets? It is one of the ironies of fate that this important disease—far and away the most common malady of infancy—is so little known by laymen; or, if known, is regarded as but a disease of the bones. Rickets affects, or is capable of affecting, every tissue in the infant's body; but if the modern pediatricist were obliged to say upon what tissue it exerts its most malign influence, he would reply: upon the nervous system. It is largely a preventable disease. In its early stages it is wholly amenable to treatment; yet there is little doubt that in rickets we have an important cause of backwardness, mental deficiency, and epilepsy. Many cases might be cited in support of this contention, but the paper's scope forbids.

Adenoids.—Since Meyer's recognition of these important growths, and of their blighting physical and mental results, the operation for their removal has come to rank as one of the most important in surgery. To be most successful, the extirpation should be most radical, a clean dissection leaving no vestige of affected tissue (Freeman). Moderate or great accompanying enlargement of the faucial tonsils should demand their simultaneous removal. The early removal of adenoids and enlarged tonsils may mean: (1) the prevention of the physical deformities and mental disturbances so well known; (2) the prevention of middle-ear disease, with its all too frequent termination in deafness, and its more dangerous sequelæ of bone and brain disease; (3) the prevention of glandular tuberculosis in the neck; (4) a lessened susceptibility to the contagious diseases of childhood, and also the fact that their results, when contracted, are less dire.

Infectious diseases.—Almost any contagious disease may leave mental deficiency in its wake; or it may so affect the organs of special sense that marked backwardness results. Of particular importance in this connection are epidemic cerebro-spinal meningitis, scarlet fever, small-pox, pneumonia, whooping-cough, measles, and epidemic influenza. The disease may cause physical damage to nervous centers, pathways, and special sense-organs. The support of all wise measures for their prevention should be viewed as but an essential phase of good citizenship.

Lastly: Let us never forget the importance of maintaining standard nutritive conditions thruout infancy and childhood.

2. *Improvement and alleviation.*—The proverbially short lives of these unfortunates, their often ill-developed extremities, their poor surface circula-

tions, their susceptibilities to temperature changes and infections, all speak for organisms whose nutrition is below par. To better nutrition is really the most important physical office that we can perform for them. Nutrition is spoken of in its broadest sense; we must increase the nutrient income, and must decrease (at least relatively) the output in waste and energy. To answer fully this great problem, one must prescribe as carefully as drugs are prescribed: open-air life; a nutritious, readily digestible, bountiful diet; proper bathing; proper games; good gymnastic work, and medicinal gymnastics for special conditions; manual training, sloyd; etc. And in the securing of this end, nutritive betterment, drugs play an important rôle.

To secure the best results, our work must be intensely individualistic. The physical examination (such as that just detailed), supplemented by the observations of teachers and attendants, will point the way. Then results must be carefully noted.

There is no room here for preconceived notions or for fads. The cold bath, shower or sponge, is in the main a stimulant to metabolic activities; but the weak child left chilled and depressed by such a measure is harmed by it, not benefited; whereas, a cool sponge, following his warm bath, may better nutritive conditions, and render him less susceptible to temperature changes. That twice-blessed trait, imagination, is needed by the worker in this field. It insures originality in treatment, and, in the presence of failure, it spurs on its happy possessor: "New worlds to conquer."

In a word, nutritive conditions for these little ones should be ideal, and it is our highest function to see that such conditions obtain.

Let us traverse the patient's body once more, not to recognize disease conditions only, but with set purpose to develop, alleviate, and cure.

To suggest cretinism at the present is also to suggest thyroid-therapy, with its well-nigh theatric results. It must be said, however, that physical betterment under thyroid is usually in excess of the mental improvement. Such children must be trained. The administration of thyroid extract should also be resorted to in infantilism, Mongolism, and delayed puberty.

Hydrocephalus, tho its recognized causes are numerous, is a disease concerning which there remains much to be known. The measures adopted for its relief are as numerous as they are unsuccessful. Still a few cases have been cured—enough to tempt us to renewed endeavors. During the past two years the writer has observed a little patient who has apparently been cured by so old a measure as puncture of the lateral ventricle of the brain. The operation was done to relieve pressure alone, and at its first performance we withdrew twenty-three ounces of fluid. At its second we removed eleven ounces, and in the fluid the germ of consumption was found. Yet there has been no recurrence of symptoms or signs for sixteen months.

Linear craniectomy—Lanelougue's operation for microcephalus—has been very generally condemned of recent years. It is certainly based upon unscientific principles. Yet a few recently reported cases appear to show

that it may possess a small field of usefulness, viz., in cases with increased intracranial pressure.

The scope of this paper prevents more than a mention of operations for the removal of brain tumors, injuries, etc.

In like manner a thoro treatment of eye conditions is precluded. These cases should be handled by the skillful specialist. The systematic medical inspection of schools has served to show the great frequency of eye disturbances among public-school children, and the proper refraction for them has yielded brilliant educational results. How much more the possession of this sovereign sense may mean to the deficient child!

So, as in the case of the normal child, every acute disease of its ear should receive skilled attention. Nor should a deafness of catarrhal origin be pronounced incurable until treatment has extended over months. Anent of middle-ear disease and catarrhal deafness, we must again emphasize the etiologic importance of adenoids. The subject has been considered, however, in dealing with preventive measures.

The teeth of these patients should be inspected at rather frequent intervals—at least twice a year—and treatment should be resorted to when necessary. Maniacal and other seizures, often apparently inexplicable, may have a tangible explanation in the exposed pulp-cavity of a carious tooth. Again, appropriate dental procedures may do much to increase the utility of the teeth, and incidentally to add much to a patient's appearance.

Enlarged glands, particularly of the tuberculous variety, may demand treatment. In the main, conservative surgery serves us best. The X-ray treatment of tuberculosis glands has yielded truly wonderful results.

In the betterment of chest and abdominal conditions the same principles must guide us that direct us in our management of other children. Only one might add with the Irishman, "more so."

In order that vital organs, among them the brain, may functionate properly, a good circulation is absolutely essential, and every cell in the body must breathe, the higher nervous cells being no exceptions.

The securance of a daily movement of the bowels in these children should be deemed imperative. Drugs are very useful here, particularly to act upon the upper bowel, but more useful still are flushings of the bowel with a normal salt solution. There need be no fear of that old-time "bugaboo," an enema habit.

The genitalia.—Every mentally deficient male child should be circumcised; and the earlier this is done, the better. In the little girl, as previously noted, adhesions of the clitoris should be prevented, or should be broken up when found. Scrupulous cleanliness of the genital organs is demanded in both sexes. Any mechanical irritation of these parts may mean the beginning or the accentuation of bad habits.

That the epileptic, the mentally deficient, and the confirmed criminal classes should not be permitted to propagate their kind few thoughtful

persons of the present century will deny. With the mentally deficient the possibility of such a contingency should be prevented by certain operative procedures before the patient has attained the age of puberty. With physically weak children, and those having no bad sexual habits, operations like tying and removing a portion of the spermatic cord and Fallopian tubes may be performed. Harm is thus prevented, and yet the patient is not unsexed. That both ovaries and testes secrete important substances (internal secretions), of value to the whole economy, is an established fact. But it must also be borne in mind that the very possession of sexual sense may spell misfortune and unhappiness for the patient and his family. Mere prevention of conception does not secure prevention of unchaste crimes against the person or of disease. Can one read history since the days of Troy, and not perceive what passion unbridled has cost a world of supposedly normal beings? How, then, may we expect these weaklings to succeed, where even the great ones have failed? In the few cases that the writer has observed, nothing but good has emanated from either castration or splaying. He heartily agrees with our chairman in the views previously expressed before this organization.

Orthopedics.—The correction of deformities, particularly of the limbs, may yield us truly brilliant results. Suppose that a child is paralyzed upon both sides of the body (diplegia). His legs are so contractured that walking is impossible. His forearms, hands, fingers, and thumbs are bent in the characteristic manner, and are well-nigh useless. After suitable orthopedic procedures he is taught to walk and to use his hands and arms. "Wonderful!" one of our forefathers in neurology would say. But the wonder does not all appear upon the surface. In reality much more has been done for him. In the first place, his muscles may develop; in the second place, function may be restored to nerve cells that had not functionated before; in the third place, other cells take up the functions of cells destroyed (vicarious functions); in the fourth place, these renewed activities involve both brain and cord cells; and, lastly, increased activity in brain or cord is not confined to leg or arm centers: we also have irradiation of the stimulus to, and increased blood supply of, adjoining areas. Thus, in educating the muscles of the arm and leg, it is not hard to perceive that we are bettering the whole nervous system—literally educating the patient.

Massage, passive movements, apparatus, electricity, and operative procedures (tendon-sections, tendon graftings, etc.), all play their respective parts in securing these truly phenomenal ends.

3. That a careful physical examination furnishes us with the best evidences of physical improvement or deterioration in our patients is self-evident. Photographs may show such changes most graphically.

4. So concerning the diagnosis of acute diseases, the value of such objective studies is obvious. Indeed, one has the advantage of dealing with the objective alone, undeceived by the whims, fancies, and distorted impressions of physical being, that which one encounters in normal people.

5. *Prognosis*.—In the best-trodden walks of medicine, prognosis is far from being an accurate science. But that exact knowledge of the patient's physique enables us to prognosticate more accurately is certainly true. In work with the mentally deficient one should be most optimistic, even tho his expressed opinions to parents and friends are ultra-conservative. It is the old question of aiming at the moon. No one really knows how much improvement may take place until persistent physical and mental training has been employed for months, or even years. Huntigdon's chorea, amaurotic family idiocy, and pseudo-hypertrophic muscular dystrophy are the only diseases that present necessarily bad progress. It is never safe nor fair to prognosticate from such types as one sees locked in the single darkened room of a private house, and viewed with a mediæval superstitious fear; nor from such as one may see in some large institutions, neglected perforce because individualism cannot obtain; nor from such as are seen in reformatories and prisons (Jesse Pomeroy's and Eddie Henderson's), not only neglected, but confirmed in habits of viciousness. In smaller, more model institutions, far more wonderful results may be obtained.

And some may say: "Is it worth while?" Yes, we reply, even in the case of him who receives the opprobrious "idiot." If the experiment were viewed only as an experiment, tho a psychologic one, it would be worth while. But it is more than that. The whole trend of ethics is to oppose, and must be to oppose, the cosmic process. To spare the consumptive and cure him if we can; to view the criminal more in sorrow than in anger, thinking more of preventing crime than of punitive measures for the criminal; to elevate the mentally deficient, and enable them to live (under surveillance, perhaps), but still to *live*, happy and perchance useful lives—this is to replace the spirit of Sparta with the philosophy of Him who taught: "In so much as ye have done it unto one of the least of these."

CONCERNING OUR LIMITATIONS IN EDUCATING MENTALLY DEFICIENT CHILDREN

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During the last decade the nomenclature of mental diseases has undergone, and it is still undergoing, constant changes. We have reached the advanced state of confusion in which we no longer understand that dementia, associating the word with dementia præcox, may necessarily mean a dementia at all. Every writer upon this subject feels it incumbent upon himself to do his own classifying. He is trying to make a word cover a class with which he is familiar clinically.

We are on the threshold of similar changes in our nomenclature in mental affections in children. "Idiot" and "imbecile" will always stand as scientific

terms. Idiocy and dementia represent synonymous mental states, a dead level of mindlessness, altho the direction in which they are going may differ. Idiocy occurs in childhood, before the brain has attained its growth and development; dementia comes at a later period in life, after a definite mental status has been reached.

Idiocy is an absence of significant cerebral processes. Idiots are, with very few exceptions, sterile; and hence they are not the menace to society by reproducing their kind that some authorities and most of the laity would have us believe.

"Imbecile" is the word which covers by far the largest class, including the ones just over the boundary line in idiocy, to many children grown to be men and women who are out in the world today caring for, supporting, and directing their own lives, and this both with and without any special education or training.

I am venturing upon this subject of classification without having anything better to suggest, but feeling a daily need for a word to give an adequate meaning to a type with reference to the etiology, pathology, and prognosis. Feeble-minded children, atypical children, subnormal children, mentally deficient children, mentally defective children, arrested mental development, developmental inhibition, and backward children, are terms used by the laity and profession alike, and they convey no definite meaning as to past, present, and future mental history of the patient.

We are much farther on in classifying nervous diseases in children. The mental condition resulting from the nervous disease may be idiocy, imbecility, or whatever special term the physician in charge may find satisfactory to himself. The treatment may or may not be medicinal, but it is always educational. It has been my experience in both reading and listening to essays upon this subject that the talker and listener have different types of children in their minds and are confronted with different problems in education.

The ones who are directing the training of large numbers of children in our state institutions are dealing, not with individuals, but with numbers; the men and women who are trying to broaden the educational system of our public schools in cities so as to include the backward child; and the physicians who are working in this special line of neurology and psychiatry, and have the management of the private schools and sanatoriums—these three classes are dealing alike with the same grade of intelligence. The tools they have to work with may be different, but the end to be gained is the same.

I believe the physician is more apt to see a class that is really suffering from nervous and mental illnesses. The parents or friends bring the child to him, not so much because they are concerned over the fact that he cannot learn anything, as because they are concerned over his illness. They have to be taught that the treatment is largely educational.

In my private consultation practice, covering a period of two years, 63 per cent. of the fathers of the children that have been brought to me for mental

examination have been professional men; 86 per cent. of the patients in our private sanatorium during two years' time have been the children of professional men. I do not take this to mean that the percentage of nervous and mental diseases in the children of brain-workers is higher, but they are a class of people bound to educate their children in any event. I do believe, tho, that a man whose nervous system is earning a living for himself and family is more apt to give to his offspring a nervous system whose resistance is lowered than a man whose muscular system is the wage-earning force. This is especially true if a nutritional disturbance be present.

Anyone who is at all familiar with the masses of children seen in our public institutions, and some that, for lack of a better term, we say are backward in our public schools, knows that they are not sufferers from any nervous or mental disease, nor are they the inheritors of such. They are largely the offspring of our foreign population. We admit them to our country and share our common citizenship with them. We do not, however, examine them as to their mental status, nor ask them to compete with our American citizens in an intellectual way. We take their children, we compel them to send their children to our public schools, and we have one standard by which to examine them and our own children. After repeated failures in this, we say that they are backward, deficient, etc. And so they are, and so are their fathers and their mothers, their grandfathers and grandmothers. It is going to take more than one generation to educate their nervous systems to what we call normal. They are perfectly capable, tho, of doing a large share of the hard manual labor of the world.

Neuropathic and psychopathic inheritances, as well as the direct or indirect transmission of nervous and mental diseases, nutritional disturbances either pre- or post-natal, accidents, and diseases, especially infectious diseases that may or may not attack the encephalon and its covering, are the responsible causes for nervous diseases and mental affections in children. And I believe, with few exceptions, such a history can be made out in time.

We have the physical before us to work with, and we know the value of improving the mentality by nutrition; we are learning the value of elimination.

Having a distinct picture of the pathology, being able to see the brain macroscopically and microscopically in the light of your post-mortem experience, does not dishearten you in any educational attempt, but it rather gives you a just understanding of what you are about to undertake.

I may know, for instance, that the brain of the Mongolian idiot may be too small in all its diameters, the convolutions few in number, the sulci superficially furrowed, the number of cells in the cortex diminished. To see it and look upon it is to fix its limitations. And yet he is entitled to the very best education he is capable of receiving, and that in the most skillful way. To deny him this concerns our limitations. So long as he lives he will improve mentally and be able more and more to adapt himself to his environment.

Taking them all as a class, the most satisfactory definition psychologically,

irrespective of causes, is one who does not respond to the conditions of his environment. If you are actually living this, the force and truth of this definition come to you over and over again. The aim of his education is so far as possible to put him in his environment; the purpose, that he may be able to care for himself, to support himself, and to direct his own life; that he also may be able to do without you.

We have all learned the value of the organs of special sense in education. The brain receives its impressions from without. We have only to stop and think how much any of us would know if we could not see, hear, taste, touch, and feel. Removing reflex irritations, eye-strain, etc., have been so fully brought to light that the incompetent have been made competent.

We are coming more and more to understand the value of our great muscular sense and of its effect upon our intelligence.

"Thought is expressed in action;
Motion comes from the brain."

I judge of what is going on in a child's brain by what he does. An absence of primary significant cerebral processes defines itself. It is the best and only possible thing that could happen that we have this tangible physical motor training to lay hold of. We are educating the mind when we are training the muscular system. We have long left the place where any intelligent physician can advise parents to delay in the education of their child until he can begin mentally. Motor and sensory training comes first; it helps not only in using both your voluntary muscular system and organs of special sense, but in the higher mental functions, attention, concentration, mental initiative, memory, and building general conceptions from simple impressions.

Kindergardening goes a step farther, and in its games and plays tends to put the child in a social relation with his fellows. To me this is the turning-point. When a child can recognize the rights of others, he is stepping forward into his environment.

Anything so vital to our interests as taking a child out of his home ought always to receive serious consideration. It is done with the hope that he may return and take his place there. Whatever private teaching he may have is far better than nothing; it fills the empty hours with occupation. But it never has taught, nor ever can teach, him his social relations, nor take the place of contact with his fellows. Much individual work must be done, but it avails not if it stops there. The day of private tutoring is past. It is bad enough with the normal child, who is bound to meet life in a broader sense sooner or later; but it is fatal educationally to a child of limited intelligence.

We can teach children to articulate by motor training. It is a much more complex, but still a motor, process. We give him a language to express his feelings and wants, and educate his brain thereby. We cannot give him ideas to express, but by association we can help him to form them.

Sloyd, music, physical training, domestic science, all kinds of handwork—we are now grown rich in what we have to offer in an educational way to our

mentally crippled child. We are still lost in astonishment at what we find he can be taught to do. Assimilation is the part of his individual brain. Few of us have outlived the lives of the children we are striving to educate. We long to see them grow up, and to know what all this is really going to be to them.

We are confronted with the more subtle thing—a thing that cannot be taught in periods of fifteen or thirty minutes, but that has to be lived. His behavior in his environment is, over and above all the rest, important. It is taught only by living it with him.

To teach him to care for his person and clothing, to attend to the wants of his body, to come to the table and eat in a proper way, to exchange the civilities of life—these are fine things.

It is no more difficult to teach the recognition of a word as such than it is to recognize a color by its name. Recognizing words, tho, does not mean that reading is going to be a resource in his life. We are finding this out to our sorrow.

I stand in distant emulation of anyone who tells us in words how we think. The difficulties of the psychology of childhood are apparent. I am so bold as to venture the thought that, as time goes on, we are going to be able to lay aside some of the things we are holding so tenaciously today, and put in their places things that have grown to be valuable in the light of our experience.

We have long been familiar with the fact that the special senses in a way compensate. If the eyes go out, the hearing becomes acute. The higher attributes of the mind are also compensatory. They have their atrophies and hypertrophies. In default of the higher reasoning qualities, the brain compensates by imitation. This may deceive the very elect. Languages can be learned, and that without any grammatical foundation; a whole superstructure of pseudo-knowledge may be built up without enough reasoning to know that two and two makes four. When normal children should begin number work is without my domain, but I know it should be begun earlier than we have been doing it with mentally deficient children. You are out of touch with the world you are living in, if you do not know the divisions of time and the valuation of money. The end to be gained is wholly worthy, but that this trains the mind to reason should be written in red letters.

There are still a few physicians who say to parents: "That child will come out all right;" or else: "Nothing can be done." Neither statement is true. And, moreover, special education does not mean that the child may have to have it for life.

The proper treatment of insanity at puberty and of most juvenile offenders is prevention. And prevention is education. To train to reason, to teach self-control, proper care and respect for your body, and the higher morality, which, whether your life be the quiet or strenuous one, will enable you to pass safely thru periods of stress—this is where education is prevention. One whose nervous system is at the point of lowered resistance is out of his environ-

ment in the strenuous life of cities, but he may be within it in many quiet country places.

The location of schools and sanatoriums may be educational. An isolated country place and a city are alike to be avoided. Daily contact with a town or village, going for the mail and into shops, seeing incoming and outgoing trains, are valuable lessons that can be lived and not taught.

Everything that we are doing now could have been done long ago; it concerned the limitations of the ones that went before. The concept of education could have been broadened so as to include the deaf and imbecile a century or more ago. Our limitations are defined by our failures. I long to see the best of all of our workers united in some one of the universities or colleges of the world, and so stand as a foundation for the ones who are to come.

WHAT HAS BEEN DONE WITH ONE DEAF CHILD IN HIS OWN HOME

ANNA C. REINHARDT, TEACHER IN SCHOOL FOR THE DEAF, BALA, PA.

It is my desire to tell you as briefly as possible what has been done with a little deaf child in his own home under the most favorable circumstances. In order to do this, it is necessary to quote from his teacher's notes as well as from the child's quaint and original expressions. He was born deaf, and his speech-training was begun at the age of two. Of course, with so young a child almost everything had to be learned thru play. Everything possible was done to keep the child happy, and he was happy all day long; there was so much to interest and amuse him.

As soon as he found objects had names, he wanted to know the names of all the objects that were of interest to him. At the end of four months he knew forty-seven words; when I say "knew," I mean, of course, that he read them from the lips and connected them with the objects to which they belonged; but this does not mean that he articulated any one perfectly. Some of them he did not even attempt to say. We all know that a deaf child learns speech as a hearing person learns a foreign language, understanding much that is said before being able to respond.

From his teacher's report I quote the following:

We get many fine lessons out of readers. In them are the animals with which Laddie is familiar, the boys, girls, babies, houses, trees, Santa Claus, and many other words he knows. Where a dog is running after chickens I shake my finger at the dog and say: "No dog, you must not catch the chickens." Laddie looks at me and then at the picture intently. Once, in a contrary mood, he shook his finger at me, patted the dog, and slapped the chickens. In other pictures I can bring in the verbs that he knows. "The dog fell into the water;" "See the horse run;" and so forth. In the zoo catalogue he points out deer, bears, birds, monkeys, and elephants (taking the names from the lips). He left the closet door open. I had my back to the door when I said: "Shut the door." He went immediately and closed it.

At the end of eight months his teacher again writes:

He not only reads sentences (from the lips), but tries to form them himself; putting together two or three words. For instance: "Top fell;" "Good-bye, trolley car, away."

At the end of a year and a half he learned fifty-two new words in one month. He was then three and a half years old. He did not increase his list per month, however, as there were times after that when a much smaller number was learned in one month. At this time "Jack and Jill" and "Little Boy Blue" were much enjoyed; "Jack and Jill" especially, as it gave frequent opportunities for tumbling down-hill in the park. Laddie was not expected to repeat the lines, but he did understand them. How could he help it when it was all made so plain to him in his play day after day? The story of "Red Riding Hood" was also taken up about this time, and "Little Jack Horner."

Before he was four he understood numerous stories told from pictures; one was sure he understood by his facial expression as well as by the way he frequently responded in words and sentences. The animals that figured in pictures or stories began at this stage to have names, and when out of doors he named the dogs and horses he saw on the street. He would say: "Horse named Dick;" "Dog named Rover." The story of Hiawatha's boyhood was fascinating after having seen the Indians give the play at the Sportsman's Show; wigwam, canoe, bow and arrow, beads, feathers, and war-paint enlivened the house for many weeks. Every member of the family had to take part in the Indian game at some time or other, and the children coming home from school were frequently shot at in lieu of wild animals in the forest. "Please tell me another story about Hiawatha," was an oft-repeated request.

During the first spring spent in the country, Laddie learned to know many of the birds, flowers, and trees about him. He has always been a lover of nature, and never tires of learning new secrets about "Mother Nature's children." When his attention was first called to the buds on the trees in the spring of his third year, he expected to see baby birds hatch out of the buds, because he had seen canary birds hatch out of eggs. He was told a great deal about people of other lands, and once, after being told about the beautiful flowers in Japan, he was taken for a drive. When passing an old-fashioned garden with larkspur, foxgloves, etc., blooming in abundance, he shouted: "A Japanese garden!"

Bible stories were begun as soon as Laddie had sufficient language to understand them. When told the story of Adam and Eve, and how they were driven out of the garden of Eden, he remarked, after some moments of deep thought: "And then the garden was 'for sale.'"

Birthdays and holidays are made much of in Laddie's family for his special benefit. Hallowe'en offers a fine opportunity for personifying the ghosts, goblins, fairies, and witches that have figured in fairy-stories. In an old country house, with open fireplaces and Jack-o-lanterns spotted about, all this seems very weird, but Laddie knows little fear.

After a snowstorm in the country his attention was called to the footprints

in the snow. "Footprints" was then a familiar term, and he would say: "Look at Kittie's footprints;" "I do not want any footprints in my garden;" and so forth.

When in the city, hearing children frequently come in and have school with Laddie. This is a mutual benefit, and everybody has a good time.

This little fellow has hobbies; sometimes it is one thing and sometimes another. When he was six, his hobby was electricity. While it lasted, he not only learned as much language in connection with it as a hearing child would have done, but he understood the principle of electricity. He put up a bell in his playhouse, connecting it with button and batteries, and it worked.

At this age Dickens' *Stories for Children* were much enjoyed. *David Copperfield*, *Little Nell*, *Tiny Tim*, and *Poor Jo* added their quota to the building of character. Truly there is a psychological period for each phase of stories for children. If they get them too soon or too late, the stories fail of their purpose.

During the past eight or nine months history stories have been in demand; stories of the Revolution, of the War of 1812, the Civil War, and the Spanish-American War have been interspersed with "make-believe" stories. A portion of *The Crossing* by Winston Churchill was told, and for many days Davy Ritchie was a hero. A friend appeared upon the scene with a white rat, which was promptly named Davy Ritchie McChesney; and the name was never abbreviated by Laddie. If anyone else took the liberty, it was cause for a reprimand.

George Washington, Abraham Lincoln, and President Roosevelt have helped to create a desire for patriotism; in Laddie's own words, to be a "loyal American."

Idioms and colloquial expressions have been taught thru play and story. He never hesitates to use such expressions as "Don't let the cat out of the bag," "Around Robin Hood's barn," "We are in the same boat," "This is my busy day," "You will learn a lesson," "You put the cart before the horse," "Is that a good idea?" etc. Once, after having played bank, someone gave him a check for a dollar. He asked if he might have it any way he liked. When answered that he might, he said: "Well, then I will take it in chicken feed." When someone suggested that he did not know what chicken feed was, he responded: "Why, certainly I do—pennies, nickels, and dimes."

At present the hobby is bees. An observation bee-hive, together with books galore which are full of illustrations, to say nothing of the thousand and one questions which have been asked and answered, have resulted in a complete knowledge of these little wonder-workers.

Manual training also has its place. A five-room playhouse was constructed from an ordinary wooden box, and was furnished with chairs, tables, and beds made of raffia and wood. In drawing and color-work Laddie does remarkably well. This he takes from a special teacher.

At the age of seven he had a vocabulary of three thousand words.

A greater part of the year is spent in the country, and while there frequent visits are made to the rural school, where this little lad is able to enter the second-year class and take questions from the teacher's lips, answering in turn, just as the hearing children do.

The teachers of this child do not claim all the credit for his remarkable progress. Of course, he is bright and has unusual surroundings. The relatives and friends who are about him never lose an opportunity of giving him the help he ought to have. All his questions are answered with infinite care and patience. Ideal conditions, indeed; and we wish that all our little children who cannot hear might be blessed in the same way.

THE SCHOOLS FOR THE FEEBLE-MINDED

E. R. JOHNSTONE, SUPERINTENDENT, NEW JERSEY TRAINING SCHOOL FOR FEEBLE-MINDED GIRLS AND BOYS, VINELAND, N. J.

My talk this morning covers much ground, and I have done but little more than touch upon a great many things, but I have tried to be brief, so that I may have a few minutes to answer any questions you may wish to ask.

When Henry Ward Beecher was once taken to task for telling so many funny stories in the pulpit, he said: "If you knew how many I think of and don't tell, you would easily forgive all I do tell." So if you think I have gone far from the institution in gathering up my threads, I hope you will forgive me, for there are still many more of which I think, but which I am sparing you.

The place of the school for the feeble-minded has long been obscure. Of the first one hundred people met upon one of the streets of any of our cities, probably ninety would not know there are such people as the feeble-minded, and possibly only one of the remaining ten would really know anything of them. And yet one in every five hundred of the population is feeble-minded, and there is hardly a line of thought into which the feeble-minded person does not enter, either as an object of love in its truest sense, a spur to greater endeavor, a subject of scientific research, a drag upon the progress of the community, or a positive menace to society.

The institutions of today where the work is done for charitable reasons, those which are in touch with the great educational, medical, agricultural, and charitable bodies of the country, and which are indeed laboratories in which many of the great problems of our civilization may be worked out, hold a unique place. There are many such in this country and in Europe, and more and more the fact is being felt that here among the "undeveloped" are many of the greatest problems of development to be solved. Because our children are, in common parlance, "not all there," we must find the way to make the most of what we have, and we are therefore in a position to tell the "normals" how to make better use of what *they* have.

Our pupils are found in almost every stage of human development. Beginning with the profound idiot, below whom there is nothing but death, they advance thru various stages to the individual who possesses powers which would make us cry "genius," were it not that balance is lacking. At various points we find some so near the insane that the expert cannot tell the difference, unless he knows the past history. Some are deaf or blind, some are criminals or paupers, some are consumptives, some epileptics, some paralytics. The development of some is often so great along certain lines that in the world they would be called freaks, and in their ability in music and painting, in their use of language and figures, they go far ahead of normal men and women; but these things cannot always be directed into useful channels, and so they are of no value to the world excepting as objects of study.

It is then largely as a laboratory that our institutions offer themselves to the world. For the medical man we present abnormalities of head, body, and limb to be studied—abnormalities as to the progress of ordinary sickness, unusual developments in contagious diseases, etc. For the lawyer are raised questions of the rights of minors and those stricken by various forms of mental disease, the questions of responsibility, etc.; and it is only by a careful study of feeble-mindedness and allied conditions that many of these questions can be answered. The ordinary child's point of view regarding religious questions may here be studied better than elsewhere, for our child is always a child, and the progress of his thought is, as it were, under a microscope. The sociologist here finds not only the results of the social conditions found in every community, but often the causes also, and a complete study of social problems would be out of the question, without proper consideration of the feeble-minded. Because our institutions have farms and shops, kitchens and cottages, and because the very easiest way of performing the work of making a living must be observed, we are helping in our little way to solve the problems of agriculture and general industry.

But it is to the educator that our work comes closest. The slow mental processes are laid bare. Methods of teaching any line of work may be studied in their minutest details. Here we may see the real value of music, of manual training, of the school garden, of physical training, of the kindergarten, and of child study; and here also we see how easily they may become fads or be overdone.

The difference in training normal and feeble-minded children is one of degree, not one of kind, and our children are found in all grades, from the profound idiot up to the high-grade feeble-minded or backward child, indistinguishable from the normal. Therefore, in this little community known as the school for the feeble-minded, where all operations move slowly, where the child spends his entire life, where the object is to teach children of backward or feeble minds what they ought to know, and can make use of when they become men and women in years, and where the employees are trained to see and understand the various phases of life here depicted, we must, if we

are doing our work properly, be able to be at least suggestive along many lines. When, in addition, you consider that some of us have boards of consulting physicians, boards of paidologists, and boards of agriculturists, who advise, study, and record their findings, it must be seen that the school for the feeble-minded is no longer an asylum where the incompetents of society are to be housed until their death, but it is a home where all of the comforts of civilization shall be found; a workshop where, in so far as possible, its needs shall be fulfilled; a school wherein shall be taught all that its pupils should learn; and a laboratory in which even the farmer and doctor may study; but, most of all, a college in which the teacher will find facts and methods which she cannot find elsewhere.

Let me pause for a moment here to say to you that at the last meeting of the International Association of Officers of the Institutions for the Feeble-Minded, I was authorized to say to the members of the National Educational Association that our doors are open to all of you. If you wish to study our methods, special arrangements may be made with the superintendents of our institutions to give you every opportunity. My own board of directors offers a special rate to the members of the National Educational Association for the six weeks' course in the training of teachers to fit them to teach children in the special classes of the public schools. We are just beginning the second season, and I shall be glad to give any information concerning it.

In view of the fact that there is probably not one teacher of the primary classes who has not at least one feeble-minded or backward child in her class, while many have more, and because there is an increasing number of special classes being formed in the various cities of the country, and expert teachers are required for these classes, I am going to say a word as to what the schools for the feeble-minded have to offer these teachers.

We have learned beyond forgetting that we are teaching children—not reading, writing, and arithmetic; that the child must be developed morally and physically as well as mentally, and in a well-trained child these are inseparable; that there is a difference between learning to read and reading to learn, between learning to use figures and using figures to learn. They creep into each other almost imperceptibly, but there are periods when they must be separate.

The teacher who will train backward children must possess more patience, resourcefulness, and tact than she who will teach normal children. She must be able to see the physical defects of head, mouth, hand, and body, and know what they mean. She must learn to recognize at once the poor reason, judgment, and will, the lack of attention, the defective speech, and the want of veracity, and know what to do; and she must again and again ask, Why?

In her schoolroom she must realize the great value of music, the place for any kind of physical culture, remembering that, as ordinarily taught, physical culture is as hard as arithmetic. She must see that the kindergarten spirit is always present, and that manual training properly given may take its place

with purely mental training right from the beginning; and always she must study the child as an individual.

There is one more thing she must find, above all, and that is a new view of discipline—a discipline that makes for happiness first, that knows no repression, but rather a guidance of energy from the bad into channels of helpfulness and good. Children are not bad; they only do bad things sometimes. Do not make corrections the easiest and shortest way, by might, but recognize the child and ignore the idea of revenge. Pay but little attention to the effect upon the others. Seek first to build up and strengthen the wrong-doer himself. Your discipline must recognize that all wrong-doing is the result of ignorance or disease, and therefore correction may only be educative or curative, seeing the wrong only that it may emphasize the right.

The institution is not a place of bars and tortures, where everything is inclosed in stone walls, and gloom and sorrow prevail; a place where driveling idiots wander thru darkened corridors, cowering under the brutal hand of a heartless overseer; it is not a prison, as so many seem to imagine, in which the world hides its mistakes and crimes; it is not a pest-house to be shunned by all; no, it is a school for mankind. It is a beacon light set upon the rocks to guide the world aright, if the world will but open its eyes and see. And for the child who, thru no fault of his own, is brought into this world where he finds no place and is too often unwelcome, it is a place of joy, a haven where this one, who can neither be punished, cured, nor reformed, finds friends and companions of his own class. Here he is comfortable and contented, and has training to suit his capacity, and entertainment within his understanding. He has occupation to keep him well and busy, and give him the satisfaction of being helpful to himself and others. Here he has all of the privileges it is wise for him to have, being deprived only of the right to reproduce his kind. And always he is guided by loving hands which shall lead him into paths of righteousness for His name's sake.

EXTRACTS FROM A RECENT INVESTIGATION IN SOCIOLOGY

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As my paper consists of summaries of several investigations, I must necessarily present it to you in a somewhat fragmentary form. No attempt, therefore, has been made to articulate the various abstracts or digest reports. The connection and interdependence of the data obtained are obvious, and lead to but one conclusion—the necessity of taking immediate action in the bettering of the educational work with the “abmodal” class of children requiring special education.

A number of years ago I undertook, under the direction of Dr. C. R. Henderson, of the University of Chicago, to investigate the care and education

of the "slightly subnormal child." A previous investigation in 1898 "on what America and Europe have done and are doing for mentally deficient children" caused me to feel that "mentally deficient," "feeble-minded," "neurotic," "abnormal," "defective," and "imbecilic" are all misnomers, for none of the terms provided for a class of individuals who were not, scientifically speaking, eligible to any of the named classifications. "Abnormal" was too sweeping in meaning—it was too inclusive. "Feeble-minded" is as unscientific for the class of children in question as is "insane" for the temporarily neurasthenic patient. In seeking to get definite census statistics showing a discrimination in terms, the term "subnormal" was used. Unfortunately, the physicians and educators and census-takers were not ready to use the finely discriminated terms, and therefore no practical data were obtained. The majority of the persons to whom question blanks were sent insisted that the children coming under the term "subnormal" were feeble-minded. The new term, however, found support from three of the leading neurologists in America and was adopted by us.

In spite of the fact that the statistical evidence showed nothing upon which we could compute the total number of slightly subnormal children in America, enough data were received to cause us to conclude that approximately 1-10 per cent. of all school children were slightly subnormal. In 1902, while the investigation was still under way, Dr. Alexander Graham Bell, at the National Educational Association meeting in Minneapolis, with whom I had had some conversation, asked me to present a statement to the Department of Special Education thru the Committee on Resolutions, such a statement setting forth the status of affairs, with my opinion as to how such children could best be provided for. Briefly stated, the following is the communication submitted to the Committee on Resolutions:

There are many backward and pathological children thruout the United States, for whom no special education is provided either by state or city expense. The mental and physical infirmities of these children are of so slight a nature that, by special training, they may become factors in the family and society.

In order to promulgate the educational interests of children that are slightly subnormal and backward, and in need of special instruction, the various sections of the Department of Special Education are asked to co-operate in the establishing of laboratory schools for such pathological children.

The purpose of these schools shall be:

1. To further the educational interests of children having minor mental and physical infirmities.
2. To serve as laboratories for original investigation in the psychology of pathological and subnormal children.
3. To serve as training schools for teachers and nurses for this particular class of children.

These laboratory schools should be connected with departments of psychology and sociology in the various state universities and state normal schools.

The nature of the physical infirmities of these children is such that both medical and educational treatment must be given; therefore institutions wherein these children may be cared for, medically and educationally, shall be given a name specifically defining the cases to be admitted—a name both exclusive and inclusive.

The child attending a state school for the feeble-minded cannot eventually take his place in society without having a stigma rest upon him; he is forever an outcast; hence the name of these schools should be such that parents need not fear such results, and will readily consent to placing their children where they may be benefited by this special instruction.

These institutions may be known as "hospital schools," "educational sanitarium" for children requiring special instruction.

Inasmuch as these schools are to educate these children up to the point where eventually they may be returned to their homes and become factors in both the family and social unit, a name must be substituted for the term "feeble-minded," "backward," "arrested development," etc., so that upon leaving these special schools no stigma will rest upon the children or affect their position in after-life. The term applied to this class of pathological children requiring special instruction shall be "subnormal children."

These children are to be educated as individuals who in time are to have a part in society, and therefore ought not to be educated as aliens, and in segregated aggregates.

Such children need the stimulus that comes from contact with many personalities; they should be given every possible opportunity for coming in contact with *normal* persons and associating with *normal* children. . . . In addition, the schools for these children should be conducted on a purely scientific basis, and to do this there must be a co-operation of physicians, psychologists, educators, and trained nurses.

The Committee on Resolutions advised that definite authentic statistics be obtained and the statements submitted be incorporated in resolution form. Accordingly, a questionnaire, indicating the fine distinction to be made in the census, was issued. In outlining the question blank, we resorted to the classification of defects—physical and mental—that had been formulated from those of the children who had been brought to the Chicago Hospital School for examination and treatment.

In undertaking the statistical investigation under Dr. Henderson, we had in mind obtaining sufficient positive evidence to convince the legislature of the various states of the necessity of providing, at state or city expense, special education for temporarily and slightly subnormal children.

It was then and is now hoped that educational sanitarium, or hospital schools, shall be a part of the public-school system; such institutions to be under the direct supervision of the superintendent of public instruction of each city. To such schools may a child who needs good medical care be sent for an upbuilding of his subnormal physical condition, while at the same time he may receive at least a minimum amount of educational work.

The questionnaire was sent to the superintendents or head authorities of public or free instruction in the congested areas of Europe and America.

To get approximately the total number of subnormal children here and abroad, the method defined was to compute, from statistics received, the total percentage of slightly subnormal in relation to the total school population of the congested areas; then with the result thus obtained again to compute the relative proportions to the total population.

The statistical evidence being of a negative nature, it was very nearly valueless, for our purpose. While inadequate for the problem in question, the "positive data of a negative nature" are herewith nevertheless reported.

The cities in the Romance and Latin countries in submitting reports recognized the value and the necessity of having such data, and stated in their communications that the next census in their respective countries would include such careful records. The northern and middle European countries also admitted the wisdom of having such data, but reported that government action would be necessary to secure it.

The report from London has been carefully worked over and is herewith submitted.

CLASSIFIED STATISTICAL REPORT ON CHILDREN IN THE PUBLIC SCHOOLS
REQUIRING SPECIAL EDUCATION (DATA GATHERED FROM CONGESTED
AREAS OF EUROPEAN AND AMERICAN CITIES):

EUROPEAN CITIES

London—

- I. 1. What is the gross number (approximately) of school children in your city requiring special education? *8,873
2. Number of deaf children? 307
3. Number of blind children? 618
4. Number of backward children? Unknown
5. Number of mentally deficient children? About 6,000
6. Number of temporarily subnormal children (mentally or physically)?
 - Exempt 909
 - Permanently disabled 759
 - In country 2,501
 - Ill 4,131
7. Number of nervous children? Unknown
8. Number of precocious children? Unknown
9. Number of orthopaedic cases (crippled in arms, legs, or those having spinal weakness)? 1,733
10. Number of epileptic children? †300
11. Number of children of poor eyesight (not blind)?
 - 10 per cent. of the children of school age
12. Number of children of poor hearing (not deaf)?
 - 5 per cent. of the children of school age
13. A. Number of children of imperfect speech? Unknown
 - a) Hearing mutes Unknown
 - b) Speech hesitation Unknown
 - c) Slow speech Unknown
 - d) Stammering Unknown
 - e) Stuttering Unknown
 - f) Lolling Unknown
 - g) Other speech defects Unknown
- B. What per cent. of speech defect is coexistent with slow mental development? Unknown
- C. Number of children in whom orthopaedic conditions are coexistent with imperfect speech? Unknown

*This number is 1 per cent. of the children scheduled of school age who are of the elementary school class.

†This is the number of epileptic children, who are reported to be fit for a residential school for epileptics, and does not include cases of slight epilepsy, or epileptics who are also imbeciles.

- II. 1. What percentage of the total school population require special education? I
2. Can you throw any light on the question of the effect of poor food and insanitary habitation, or any of the above? ‡
3. Can you give any information regarding the above questions, particularly in relation to questions 5, 6, 7, 9, 11, 12? ‡
4. What is the bearing of cruelty at home, and constant fright, in relation to questions 4, 5, 6, 7, 13? ‡

The above statistics apply to the District of the School Authority for London.

Paris.—School census statistics in such detail as outlined in the questionnaire have never been gathered. The head of the educational system strongly advocates the collecting of such data, and reports that in all probability such statistics will be forthcoming for publication in the near future.

Vienna.—The head of the educational system reports practically the same facts.

St. Petersburg.—" . . . For Russia such statistics are gathered only from the entire population, and not especially from the school population. There are here many and different schools for defective children, but it would take too much time to collect the particulars, because these schools are under the direction of different administrations, governmental and private."

(Signed) *Secretary of the Ministry of Public Instruction.*

Dublin.—Report very meager; educable defectives as follows: deaf, 177; dumb, 30; blind, 294; imbecile, 266; total, 767. ". . . With reference to your communication of the 1st ultimo, I have pleasure in forwarding by this post a copy of the Census Book, 1901, for the city of Dublin, which contains particulars on some of the subjects mentioned by you."

(Signed) R. MATHESON,
Registrar General.

Cologne.—Report submitted of no value.

Glasgow.—" . . . With reference to your circular of 1st instant, I have to inform you that the information you desire cannot possibly be obtained by us with any degree of certainty."

(Signed) G. E. ALEXANDER,
School Board of Glasgow.

AMERICAN CITIES

Boston.—Report as submitted by the superintendent of public schools: "I have given considerable thought to the queries made in your circular letter of March 1, 1904, for the purpose of discovering, if I could, some practicable way of getting valuable answers thereto. The difficulty is that a large proportion of the children referred to in the several queries are not in the public schools at all. Again concerning those in school, I can obtain only the unexpert opinions of the teachers. Indeed, I see no other way of getting valuable information on the points suggested than making a complete door-to-door canvass of the whole city by medically expert canvassers. Such an undertaking is far beyond my power or resources."

(Signed) EDWIN P. SEAVER,
Superintendent of Public Schools.

Philadelphia.—No classified statistics have ever been taken.

Baltimore.—No classified statistics have ever been taken.

San Francisco.—No classified statistics have ever been taken.

Denver.—No classified statistics have ever been taken.

Omaha.—No classified statistics have ever been taken.

Chicago.—Statistics now being gathered.

New York.—Statistics now being gathered. General report submitted below.

‡ The school authorities have no statistics bearing upon these points, but it has been commonly observed that among the physically and mentally defective children there are a large number who have been improperly fed and cared for.

A part of the investigation was to ascertain approximately the possibilities at the present time of utilizing the state charitable institutions as laboratories of investigation. The first informal inquiry brought to light the fact that few well-trained teachers (aggregately speaking, and comparing special teachers with teachers of normal children) go into the work of special education. Therefore such institutions cannot be utilized as laboratories for educational research until the workers there are fully trained. The data recorded would be valueless.

The results of a very recent investigation furnish proof showing that few of the state institutions which have educational features employ normal-school or university graduates (data on this point in the appended table). In pushing the investigation to ascertain the cause of this condition of affairs in institutions for individuals who require special education, it was found that a large majority of states do not countersign diplomas of normal-school and university graduates whose first year of "experience" teaching has been gained in state institutions, the alleged reason being that the respective legislatures make no provision for such cases, and, also, that the state institutions are not under the educational supervision of the state superintendent of public instruction. The inquiry also brings to light the fact that normal-school graduates and university graduates, as a rule, are anxious to get their diplomas countersigned as soon as possible, so that the annual examination preliminary to receiving certificates will be done away with. Very few teachers can afford to spend a third or fourth year in further special preparation after the expense of a normal training or a university course. Many well-prepared teachers are deterred, therefore, from going into this work of special education. As a result, the pedagogical data gathered in such institutions have practically no psychological value, for they are not the results of scientific observation.

If some arrangement could be effected between the state institutions for blind, deaf, feeble-minded, insane, incorrigibles, and dependents, and the state normal schools and state universities, whereby a year's instruction given in such state charitable and penal institutions would be credited as laboratory work to such graduates of state training schools as might wish to take (with pay) an additional year in the way of special-education preparation, in order to acquire knowledge of the physical and mental defects of children, more well-trained teachers would go into the work. The returns to the state would consequently be greater, for the inevitable result would be either that the educational work of these state institutions would be brought under the direct supervision of the state superintendents of public instruction, who then could exact of such institutions the same high standard of pedagogical excellence that they now do of the public day schools under their jurisdiction, or else the state universities would control the educational policies and methods. The returns to the state and to society in general can hardly be overestimated. By using these state institutions as laboratories of pedagogical experimentation and as practice schools for the state normal schools, the public-school system would be enabled to supply a long-felt want—teachers

properly trained to handle the many subnormal and peculiar children to be found by the hundreds in our public day schools. The needs of such children are seldom understood by the general teacher; in fact, the general teacher is so busy attending to the needs of the child of average mentality that he has not the time in the course of the ordinary school routine to take up the study of the idiosyncrasies—much less meet the needs—of the subnormal and abnormal children.

In view of the fact that the holder of a state diploma wishes to have it countersigned, so as to have tangible evidence that he is a "licensed pedagog," in "good and regular standing" as it were, it is but fair for the state which has given the teacher this preliminary education by which he is enabled to earn a livelihood, further to equip him so that he may be a "general" practitioner, and that he may not continually be taking examinations to be certificated.

The public has a right to expect some returns for the state funds expended in the maintenance of the state institutions other than the physical care, protection, and education of its wards. The money expended should be money invested, not capital sunk. The profits to the public will be the educating of parents and teachers to prophylactic as well as therapeutical measures. This can best be effected by utilizing the present institution for child-study laboratories and for research laboratories in pedagogy, psychology, and medicine. With data thus obtained, a method of educational procedure may be defined for those children who cannot and do not get into the institutions already provided.

Knowing theoretically the peculiarities of abnormal children is a vastly different proposition from "being up against the real thing." To harmonize these negative factors of schoolroom life—these little, anti-social individuals with the group of so-called "normal" children—it is essential that the pedagogical practitioner have some "clinical" experience, and it is imperative that the state institutions, supported at enormous state expense, should be supplied with properly qualified teachers.

Below is a statistical report showing approximately how the state institutions rank educationally. As a number of the state superintendents did not return the inquiry blank, no attempt has been made in the appended report to give anything except an approximate idea. We were obliged to estimate roughly only. This we did by computing the total number of trained teachers reported, in relation to the total number of pupils reported. The report, of course, is not accurate, but it will give an approximate idea.

INSTITUTIONS FOR DEAF IN THE UNITED STATES

Total number of university graduates	82
Total number of college graduates	32
Total number of normal-school graduates	42
Total number of special training	125
Total number of deaf	4,305
Total number of teachers	395
Total number of not enrolled	1,100

INSTITUTIONS FOR BLIND IN THE UNITED STATES

Total number of university graduates	27
Total number of college graduates	21
Total number of normal-school graduates	43
Total number of special training	15
Total number of educable blind	1,598
Total number of teachers	254
Total number not enrolled	3,356

INSTITUTIONS FOR FEEBLE-MINDED IN THE UNITED STATES

Total number of university graduates	2
Total number of college graduates	4
Total number of normal-school graduates	35
Total number of special training	14
Total number of educable feeble-minded	5,600
Total number not enrolled	143
Total number of university graduates in all institutions reported	111
Total number of college graduates in all institutions reported	57
Total number of normal-school graduates in all institutions reported	120
Total number of specially trained graduates in all institutions reported	158

446

Briefly stated there are 446 specially trained and skilled teachers to every 11,503 children requiring special education in state institutions—not a large percentage.

From the data collected from authentic sources and herewith presented it is obvious—

1. That a higher standard for teachers employed in the state charitable and penal institutions must be exacted. This can be best brought about by—

a) Employing only teachers who have diplomas showing their scientific preparation for special work.

b) By paying higher salaries to teachers in schools of special education.

c) By state boards of control allowing teachers in the state charitable and penal institutions to have every third year for a year of vacation (with salary), this year to be spent in study or research.

d) By the state universities being given supervision and control of all the educational and scientific work of such institutions.

e) By the state boards of control in the various states being made up, *not* of politicians, but of educators, scientists, physicians, lawyers, and philanthropists, whose duty it shall be to see that the wards of the state receive that for which the public pays high taxes, and whose duty it shall be also to advance the scientific interests of the state charitable and penal institutions that have educational features.

2. That there must soon be, in connection with the public day-school system in the large cities, special institutions—residential schools—which shall provide both hospital and educational features, such institutions to be used as a sort of clearing-house for children who require for one, two, or even three years special physical and mental care. In such hospital schools or educational sanatoria may parents place their children, where they may be carefully studied until it is definitely determined whether such children are candidates for state school for feeble-minded, or whether they are only temporarily subnormal, and can by a few years of medical care and special education be brought up to the norm. That these residential schools must provide for very young deaf, blind, or subnormal children, for the state institutions do not admit children until the eighth

or ninth year, thus losing to the child much valuable time for overcoming his deficiencies. The purpose of the residential schools to be prophylactic as well as therapeutic.

3. That the universities and state normal schools must include in their curricula branches of study that will specially fit teachers to know very definitely that which they *should* know to handle skillfully all cases and types of defective children that may be met in the public school, and who, because of neural defects, speech defects, mutism, etc., or because of physical and mental infirmities, or because of illness, must be re-educated, and have special care and treatment.

As was indicated in the statement submitted to the Department of Special Education in 1902, one of the greatest needs in the educational field today is graduate courses in our universities, colleges, and state normal schools, such courses to provide or include a special course of study of "special" education, including particularly instruction in the physical care of children; the overcoming of neural defects; correction of speech defects; special method for the training of the deaf; special method employed in the education of the blind; the methods to be used in re-educating young invalid children; and methods of handling incorrigibles.

The state reformatories are putting in educational features, and the time is not far distant when the re-education of the insane will be a part of the system of state public instruction and under the joint supervision of educators and physicians.

ALL CRIME IS DISEASE

ARTHUR B. LINSLEY, REGISTRAR OF PHILLIPS BROOKS SCHOOL,
PHILADELPHIA, PA.

The dying words of the greatest of all the kings of biblical history to his son, the wisest of all men, express in their literal meaning a caution and a command which may well be the motto and inspiration of every ambitious youth of today: "Be strong and show thyself a man!" It may safely be said that no accomplishment in this world, however praiseworthy in itself, deserves consideration unless it have virtue as its basis. In no system of government, in no university, in no school, ought rewards of merit or any form of appreciation to be given, unless, coupled with the enumeration of other deserving qualities, there be also these words: "*and* for exemplary conduct."

"What doth it matter if one gain the whole world and lose his own soul?" Of what real advantage is it for a man to be a leader in politics, society, art, or literature, if his private life be so corrupt that he may never receive the approval of that most unsparing of critics—his own conscience? The most interesting and the most unsolvable of all the investigations presented to the student of social ethics and of theology is the wonderful duality of the human soul—that which I call "myself." You may never have realized it, but if you will turn the lamp upon your inner consciousness, and scan the process

which goes on whenever you are called to decide upon a matter of moment in your conduct, you will hear always two voices speaking; not, I feel sure, those of "the good angel" and "the bad angel"—external monitors—as some contend; but the two distinct and powerful elements of your own duality. You are never called upon to meet and oppose a single temptation, to which there is danger of yielding (and, surely, that is not "temptation" which involves no danger), that you are not conscious of the better part within you presenting the claims of duty with unsparing bluntness and pertinacity, and fighting vigorously the advances of that other part which extols with enervating plausibility and eloquence the expediency and advantage of the evil course. These two monitors of your inner self actually talk with each other, each presenting its own arguments as tho you yourself were the judge; and how often, when you have yielded to the tempter, have you listened to the upbraidings of that same better self? This knowledge and conviction of the right is the very last human power to be lost when reason refuses its society; and there is no man so sunken in vice, no woman so depraved, no editor of any vile sheet so prone to cater to the worst elements in society, as not to be a competent, not to say unerring, judge of the line between right and wrong in any question of conduct or propriety which is ever brought up. If, then, I were to define character in the briefest and most epigrammatical way, I should call it "the preponderance in man of the better self over the worse."

The one goal of all education, of all training, of all trial and tribulation, is *character*. When the refining of the last great assay has been made, when the metal has been melted in the crucible and the dross has been driven out, the only thing which the Great Judge will select is the pure gold of *character*.

Of the influences which tend to improve the character and morals of men, I maintain that there is none of greater value than judicious physical training.

You do not believe that even a Paderewski could give his noblest interpretations upon an instrument ill-made or out of tune. How can you expect the best accomplishment of the mind and heart, if that most marvelously intricate of all machines, the human body, be not kept in perfect order and at the point of highest efficiency?

I am well aware that for many years athletics and athletes have not been of the highest repute. But there is nothing attractive and entertaining in this world that the devil and his minions do not seize upon and monopolize, if you permit them to do so. The time was when a young man would almost lose his reputation to be seen playing a game of billiards. The lowest elements of society had seized upon this finest of all games of skill, and surrounded it with such associations as made it disreputable, not only to enter a billiard room, but even to take part in a game in a private house; but today the billiard table is as reputable an adjunct of the city home as a grand piano. Thus I might enumerate many kinds of sport and many forms of exercise (which are not only absolutely harmless in themselves, but, on the other hand, extremely beneficial) which have been brought under the ban of the critic and

the church, because of the evil associations which have been made to surround them. But it is true still that, outside of our colleges and schools, the athlete is apt to be regarded as a man of inferior standing, and so long as the brute instinct remains in the human nature, just so long will the crowd, at every opportunity, flock to see dogs and game-cocks and men fight and kill each other, and that sport will continue to be the most fascinating to the lowest elements of society which has in it the greatest amount of brutality.

Much wrong has been done by injudicious opposition to many forms of harmless sport and exercise by people who ought to have known better. From the time of St. Jerome, who declared that the duty of a monk was not to teach, but to weep, and who describes himself as "weak of digestion, his skin squalid, and his bones as scarcely holding together," down to the beginning of the present decade, a vigorous constitution and exuberant health have always been considered inconsistent with "spiritual sanctity." Only three of the famous Greek and Latin Fathers—Ambrose, Augustine, and Athanasius—were able-bodied men. "But the permanent influence of these three has been far greater, for good or for evil, than that of all the others put together."¹

Students of divinity forty years ago were practically excluded by public opinion from participation in any form of athletic sports. They were forced to conform their lives, their dress, and their diet almost to the ascetic standard of the Middle Ages. I have a friend, a clergyman, now fourscore years of age, who in his youth barely escaped expulsion from the Baptist Divinity School at West Newton, Mass., for participating in the game of ball called "rounders." Another was driven from his pulpit for swimming the Connecticut and pitching quoits; and the idea is still rife in most communities that the minister of the gospel must be not as other men, but make his life eccentric by the practice of excessive self-abnegation. The most cursory glance at the history of the church will, however, establish the fact that almost all the great and permanent religious movements have been accomplished by vigorous and able-bodied "saints," who have been the exception to the general rule of health. I need scarcely allude to the typical scholar or professor in the colleges of the last half-century. His description, in a word, is that of great intellectuality, feeble constitution, chronic indigestion, and peevish regret that lack of health had prevented the accomplishment of the magnificent undertakings he had always proposed to make. Horace Mann has capitally said: "All thru the life of a pure-minded but feeble-bodied man, his path is lined with memory's gravestones, which mark the spots where noble enterprises perished for lack of physical vigor to embody them in deeds." All this is changed; and today the preacher or the scholar may adorn the walls of his study with the trophies of the chase or the prizes won in the athletic contests of his college days, with no alarm lest his piety should be thought the less sincere because of his manly physique or his vigorous personality.

Guhl and Koner, in their *Life of the Greeks and Romans*, mention first

¹ Thomas Wentworth Higginson.

among the public buildings of Greece the gymnasiums, because, as they say, they were the center points of Greek life. Here, as well as in the open air, were maintained all kinds of regulated exercise for the purpose of strengthening the body or single limbs. These they called "gymnastics." This training was supplemented by "agonistic" exercises, comprising those that tended to prepare the athletes for the wrestling bouts, which formed an important part of the national festivities, particularly the games of Olympia.

Here assembled, invited by the peace messengers of Zeus, the delegates from empires and cities, with crowds of enthusiastic spectators from distant shores. The flower of Greek youth came up to test their skill in the noble competition for the crown of Zeus. Only he whose previous training of at least ten months in the Greek gymnasium, and whose untainted character and pure Hellenic descent had been certified, was allowed to approach the silver urn which contained the lots.

Sterne says: "The body and the mind are like the jerkin and its lining; if you rumple the one, you rumple the other." In this bit of wisdom lies the gist of the whole matter. The scholar, the preacher, and the business man, in our rushing metropolitan life, will speedily break down unless he recognize the fact that the constant drain upon his nerves and the trituration of the tissues of his brain must be balanced by regular and judicious exercise. Charles Kingsley said of the Greeks: "Their notion of education was to produce the highest type of health—that is, harmony and sympathy and grace in every faculty of mind and body;" and so closely upon a par did they place the action of mind and body that their commonplace definition of an "ignoramus" was "a man who could neither read nor swim;" and the Persians swung the balance far to the side of bodily care, for, says Herodotus, "from their fifth year to their twentieth the boys were carefully taught three things only—to ride, to draw the bow, and to speak the truth."

The fundamental maxim of the new physical training is this: "Aim not to produce a *few great* athletes, men who can lift vast weights, hurl a ponderous hammer, ride a wheel one hundred miles between sunrise and sundown, or win a six-days' foot race, while the multitudes go untaught and untrained; but rather to raise *every individual* to the highest symmetrical development—to the maximum of health and physical beauty of which nature has made him personally capable." Not quantity, but quality—grace of form and efficiency of muscle—is the desideratum. Hercules must yield the palm to Apollo.

One of the greatest eulogies, in a single sentence, which I have ever heard pronounced upon a human being, was that spoken of the late Dr. Marion Sims: "That by his discoveries in the methods of surgery and in the treatment of disease he had added twenty-seven days to the average life of civilized woman!" And if out of all the din and fanfare of the present era of athletics, attention to physical training and hygiene shall become *universal* in all our systems of education, thousands and thousands of years in the aggregate, of health and strength, of comfort and happiness, may be added to the human life of the civilized world.

To my mind, systematic physical training for children between the ages of eight and eighteen, followed by regular daily exercise continued in the same lines, produces fully as important results upon the intellect and the morals as upon the bodily development and comfort. Physicians in charge of prisons and reformatory institutions agree that they seldom find among the inmates perfectly developed physical specimens, and that even here the exception proves the rule, for such individuals can easily be shown to have been subjected to some enormous strain which they had not the mental or moral power to resist. There is a limit of tension beyond which every bow will break. Even in these instances it is an open question whether the failure of the moral side did not proceed from weakness of the brain directly traceable to a lack of suitable training of the muscles or imperfect nutrition of the tissues.

The big, blond-haired, blue-eyed Gauls, glorious specimens of the best northern type of the day, sneered at the little soldiers, half a foot shorter than themselves, with whom Cæsar came to subdue their country to the Roman yoke. But Cæsar called a soldier a veteran only when he had had fourteen years of incessant and laborious service, had been trained by every imaginable hardship, and under all skies and in all climates, by most severe and protracted marches, bearing heavy weights upon his back, and laden with armor that would almost crush a modern soldier on his first day's march. But the derision was turned to alarm when the trained Roman soldiers had well begun the siege of some hitherto impregnable city with battering-ram, testudo, and tormentum; and the bigger but more untrained Gaul surrendered with alacrity to his brave and intelligent enemy, invariably expressing his surprise that men of such little stature could build such mighty engines and work them with such telling effect; and there is no doubt that the athletic spirit which characterized the bodily education of the Romans in the gymnasium and the wrestling fields and in military service thru half a dozen generations, produced a race who were giants in intellect, and certainly far better than their neighbors in morals—a race which only centuries of luxury and neglect of this same physical training could overthrow.

In modern times, or perhaps, I should say in the last twenty-five years, the knowledge of anatomy has become well-nigh perfect, and an almost limitless variety of apparatus has been devised for the training of each muscle of the body; and I confidently believe that, if to every schoolhouse in every land there were added an extension, or a story, giving a single large sunny room, into which a judicious variety of the appliances of a well-equipped gymnasium could be put, and if every child, from the youngest to the oldest, could receive forty minutes of drill by a competent instructor each day, and have that training supplemented by instruction in the important laws of health, the total of crime and the numbers of the criminal classes would, in the following generation, be diminished fully one-half.

What is the testimony of the athlete who has subjected himself to system-

atic training? He must, in the first place, to win his race or to accomplish the task before him, conform rigidly to all the rules of health; he must retire early to secure his full quota of sleep; his diet must be regular, simple, and plain; he must abstain from the use of tobacco and all alcoholic or malt liquors, and in many instances even from the use of coffee and tea; he must, in short, avoid every unnatural stimulant, and be free from excitement and from unnecessary diversion of attention from the object of his pursuit; he must realize that cleanliness is next to godliness; and he must be persistent and industrious in the practice of the special exercises which he has in hand. Surely such a training conduces to the best possible morals. To develop strong arms and chest and legs is the surest way also to produce a clear and powerful brain. In other words, the best forms of physical training must needs bring a powerful contribution to the moral and intellectual well-being of the subject.

What the effect upon the whole community—men, women, and children—would be, if in this way they could all come to reverence the laws of health, and see that the highest mental accomplishment were attainable only with perfectly healthy bodies and well-trained muscles, it is impossible, almost, to conceive. The testimony of professors and physicians in the universities all over the world established the fact that hand in hand with the diffusion of the athletic spirit goes an improvement in the morals of the students, and that, in a large majority of instances, the men who are most successful in athletic sports excel also in mental attainments. Abuses, it is true, have invariably crept into all great movements for the intellectual, moral, and even spiritual development of the human race, and this new and far-reaching interest in physical development in the universities of Europe and America may lead to an excess of training in individual cases. The chief source of danger in this direction consists in the offering of prizes for athletic contests which are intrinsically too valuable, and in the establishment of competitions between rival universities which are too fiercely partisan—like the hard-fought matches of football and lacrosse, or the annual boat races between Oxford and Cambridge, or Harvard and Yale. The hero of the olden times who bore home the simple garland won upon the Olympian plain was far prouder of the honor, and deemed himself far better repaid for his four years of training, than many a modern athlete bedecked with medals of silver and gold. It was for *honor* alone he wrought—the highest need of praise.

What do I ask you to infer, therefore, from this brief presentation of the value of athletic training to the morals of men and women? Simply that wrong doing and wrong thinking in almost all instances have their basis in disease of one form or another, whether original or inherited. Just as the most intelligent breeding and training of the horse thru many generations will produce an animal perfect in disposition as well as in physical attainments, so it is certain that, could the propagation of the human race be maintained for several generations under arbitrary selection and perfect conditions, the

disposition of the subject would be so attuned to right thinking and moral conduct that crime would become unknown, and the "right" would appear the better choice to every human being.

I hail then with enthusiasm the athletic spirit of the present time, and I prophesy that before many years our American young men and women will show a robustness and vigor of constitution, and a familiarity with the best forms of physical exercise, both for the training of the muscles and the maintenance of health, unparalleled since the days of Plato the mighty wrestler, Socrates the invincible soldier, and the magnificently trained boys and girls of the Dorians, in ancient Greece.

The man of the future is to be a man of action, and he must have big lungs, brawny muscles, and a constitution of iron. Already the pessimist is asking: "Where today are the counterparts of the great statesmen, orators, poets, and painters who have in past days studded the sky of history with the jewels of their intellect?" My reply is: "They are here; but this busy age of evolution has claimed them for other work; they are factors of a new and higher civilization, and art, for the nonce, must yield to utility."

Your Chathams, your Harry Vanes, and your Websters of this age are managing colossal railroad systems which stretch their lines of steel thousands of miles into the wilderness, and demand the best energies of fifty thousand men.

The Galileos, the Newtons, and the Franklins have chained the lightning and are illuminating the world with its majestic energy. The Shakespeares and the Miltons, the Raphaels and the Rembrandts, are standing today at the bar of nations, pleading causes whose decisions make the world to tremble; or wielding, thru the pages of marvelous newspapers and magazines, a pen mightier than the sword of Alexander or Joshua; or wearing the bishop's robe and miter, and exerting a sway potent unto the uttermost parts of a great land—not as thru the enforced and narrow tenets of former days, but by the subtle, golden influence of a broad Christianity.

Do we wish to have our land pure in morals, and foremost in letters and science, our citizens law-abiding and progressive, our young men and maidens models of beauty, intelligence, and purity? Then remember that the foundation of all these good things lies in securing for the children of our nation healthy and well-trained bodies.

Be *thou*, therefore, strong, and show thyself a man!

DISCUSSION

DR. E. G. BROWN, medical examiner, public schools, New York city.—After being asked to speak upon the topic, "All Crime is Disease," when thinking of the relationship between crime and disease, I found myself continually asking the question: Is it that "all crime is disease" or that "all disease is crime"? It is certainly so that much disease is the result of wrong-doing (crime) or of ignorance; and in these days there is no excuse

for ignorance of the laws of health. Such ignorance is sinful; criminal, it should be considered. So, in thinking the matter over, I felt that it should rather be said that "all disease is crime." And now from the platform I hear the topic announced in this way.

On the other hand, there is no doubt that much crime is due to disease—that it is a symptom of disease, both in adults and in children. But that disease causing crime is itself frequently the result of crime (or what should at least be considered criminal ignorance) is none the less true. So, however we look at it, if we study the subject carefully, we must recognize the intimate relationship between physical condition and mental ability or character.

In the study of crime among adults, we plainly see that at least much crime is due to disease. We also see that much disease is due to crime. How much more is this latter fact true of children! Yes, in the study of children we find that most wrong-doing (what in an adult might be considered crime) is due to disease. It is not the child's fault. He is supposed to be under the guidance, training, or education of adults. And it is the fault of adults if children are not healthy, strong, and good—growing to be true, strong men and women.

This subject (the relationship between physical condition and mental ability or character) has especially interested me for some years. The New York city public schools recognize the fact that character, as well as the acquirement of knowledge, should be one of the aims of education, and that not simply the average child, but that each child, has a right to an education, and that there is a close relationship between mental ability or character and physical condition. Therefore the New York city public schools are working for the atypical child as well as for normal children. It is my privilege to be associated with the work. Both in public-school work, and in private work I am more and more impressed with the important relationship between physical condition and mental ability and character, and that something definite can be done in the way of character formation and mental development by physical training, or treatment of diseased conditions.

First let me speak of the importance of preventive treatment. We as teachers can do much to educate both adults and children to live so that children still to come may have that heritage of health and strength, both physical and mental, which is the most sure preventive of future crime, and which is the right of every child.

If young men would fill themselves with high ideals of the value of health and sense and true womanhood, then young women with weak bent backs (called "straight fronts"), misplaced vital organs, awkward gait, frivolous ways, and lack of mental and physical health, would mend their ways, or at least not frequently be chosen to become wives and possible mothers of weak children. And young men having real high ideals for womanhood must themselves be worthy. How often may be seen families of delicate children, the offspring of weak and worse than silly parents! I know two young men—chums—one of whom said he would never fall in love with weakness. The other laughed at this. The first was told he would some day fall in love with and marry some young woman without regard to his "fussy ideals;" he would fall in love with the first young woman who pleased him. His reply was that none would please him who had not health, strength, and truth. Both these young men moved much in society. Both are now married. One has a weak child. One has two happy, healthy little ones. This lesson may be seen illustrated again and again in real life. Let us have healthy, strong, and high ideals, and let us teach them, that weakness, disease, and crime may be as much as possible prevented.

And now I have already struck my second point—the possibility of inspiring youth with high ideals. This is mental treatment.

Third, let me point out the importance of physical activity of all kinds in the formation of character. A boy, for instance, cannot play good, clean basket-ball without

becoming quick, strong, and honest. A boy is debarred from school because he is supposed to be feeble-minded. As he has no other outlet for his energy, he is learning all manner of wicked tricks, and is undoubtedly growing to be a criminal, owing to his physical weakness. How often do we as teachers realize that we can inspire the adolescent boy with higher ideals, if we will exert ourselves to do so? When we cut fun out of a boy's life, we lose influence with that boy. I once knew a boy who wanted to have as good a time in life as he could. The jolliest set was the set he chose for his companions. By and by he realized that these boys were a trifle "off color," as the expression is. His mother had done everything in her power to persuade him to drop these companions, but to no avail. This boy finally went away to a camp, and there led a different life entirely. One young man, whom he had been looking up to for a long time, talked to him on the Indians and their ideal physical life. He went home from camp filled with the idea of being strong, healthy, and athletic. Let us then inspire our boys and girls with high ideals, and they will undoubtedly have great influence on their health and character.

Character is very strongly influenced by physical activities. If you tell a boy to sit still and be good, it is almost impossible for him. If we tell him, rather, to do what is good, it is much easier for him. I certainly do believe that character is formed by physical activity.

Children who could not keep up with their grades in the New York schools were sent to me for examination, and invariably I noticed that their physical condition was very poor.

Let us remember that much crime, due to disease, can be prevented. Let us remember that youth can be inspired with high ideals, to live strong, noble lives. Let us remember that as the youth lives, as he does, so he will become. Physical activities have a most important influence upon mental qualities and character.

Be thou, therefore, strong, and show thyself a man. And remember that the greatest man is he who works to inspire and train the young to strong, true womanhood and manhood.

A. J. WINNIE, principal, Jefferson School, Racine, Wis.—The subject under discussion is "All Disease is Crime." To my mind, the subject admits of two interpretations, either that it is a crime to be in poor health, or diseased, or that disease is the basis of all crime. The subject has been treated from the latter standpoint, and in this I am somewhat disappointed; for I do not believe that the writer of the paper has demonstrated, nor do I believe that anyone can demonstrate, that crime is a result of disease; nor do I believe that it has been shown that a healthy, well-developed body is in any sense indicative of a strong moral character. While I am willing to admit that there is an intimate relation between a strong, healthy body and a strong intellect, I do not believe that a strong intellect is necessarily indicative of morality.

The paper seems to have confused moral attainments with mental attainments, when the attempt is made to prove that "the highest mental accomplishment is attainable only with perfectly healthy bodies and well-trained muscles." All must admit that the greater the intellect a man has, the greater a power he is for good or for evil. A grafter today, to accomplish his nefarious business, must be possessed of a keen intellect.

The man of biblical history whose dying words have been quoted, "who was ruddy and withal of a beautiful countenance and goodly to look to," and who overcame the mighty chieftain of the enemy, Goliath, did not reach that perfection in morality that he attained in physical health. Moreover, he committed the greatest of crimes, murder.

History shows that, while Rome excelled in arms, and was noted for her gymnasia and baths, she did not excel in morality, but was dominated by the lower animal appetite and passions, which eventually led to her downfall. The name of Nero stands out as a symbol of all that is low and base in mankind.

I believe that, as the body becomes developed and the whole physical system is working harmoniously, the lower and baser animal nature becomes more active and strives

more vigorously for the ascendancy. From whatever sources I have been able to secure information I have been unable to find it to be the rule that the leaders in athletic sports in our schools have been the leaders in *intellect*, not to mention the morals.

Besides, it is a well-known fact that a great amount of proselyting is carried on among educational institutions, in bringing students from one school to another for their excellence in athletics, when very frequently their scholarship is below grade. I am informed, also, that when the boys "break training," as it is called, at the close of a season, in a great many cases their actions fail to show a great degree of moral uplift.

The paper admits that the moral and religious classes of the past were of poor health and of feeble constitution. If disease begets crime, how are we to account for this morality? St. Paul, one of the greatest characters of the New Testament, confesses to a thorn in the flesh.

The fact that statistics show a large percentage of the inmates of our reformatory institutions to be diseased in some form or another does not prove that their disposition to crime is a result of their disease, any more than it proves that both their disease and their crime are a result of environment and heredity.

I believe that education in all its phases, and proper environment, is the cure for crime. Edward D. Mansfield says: "The general fact is apparent that education is a force restraining vice and crime, a moral power over the appetites and passions of men." In the report of the Commissioner of Education for 1898-99 some very interesting letters and statistics are given to prove that education dispels crime.

Disease is defined by Webster as "a state of the body disturbing the performance of the vital functions," and crime as "a violation of law divine or human."

The greatest of all lawbooks tells us "To him that knoweth to do good and doeth it not, to him it is sin." We should safeguard the health of our bodies as much as the health of the mind and soul; if not, we violate the law of health, God's law, and, so far as it effects posterity, man's law. Disease may then be called a crime. But this crime may not always rest at the door of the diseased, and often to find the offender it may be necessary to go back two or three generations; for, "I the Lord thy God am a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth generations of them that hate me."

A great amount of study and discussion has been carried on in recent years over heredity, and many interesting facts have been produced. But just how much must be charged to environment, and how much to heredity, has not been determined.

If we unwittingly violate one of the statutes of the state, we are not held guiltless because of our ignorance of the law. So we suffer, and our posterity, for our ignorance of the laws of health.

I would therefore plead as earnestly as does the writer of the paper for observance of the laws of health, and believe with him that physical culture is to be the agent in producing a stronger and healthier people in the generations to come, when all shall be students of the rules of health, and shall come to realize the fact that disease, inherited or acquired, is somebody's crime.

DEPARTMENT OF INDIAN EDUCATION

SECRETARY'S MINUTES

FIRST SESSION.—MONDAY, JULY 3, 1905

The opening meeting of the Department of Indian Education was called to order in the Asbury Park Auditorium, on Monday, July 3, at 9:30 A. M., by the vice-president, R. A. Cochran, superintendent of the Mount Pleasant Indian School, Michigan.

The Carlisle Indian School band furnished the music.

Greetings and résumé of work from officials and friends were given by Rev. A. E. Ballard, vice-president of the Ocean Grove Camp-Meeting Association, New Jersey; Hon. T. Frank Appleby, president of the General Committee of the Local Organization; Hon. John J. Fitzgerald, member of the Committee of Indian Affairs, United States House of Representatives; Hon. Charles J. Baxter, state superintendent of public instruction of New Jersey; Hon. John D. Benedict, superintendent of schools in Indian Territory; Miss Mary R. Campbell, graduate student in philosophy, Johns Hopkins University, Baltimore, Md.; Miss Estelle Reel, superintendent of Indian Schools.

A telegram was read from the president of the department, Major William A. Mercer, Seventh United States Cavalry, superintendent of the Carlisle Indian School, regretting his inability to be present.

SECOND SESSION.—MONDAY, JULY 3

The Department was called to order in the Asbury Park Auditorium, at 2:30 P. M., by Superintendent R. A. Cochran, the vice-president.

An address on "The Advisability of Conducting Normal Schools to Train Teachers for the Specific Purpose of Instructing Indian Children," was given by John D. Benedict, superintendent of schools in Indian Territory.

Miss Natalie Curtis, New York city, then presented a paper on "Music of the American Indian."

"Ethnological Study of Our Indians in the Southwest" was the topic of a paper by Miss Mabelle Biggart.

The next paper, "Indian Characteristics," was presented by Miss Mary C. Judd, Minneapolis, Minn.

THIRD SESSION.—TUESDAY, JULY 4

The department met in the Asbury Park Auditorium at 8:30 P. M.

A paper on "Work of the Bureau of Plant Industry, United States Department of Agriculture, in its Relation to Agricultural Instruction in Indian Schools" (illustrated by stereoptican views), was presented by Miss Susan B. Sipe, Normal School, Washington, D. C.

A reception to Indian school-teachers and workers was held in the parlors of the Auditorium.

FOURTH SESSION.—THURSDAY, JULY 6

The department was called to order in the Auditorium, at 2:30 P. M., by Superintendent R. A. Cochran, the vice-president.

"Indian Education and Methods of Instruction," was the topic presented by Mrs. Amelia S. Quinton, president of the National Indian Association, New York city.

The following resolutions were adopted:

Resolved, That we hereby tender our thanks to the president for persuading Hon. Francis E. Leupp to accept the direction of the Bureau of Indian Affairs, and that we feel under his able guidance a great step forward will be taken in advancing the cause of the Indian.

Resolved, That we hereby tender to the Secretary of the Interior our sincere thanks for the cordial support he has given us in our efforts in behalf of the Indian children; and that we are in hearty sympathy with the reforms the Commissioner of Indian Affairs is introducing in the Indian school service. We commend the good work done by the Superintendent of Indian Schools, and extend our thanks for the helpful suggestions tending to better the Indian. We thank the vice-president of the department, Mr. R. A. Cochran, for the able and impartial manner in which he has presided over our meetings.

Resolved, That we commend the care exercised and the efforts put forth by the Civil Service Commission to keep up the standard of efficiency in the Indian field service.

Resolved, That our thanks are due, and tendered hereby, to the officials and people of Asbury Park and Ocean Grove for the cordial welcome extended to us, and the many courtesies we have received from them. We also sincerely thank the local press for its reports of our proceedings and helpful notices, and the Carlisle Indian School band for supplying the music.

The Department then adjourned.

ESTELLE REEL, *Secretary*.

PAPERS AND DISCUSSIONS

GREETINGS AND RÉSUMÉ OF WORK FROM OFFICIALS AND FRIENDS

HON. JOHN J. FITZGERALD, MEMBER OF COMMITTEE ON INDIAN AFFAIRS,
UNITED STATES HOUSE OF REPRESENTATIVES

I am here today to indicate my sympathy with you in your work. I desire to speak words of encouragement, and to assure you that there is a strong bond of interest between all who participate in the work of the Indian civilization. Yours is by no means an easy task. Carping critics readily find fault and never suggest improvement in the service of which you are important factors. Their criticisms are often the result of ignorance, sometimes of prejudice—frequently of both, combined with an exaggerated valuation of their own ideas.

During the past six years, as a member of the Committee on Indian Affairs in the House of Representatives, I have given considerable attention to many phases of the Indian work. At various times I have endeavored to point out what in my opinion were the errors into which those charged with the duty of devising methods to civilize the brown race had fallen. After considerable investigation and study, I became firmly convinced that the most essential, the most imperative, need of the Indian service was to devise some scheme by which the Indian upon the reservation would be compelled to give up his life of laziness and to take up useful tasks.

During the past few years marked improvement has been noted in the methods followed in the Indian schools, and I desire to congratulate you for

the success that now attends your efforts. The life of a teacher is hard at best. To succeed in the profession, besides the usually admitted qualifications, the teacher must have the peculiar talent for imparting knowledge which can hardly be overestimated. Really good teachers often succeed in their work in spite of bad system and improper methods, but when they do it, it is only by the greatest sacrifices of time and of health. With advanced, or I might say up-to-date, methods the work of the teacher is much simplified, and the successes to be obtained are more numerous and much greater. To follow out a proper system makes the teacher's work a pleasure, the scholar's work a profit. I shall not say that the methods in the Indian schools are perfect, but I do know that they have been immensely improved in recent years, and with the same energetic, systematic, sympathetic, and intelligent supervision they will continue to improve. The object of all the efforts of any government in this field is to make good American citizens of those placed under your charge. Sometimes it is thought that all of the Indian traits should be completely eliminated. I am of those who believe that the good in the Indian character should be developed and cultivated, and the bad eliminated.

HON. CHARLES J. BAXTER, STATE SUPERINTENDENT OF PUBLIC INSTRUCTION
FOR NEW JERSEY, TRENTON, N. J.

We who have charge of the systems of education which have been long established are learning of you, and because of the influence of your example are endeavoring to make them more rational and better adapted to the needs of the masses. Our courses of study have been gradually extended on academic lines, and not until recent years have we discovered that such development is not the best. A system of education that is adapted to the present more humane, practical, strenuous, and enlightened age must take into consideration our many-sided existence and provide for the harmonious development of all the faculties, with a view to effective service and right living. Ethical, æsthetic, intellectual, and practical training and instruction should go hand in hand.

Education that is purely academic leads away from and creates an aversion to the duties of practical life. We cannot hope to keep the pupil in sympathetic touch with his environment, and continue to force upon his attention only the unfamiliar things which lead him in thought and purpose away from it. When the school days of the youth thus trained are ended, his thought, interest, and energy must be redirected, and a new and usually distasteful education begins. Life is so short and human energy so valuable that there should be no steps to be retraced or mistakes to be corrected.

The most unfortunate heresy ever entertained is that scholarship is, or ever was intended, to be a means of escape from an adequate share of life's duties, or that it alone will ever enable anyone to earn a more leisurely or

luxurious subsistence. The child, whether red, white, or black, should not only acquire in the school habits of industry, but should also learn that all useful labor is honorable, be taught to respect all worthy laborers, and impressed with the fact that success can be achieved only thru the personal effort which culminates in results. If thus trained, he will rejoice in the work which his hands find to do, and in grateful content fill the niche in life to which his powers, native and acquired, relentlessly assign him. Only those who go out from the school with a purpose to be all they can, to do the best they can, and ever courageously to meet the duty which comes next, will win large success. To insure the healthful, symmetrical, and permanent development of the class, of a commonwealth, or of a nation, it is necessary that educational and industrial development go hand in hand.

You teachers of the nation's wards placed industrial education on an even footing with academic at the inception of your work, and we of the older states are just beginning to appreciate its importance. The addition of manual training to the course of study usually pursued in our public schools was a good long step forward, and both its practical and its educational value have been conclusively demonstrated. We have learned that, without impairing in any degree their academic efficiency, we can establish most valuable relations between our schools and our varied industrial interests. This discovery, taken in connection with the fact that our courses of study were already crowded, is regarded by many as little less than a revelation. Experience has also proved that this broadening of the school curriculum, with the facilities it has provided for the alternation of study, and agreeable and purposeful muscular activity, has stimulated greater interest in school work and resulted in an improvement in discipline. The different forms of wood- and iron-work taught in our manual-training schools constitute a valuable correlation with many of our manufacturing industries, and the several branches of domestic science make a most interesting and important connecting link between the home and the school, and, in many instances, have resulted in improved home conditions.

The soil is the chief source of the world's support and the basis of its wealth. The product of the mines of our western El Dorados is insignificant in value when compared with the wealth locked up in their soil and awaiting the magic touch of industry. Tho much of our national area is uncultivated, and much is unskillfully cultivated, it is estimated that the agricultural products of the United States during the past two years exceed in value the total output of the gold mines of the world since the discovery of America. Notwithstanding the magnitude and importance of our agricultural interests and the great possibilities which they offer, the oldest, most necessary and independent of occupations, mainly as a result of our faulty education, holds an inferior place in the public estimate, and the drift of population is toward the already congested cities, and the trend of enterprise is toward other occupations which are not more important. This can and should be counteracted by the school, thru the agency of the school garden.

The cultivation of fruits and vegetables about the school will not only beautify its surroundings and afford admirable facilities for nature study, but also awaken an interest in rural occupations, and will create a love for rural life.

A few of our districts have established school gardens, and results have proved most satisfactory. The assignment of individual plots has stimulated independent thought, pride of ownership, and resulted in individual initiative. The interest aroused has been such that the plot at school is frequently duplicated at home.

I am well aware that you who are engaged in teaching our Indian youth are utilizing every practical industrial agency, and believe that nothing will prove more effective in your work than the cultivation of the school garden. It is collaboration with nature, and thus most in harmony with their natures, and culminates most quickly in results that minister to their necessities. The individual plot will prove an important factor in preparing them for the advantages offered thru the provisions of the land-in-severalty bill.

Only those who cultivate their allotments of land instead of leasing them to others will reap substantial benefit from the said enactment. Winning a subsistence from the soil creates a sense of dependence upon it, stimulates love of locality, and results in home-making, along with its anchoring influences of home interests, home comforts, home attachments, and home pride. This is a consumation devoutly to be wished and earnestly sought, and the soil and climate conditions should always be such as to make its attainment practicable. Thru your efforts our red brother is beginning to realize the wisdom of the divine decree, "In the sweat of thy brow thou shalt eat bread;" to experience the uplift and independence of industry; and to learn that charity ennobles only those who give.

MISS MARY R. CAMPBELL, GRADUATE STUDENT IN PHILOSOPHY, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD.

A bird's-eye view of the various aspects of "Indian education" as it is today, compared with our memories of it as it was a decade since, causes us to believe that the problem of educating the red man has been practically solved. That is to say, we see the end in view, the why and wherefore; but there are still some missing factors that belong to the "how" phase of the problem.

Possibly one of the most difficult phases of the question is how not to divorce the parents and children; how not to make, by reason of superior education, the gap between the Indian parent and the Indian child greater than necessity compels us.

One of the strongest of human characteristics is our great desire to have other people do as we do, to act like us; and one of the aims of Indian education, the same as our work in special education, is to train the socially unfit to be like us. We attempt to reform, to revolutionize, and to modify the lives and conduct of others according to our mode

I have always felt that the philosophy of the cannibal in disposing of the missionary is commendable. He wastes no time in argument. He summarily, expeditiously, and neatly disposes of the whole situation by eating the missionary. He and his do not wish to learn the ways of the missionary. Why take time in undoing that which his tradition and religious feeling forbid? It is the most economic adjustment to be made. There are not enough missionaries to offset the traditions of the tribe and to revolutionize it; and one individual cannot revolutionize the community, therefore the individual is sacrificed. In some such way the Indian formerly dealt with his officious white brothers who spoiled the evenness and serenity of his existence.

Today, from the Indian's point of view, there is a struggle for existence, not merely as a man, but as an Indian. The Indian has his religious feelings and moral code, some of which have come to him thru the ages; and he is so impregnated with traditions of his tribal religions that it is not moral for us to disturb or to try to convert his customs, many of which are a part of his religious code.

After the young Indian child is sent to school by the government, he is made to live a double life; his education develops in him a double personality. He has his life at school and his life with his parents. The Indian child is trained out of much that is "uncivilized;" but in so doing we widen the gap between the parent and child, so that, when eventually the child goes back to his Indian life and parents, either he becomes wholly dissatisfied with his family, and so can be no great benefit to this Indian community, or he necessarily degenerates somewhat—a condition of affairs which is characteristic of our white college men and women who came from rural communities or limited environment. Children are educated away from their homes; the family spirit, the family life, so essential to the commonwealth, is destroyed. The success of a family lies in its being as nearly a perfect community as possible. Destroy the family life, and disintegration of the community is inevitable. The obvious need of the Indian, like that of the white man, is to be taught how to preserve and maintain the ideal family life.

In the education of the Indian he must be trained to see the necessity of his contributing his share to the commonwealth. To do this, he must first be trained to be an integral part of the commonwealth unit. In order to accomplish this, the educators of the Indian must help him thru his period of transition while he is developing different standards of living, by working with the family. To help solve his social and moral problem, the settlement- and neighborhood-house plan of developing the Indian community offers peculiar advantages both to the student of ethnology and to the student of sociology. Such a plan, developed under the auspices of universities and colleges as research work, is one way of contributing to the general knowledge of the Indian so that he may not be handled as an alien.

Another plan to assist students who wish to take up Indian education as a vocation is to use the present Indian reservation schools as pedagogical and

ethnological laboratories, or as auxiliary laboratories and practice schools. With such a plan in operation, the Indian schools would then become a part of the state public instruction system, and under the supervision and control of the state superintendents of public instruction.

Another idea concerning the advancement of Indian education is to permit the teachers of Indians to have every third year for rest and study, with salary.

In our department of special education we are endeavoring to bring to pass higher ideals. From your department we have learned much. Co-operation in all fields of work is the method of advancement.

MISS ESTELLE REEL, SUPERINTENDENT OF INDIAN SCHOOLS, WASHINGTON, D. C.

I wish to invite your thoughtful attention to some of the policies which have been outlined by the new Commissioner of Indian Affairs, Hon. Francis E. Leupp, of whom one prominent newspaper says: "No commissioner has ever come to the Indian Office so well equipped;" and another says: "The new Commissioner of Indian Affairs, Francis E. Leupp, has been long regarded, by all who take interest in the subject, as the highest authority on all matters relating to the present-day descendants of aboriginal Americans." For twenty years Mr. Leupp's vacations from arduous journalistic work have been given to the study of Indian affairs. Most of his summers have been spent in visiting the Indian reservations, and their welfare has seldom been out of his thoughts in the whole period. Since he assumed official responsibility for the Indians last January, he has been rapidly putting into effect the reforms his great experience and fine judgment showed to be immediately necessary for their betterment. We want to thank the president for persuading Mr. Leupp to accept the direction of the Bureau of Indian Affairs, and should congratulate ourselves that we have a commissioner who understands and feels strongly on the subject of Indian education, and is anxious to have the best and most practical methods used in the schools, from the kindergarten up, in training the Indian children to lead useful and industrious lives.

He wishes the schools to preserve and develop along the right lines the best of the children's inherited traits and attributes, and not attempt to make the Indian over and transform him into a white man, with the idea that this is necessary in order to bring him into harmony with the established order. He wishes us to preserve their natural filial affection, and to guide and direct it wisely and tactfully to the development of proper ambition and a strong sense of individual responsibility.

The seeds of self-reliance and self-respect must be judiciously sown, and the children must be taught that the attaining of an independent position in life, sustained by the ability to make themselves self-supporting, must be the goal toward which all their efforts in school shall attend. We all realize that the first and most important step in the training of the young Indian is

to teach him to speak English. This is the corner-stone in his education. But in teaching him English—which he must learn—the commissioner urges us to see that no child shall be forced to drop or forget the language of his ancestors. The child's natural love for his mother-tongue must be respected, even while making him recognize the absolute necessity of learning to speak, read, and write English as the essential basis of his school training. The commissioner, from his twenty years' experience, knows that it is not well to hedge the Indian about with too many or unnecessary restrictions. He believes that such reasonable regulations as to their hair-cutting and clothing as may be necessary to preserve proper uniformity in the schools are well enough; but when a boy leaves, he must not be punished because he exercises his own taste as to the costume he shall wear thereafter; for, as the commissioner so wisely puts it, look at the illustration of the tadpole, whose tail we do not chop off; nature arranges that, so that the tail drops off of itself when the legs are strong enough to enable the frog to hop, and it leaves the water to live in the air for the most part. So the Indian will voluntarily drop his racial oddities as he becomes more thoroly imbued with our civilization and breathes our atmosphere as a habit.

This illustration is strikingly applicable to the condition of the Indian in his undeveloped state, and the necessity of using natural and logical methods in bringing him to the highest fruition of his power. The commissioner states as follows:

I wish all that is artistic and original in an Indian child *brought out*—not smothered. Instead of sweeping aside the child's desire to draw the designs familiar to it in Indian art, and giving it American flags and shields and stars to copy, the child should be encouraged to do original, or perhaps I should say aboriginal, work if it shows any impulse thereto.

In outlining directions for us to follow he says:

I am now arranging to bring into the schools a novel element in music—namely, the preservation of the *Indian* music itself, for the bands and for singing. We are in danger of losing themes and motifs of great artistic value, because of a stupid notion that everything Indian is a degradation and must be crushed out. We might as well crush out the finest art of ancient Greece and Rome because it was associated with the worship of the Olympian deities, or the Egyptian music which Verdi helped revive because it was associated with the Pharaoh who played tricks on Moses.

Let me assure all the Indian teachers and workers that the commissioner, whose whole heart is in the work of educating and developing the Indian—not against it, but along the lines of his natural impulses—desires us to preserve and bring out all that is best in him, and guide and direct his hereditary instincts of personal pride and racial patriotism, utilizing these in inculcating self-reliance and self-respect, which will best second our efforts to mold him into a useful, self-supporting member of our body politic. We must all co-operate heartily and without reserve, remembering always that we are working for a common purpose, and that we can best accomplish good results by carrying out faithfully and intelligently the policies deemed most practical by the head of the Indian service.

In order to assist the employees along these lines, the Carlisle School has recently printed, for distribution among the Indian schools, a pamphlet containing extracts from the *New York Sun*, *Tribune*, and the *Outlook*, embracing some of the commissioner's views on Indian matters, and partly outlining the policies he intends to enforce, and which have already been partially put into effect. It is desirable that these articles should be read and studied with care by all the Indian teachers.

MUSIC OF THE AMERICAN INDIAN

MISS NATALIE CURTIS, NEW YORK CITY

We all know how difficult it is to instruct those whom we do not understand. All that we have heard at these meetings brings us to the conclusion that it is of inestimable importance for the Indian educator to know the Indian. It is of value for all who are interested in teaching or studying the Indian to have a knowledge of their aboriginal brothers. One great avenue to a better understanding of the Indian is a comprehension of their songs, for songs are to the Indian all that books are to us.

Songs and ceremonies are the unwritten literature of the race, and as in mediæval times the deeds of heroes and the chronicles of peace and war were sung by the bards and minstrels, so today in the festivals of the Indians are the great events of the tribe told in song. Besides its important part as the expression of the intellectual, moral, and spiritual life of the Indian, song often accompanies even the most menial acts of daily toil. Such songs are special songs to fit the task; as, for instance, the songs of the Pueblo Indian women while grinding their corn.

I paused one day at the door of a Pueblo house where a woman was singing a flutelike melody to the rhythm of her grinding. "Tell me," I asked, "what are you singing about?" The woman paused in her work. "Oh," she answered with a smile, "I am singing of the Rainbow Garth who paints the heavens; of the rain that we long for; of our growing corn." Such songs are gems of poetic and melodic beauty that would be valuable indeed in our own American literature and culture. European musicians, on hearing the Indian songs, exclaimed: "And you Americans—you are allowing all this to perish! You are stamping out music unlike any other in all the world—why?" Why indeed, for this music belongs to our own land. Happily the prejudice against the Indian songs, as against all things Indian, is waning. Yet, if we are to retain the peculiar talents of this people, schools must foster in the little ones the gifts inherited. This song of the Rainbow Garth floated out from the Pueblo village dwelling, but beyond from the government school rose the sound of "Marching through Georgia" in shrill chorus. This battle-song of ours has its rightful place in our history and in the memory of

our Civil War; but to the sons of the Painted Desert in far-distant Arizona are our war-songs as appropriate as their own call for rain?

All Pueblo girls can sing corn-grinding songs in chorus. At Hampton the students were encouraged in their own songs. I heard them singing together as they bent to and fro over their washtubs.

It is true, as was said this morning, that the Indian must eat bread in the sweat of his face. So did our fathers. But there is nothing sentimental in affirming that the love of beauty can go hand in hand with toil, and that true art transfigures labor, giving it the dignity of the individual's chosen tasks performed with joy; and without such joy labor sinks into the lethargy of the plodding ox; or worse, is performed as by a machine instead of a living being. Everyone who has been in the South knows that the negroes work with ten times more zest when they sing at their task. Everyone who has been in the West knows that the deserts of Arizona wake into melody when a group of Indians set out to their fields. The Indian will not work less but more for encouragement of the natural song impulse within him. And such encouragement will help to make him what we want him to be—that for which our young republic stands—the workman with ideals.

ETHNOLOGICAL STUDY OF OUR INDIANS IN THE SOUTHWEST

MISS MABELLE BIGGART, NEW YORK CITY

The Navajo and Hopi tribes are probably descendants of the ancient Aztecs. The Navajo reservation extends over two hundred miles one way and one hundred and fifty another. They as a people are in need of schools—day schools. Reservation schools, as the boarding-schools far away, should come later in life. The little children should be educated first on the reservation. It is the work of the National Indian Association to start missions and turn them into different denominations. It is the work of the government to start schools, and with our commissioner, Hon. Francis E. Leupp, who is interested in this work of day schools, a great alliance and reform is promised. If we can unite for day schools, industrial work and evangelization, we may add some 25,000 Indian people of noble qualities to our American citizenship. I went on the desert last summer from hogan to hogan with interpreters. I was greatly interested in their customs.

The Hopi homes are emancipated; that is, they build their own houses of stone, sand, and water, and own them. The wife also has the right to discipline her husband. If, for instance, he has been away and has not given a good account of himself, she will put his saddle and belongings outside of her door, and he will not dare to enter. But, unlike some of our people, they

never separate. He will go to her friends and his, and they intercede with the wife, and a reunion takes place.

The Navajo children obey from love, and the Navajos have many delightful characteristics.

TEACHING INDIAN PUPILS TO SPEAK ENGLISH

REUBEN PERRY, SUPERINTENDENT, NAVAJO INDIAN SCHOOL, FORT
DEFIANCE, ARIZONA

The importance of giving Indian pupils a good command of English is the foundation upon which all further training is based. Enough English to enable the child to conduct the affairs of ordinary business life, and to give him some responsibility and independence when placed in the world to shift for himself, is absolutely essential to success. The natural method of giving a child English lies in a presentation of objects and the English names to represent them. This should be done in a manner to command his interest and attention. The material for such lesson should, as much as possible, be new, and the objects should not be left in sight of the child until he has lost interest in them before the lesson begins. Just as he becomes acquainted with the object, he should become acquainted with the English words that represent and describe it; and while he is making his observations and gaining his ideas, he should be led into the oral expression of these ideas. The names of the objects and the simple sentences given by the child should be repeatedly written on the board, until a correct mental picture of the written word or sentence is formed.

Beginning first with the names of things, as "ball," we proceed to short sentences, as, "Roll the ball," "Throw the ball," "Catch the ball," "The ball is round;" illustrating in each case by having the children perform the actions enumerated. When the idea is thoroly grasped, we repeat the words in concert and singly, giving particular attention to clear, distinct enunciation. The rule should be in this work, as well as in all other classroom work with Indian beginners, short lessons and repeat, review, repeat, and review.

The articles used in the industrial departments, farm, garden, etc., furnish excellent materials for the lessons in English. Children should be required to give the names of things in the dining-room, kitchen, etc., such as "table," "chair," "knife," "fork," "spoon," and "plate." As pupils give the names, the teacher writes them on the board, where they are allowed to remain in the sight of the class until the next day's lesson. Then the pupils are encouraged to make simple sentences containing these words, as: "We eat in the dining-room," "We sit at the table," "I sit on a chair," "I eat with a fork," etc. These sentences also may be written by the teacher, and used afterwards by the class as a reading-lesson; also for a copying exercise. I have

found it a great help to make kitchen, dining-room, sewing-room, laundry, farm, and shop charts, as suggested by Superintendent Reel.

The evening hour has been devoted entirely to the acquisition and use of English. For this purpose each teacher's pupils were divided in two schools, making six classes instead of three, and, the children of the kindergarten retiring before the evening hour, the assistant superintendent, disciplinarian, and kindergartner took charge of the additional rooms. During the evening hour conversational work was indulged in, and some familiar subject connected with the child's home life or school life was selected for the exercise. The subject was generally illustrated by the object itself or by a picture. Each child is encouraged to contribute his quota to the general fund of conversation. One child was encouraged to ask questions for the other children to answer. By dividing the schools and having smaller classes, more teachers, and allowing only thirty minutes for the evening hour, the children have rapidly acquired the use of English, and the evening hour has been a very valuable and pleasing part of our schoolroom work.

INDIAN CHARACTERISTICS

MISS MARY C. JUDD, MINNEAPOLIS, MINN.

The general belief expressed by the average American traveler in his own land is that the Indians as a race have no sense of humor, and rarely laugh even when with their intimate friends. But those whose lives have brought them into close touch with the Indian race know that the keen intelligence which can read nature's guide-posts thru trackless forests or over almost limitless plains, which recognizes the work of Manitou or the Sun-Father in the tempest, the torrent, or the flower on land or lake—they know also that the Indian laughs when the time and place permit him to cast aside his mask of stolidity.

American humor depends much upon exaggeration, and so do stories around the wigwam fires. Not very long ago a party of white men were encamped near an Indian village in the North. Mosquitoes made life a misery, and one of the fishermen from the camp asked an Indian woman going by if she had ever seen the pests of such size and strength in any other place. "These big!" she answered. "These are small. Mosquitoes by our tepee so long, they must sit down to bite us, and they so tall when they touch the ground their bills stick in our faces. You think little trouble is big. You folks from town easy 'fraid." This turned the laugh on the fisherman and checked his further complaints.

The woman's wit was much like the tribe stories of Iagoo, the Mark Twain of Indian lore, whose account of killing a mosquito with a war-club and using his wings for boat-sails is equal to any in our literature.

A teacher on a Minnesota reservation thought she would amuse her pupils on a certain rainy day by playing circus in an original manner. Each child was allowed to choose the animal he desired to see, and he was assured that it was hidden in a small room across the hallway. One boy, Jack Spratt by name, wanted to gaze on a monkey. When his teacher opened the door and led him to a mirror, his shout of laughter showed that a full-blood Indian boy could see a joke as well as anyone. He begged to be made doorkeeper for the game, and no children had more sport than those whose vivid imaginations had been trained in the forest.

Blankness of countenance, apparent inability to see or to hear, is, as all know, a part of their home teachings. They learn early that there is a time to laugh and a time to refrain from the quiver of a smile; that gravity increases the dignity of a statesmen, a warrior, or a stranger on a new trail; and that to conceal one's feelings is to show strength of will and purpose. But it is not true that Indian life is devoid of laughter, jollity, and fun.

New England people still relate the old story of colonial days when a certain chief with certain companions entered the house of a settler whose wife had just placed upon a chair her pan of dough covered with a white cloth. One of the unasked visitors made haste toward the great cushion, ignorant of its contents. He sat down on the dough with such good effect that the hearty guffaw of his chief was the first warning that the good wife had of her ruined bread. Her vigorous scoldings of the one who made the blunder added to the laugh, and the chief left the house in order to regain his composure. Whenever thereafter he made a call at the same house, his smiles showed the remembrance of the accident.

You must have often listened to graphic accounts of monstrous muskellunges lost to greedy fishermen who failed to bring them to shore, but the story is still told in tepee and wigwam of the fish so huge that it swallowed both the fisherman and his canoe, and was captured only because there was room inside of him to shoot an arrow from the bow that had been a portion of his dinner. The hero may be named Menabozho instead of Hiawatha, but names matter little sometimes.

Of Iagoo, the old-time story-teller, it is said that he declared that he had seen an ant so large that it could drag a great rabbit to his hole in the ant-hill. The eyes of the ant were like coals of fire, and its horns as sharp and fierce as those of a buffalo. Surely, later American jokers have not been able to enlarge upon details in any better fashion.

These tales must recall to the minds of many in this audience still better stories told by their Indian associates in school, camp, or agency, and which are full of wit and rich humor. Conway, the artist, who went to western camps and villages before the era of railroads, and has made his name famous because of his portraits and other well-painted pictures of the now historic faces and places that have vanished with the buffalo, had the good fortune to hear, and the pen to preserve, several peculiarly beautiful legends of the

Dakotas. To Conway we owe the rescuing from oblivion of the charming legend of "How the Water-lily Came," and some poet should sing its story in his verse. This is the myth, briefly told:

A young brave dreamed of a star that fell half-way from the sky and then stopped, seeking for some place on earth to rest where she might find comfort and companionship. She saw the white rose on the hilltops, and hid herself in one of the blossoms; but she grew lonely on the hills. She left the mountain rose and went to the yellow flowers of the prairie. The tramping herds of buffalo frightened her, and she trembled with such fear that she rose again into the air. A soft breeze floated the star maiden over a lake. There she saw her own shadow and that of her sky-sisters, and she rested on a lily leaf. The next morning the lake was covered with the first white water-lilies ever seen by man.

Some of the Arizona Pueblo people believe that the great boulders scattered over various parts of our country were at one time huge animals who were prevented from devouring the few inhabitants of the earth by being turned to stone while they sought their prey. Other rocks were once tepees, or broken fragments of mountain sides hurled by giants who were hunting fleeing tribes, but who by the magic of medicine-men became senseless stones themselves.

I feel assured that it would serve to lighten the tasks of the teacher of Indian children, as it has some in the schools of New York city and elsewhere, if she could write down in her daily journal a few of the funny sayings and sharp quips of her own pupils. I have not been able during the past twelve months to secure any fresh stories showing this native love of humor and of beauty, but there must be a fund of them awaiting the pen of him or her who is willing to take the time and make the effort to preserve them for the public. Is there not another Schoolcraft or Longfellow who is able to let the world discover again that hearts are the same everywhere, and the soul loves beauty whether the body is hidden by palace walls, or the thin covering of a tepee, wickiup, or wigwam?

THE WORK OF THE BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE, IN ITS RELATION TO AGRICULTURAL INSTRUCTION IN INDIAN SCHOOLS

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The Department of Agriculture is a great university, having in its service some of the noted scientists of the age—men who are serving their country quietly, unobtrusively, constantly, repeatedly refusing more remunerative positions.

The story of its duty is, by the experience of its scientists, to help any locality to an early solution of a problem with which it is struggling, or to

render aid when an undertaking is beyond the means at the disposal of the people interested. To accomplish these ends, many specialists must be trained, so that it has become a postgraduate institution where groups of sciences are taught and applied. Since 1897, 496 students have been admitted to the department, 40 per cent. of whom have gone elsewhere to teach, experiment, or demonstrate in private enterprise what they have learned there. It is a great university for you. You do not have to matriculate. You may receive its benefits for any period of time. It furnishes you special information at any time, by correspondence or otherwise, in lines of work in which you are interested.

You are interested in the teaching of the Indian. The Indian question of the future is an agricultural one. The problem will be how to teach him better methods of agriculture, of stock-raising, and of the utilizing of the natural advantages which he possesses. You who are charged with the betterment of the Indian by teaching in Indian schools should get thoroly in touch with the entire work of the Department of Agriculture, in order to utilize the results of its investigations. More especially should you come in contact with the Bureau of Plant Industry. Its fields of investigation cover the entire question of crop-growing and crop production; studies of diseases of crops and the remedy for the same; the improvement of crops by breeding new plants; the securing of seeds and plants from foreign countries for the purpose of adapting them to special conditions existing here; and the movement of crops from one section of this country to another for the purpose of better adaptation and improvement.

In his last report to the Secretary of Agriculture, the chief of the bureau, Dr. B. T. Galloway, says:

The great interest now being manifested in nature study has prompted the bureau to encourage the movement by such means as might legitimately be within its power. It seems proper that the department as a whole should recognize the work, as its underlying principle is the encouragement of rural life and rural pursuits. There can be no question that this new movement, in addition to its other advantages, will greatly aid agriculture by implanting in the plastic mind of the child a love for agricultural pursuits

In the introduction to a bulletin on school gardens, now in press, he says:

Agriculture in its broadest sense is the primary basis of wealth in this country, and it seems essential that efforts should be made in our educational system to bring early to the mind of the child the facts which will be of value in emphasizing the importance and necessity of agricultural work. There is no better way to do this than thru a well-managed and well-conducted system of school-garden training. The Bureau of Plant Industry has been much interested in this movement through the contact of its workers with educators. Efforts have been made to arouse interest in school gardens through bulletins and distribution of seeds.

More and more evident it is becoming, in all lines of its work, that publications are not sufficient to arouse that interest in agricultural advancement which the necessities of the times demand. An active demonstration of the superiority of certain crops and certain methods over others is always a striking

object-lesson, and never fails to attract attention. An active demonstration of a school garden planned to correlate the outdoor work with that of the schoolroom is in active and successful operation on the grounds of the department at Washington. Realizing that the progress of this work must necessarily be slow, from the fact that public-school teachers have no practical training in agriculture and horticulture, the bureau is urging the establishment of elementary courses in these lines in all normal schools. The co-operation of the Normal School at Washington has been gained, and thru them it is demonstrating its ideas. These experiments form the subject of this paper. No set rule can be made for the management of a school garden. It rests with you to find what is valuable for your own school, and adapt that to it.

Two years ago Normal School, No. 1 in Washington, was assigned a small greenhouse, and last year one was assigned to Normal School No. 2—the colored normal school. From October to May the students of both schools, under the direction of the instructors of botany of the schools, by means of simple experiments, receive lessons in the preparation and fertilizing of soil; in the conservation of soil moisture; in the methods of plant propagation by cuttings, budding, and grafting; in the methods of seed-planting; in the requirements of common plants in regard to food, moisture, and light; in window-box gardening; in tree culture; in planning school gardens. Two hours a week are given to the work, one hour in the class-room and one in practice of plant propagation. Necessarily for practice much material is raised, but with a little planning this can be selected so that it is suitable for school-ground decoration; so the two schools have become the supply department for the city schools. The practice exercises of the boys in the carpenter shops—dovetail joints, T-joints, beveled-edged blocks, etc.—are of no use but for practice, and are usually consigned to the furnace. The practice exercises in gardening grow, adding beauty and pleasure to our school buildings or schoolrooms.

Greenhouse work is not sufficient. The student must have actual practice in making a garden and in handling classes in outdoor work. The place for a student in the city to obtain his practice in making a garden is at his own home. He has there a chance to exercise judgment which is frequently lost in class work. He can there follow the garden to its full fruit. There he can become familiar with the human virtues necessary to produce success in a garden or in life. He can take to the home a practical piece of work. As the home garden is legitimate school work, it must be inspected by the teacher in charge. Since the establishment of this course in home gardening, 175 pupils of Normal School No. 1 have taken it, their gardens have been inspected, and suggestions given when necessary. Statistics taken before the work begins show that two-thirds of the students, ranging from eighteen to twenty years of age, have never put a seed into the ground, and few have any knowledge of the preparation of the ground. One, with a small trowel, endeavored to dig all of her garden three feet deep. These facts

alone prove that the teacher must have training before the children can be reached.

Some of the students cultivate the entire yard, some but a small portion. In case of asphalted yards, or lack of space thru living in apartments, the efforts are confined to window-boxes. The work has become so popular that it is seldom that the entire yard is not cared for by the student. In no other way could such genuine interest have been aroused among these people. Usually all of the family co-operates, particularly the children, and there are homes where every member of the family—father, mother, and child—has a portion of his own. Sometimes a whole neighborhood has caught the gardening fever from the normal student.

This work is far-reaching. It stretches beyond the immediate home. It stretches beyond the neighborhood. The student gardeners gather so much pleasure from their own gardens that they are generous enough to want the children with whom they come in contact to have the same. They have understanding of the subject—at least enough to start the children on their way. They have enthusiasm sufficient to enter into childish accounts of success or failure; and it is not unusual for them to visit the gardens, thus making the tie stronger between home and school. It produces individuality, originality, and generosity. It calls for patience, industry, persistency, attention to instruction, and power to surmount obstacles, all of which are required of a good teacher.

I have stated that an active demonstration of school-garden work is in progress now on the grounds of the Department of Agriculture. This is also under the direct care of the normal school.

Beginning in March, the boys report at the normal school greenhouse once a week, while the girls are at the cutting and¹fitting school. To make this a practice department for the normal, the students are in charge of the work, tho they are carefully supervised. By simple experiments that can be performed in any schoolroom, the boys are taken along elementary lines in the study of common soils and their water-retentive power; the value of cultivation; the use of fertilizers and methods of seed-planting. About the middle of April the ground in our vicinity is ready to work. Then the outdoor work begins. The department plows and fertilizes the land. The normal school plans the garden. The boys do the rest. By means of tape-line, a string, and pegs, the entire garden is laid off. This is of most practical value in their training. The cultivation of the habit of accuracy is one of the strong claims for gardening as an educational factor.

Each of sixteen boys was given a plot 11 by 20 feet. He was required to leave a path 2 feet wide on the long side; so the plots for planting are 9 by 20 feet. He was also given a Dutch or scuffle-hoe and a rake. These tools are numbered, so that he is responsible for them. The rake handle is marked by paint in six-inch spaces to aid in planting. He thoroly spaded and raked his plot, and tho the land had been plowed, wheelbarrow loads of brick and trash have been removed from the plots.

To produce a pleasing effect, the sides of the plots bordering the main walls are edged with flowers; the remainder is planted with vegetables. Such vegetables are selected as will mature quickly, as children are impatient for results, and such as require the minimum of attention; for, being a part of school work, the gardens can be cultivated but once a week. The average city child has little knowledge of seed-planting. Usually he does not follow the instructions given in the first seed-planting lesson, for he does not seem to realize that where a seed falls there it will grow. It is only necessary for the first row of radishes to appear above the ground to teach him this lesson. Every boy's row is the subject of much criticism—favorable or adverse—from his neighbor.

The planting is always done by garden line; for much training is needed by the oldest of us in following a straight line. The boy who has not kept strictly to it finds himself so busy making excuses that the next planting is most carefully done. A seed is a gentle teacher of accuracy. Cultivation is the secret of success. Following the advice of Professor L. H. Bailey, of Cornell, the watering-pot is discarded and the rake used in its place. With his hoe and rake the gardens are so well cultivated that last year from May to October no water was put upon them. By simple experiments they are taught the value of conserving water by cultivation. Financially the results are satisfactory. Last year current market prices were placed on the produce as gathered. An acre would have produced \$900 for the season. This year the outlook is better. From April 15 until school closed on June 21—nine weeks—they have gathered two and one-half bushels of beans, 500 bunches of radishes, 600 heads of lettuce, thirty bunches of beets, some peas, nasturtiums, and verbenas. Everything a boy raised is his own. I know of no happier day in the year than when he takes home his first radishes. They do not care to sell what they raise; they seem happy only in taking it home. The educational side appeals more strongly, however, than the financial. A city boy has little opportunity to become familiar with the growth of the common products of the United States; yet his geography requires him to recite at length upon them. To make the sixth-grade geography of vital interest, plots of our common grains—corn, wheat, rye, oats, barley, fiber plants, flax, and cotton—and the commonest products of our locality—tobacco and peanuts—have been planted. A fund of general information is obtained about the plants as they grow that could not be obtained by any other means. A storm beats the rye and oats to the ground. The boys discover for themselves the extra growth that takes place at the joints when they lift. The lengthening of the flower stem in the peanut has been of great interest. These plots have furnished much valuable material for talks on the manufacturing processes. Their value is limited only by the ability of the teacher. This should be suggestive to you as teachers. Life should be the keynote in geography as well as in botany and zoölogy.

The whole garden has given material for practical arithmetic. Under

the direction of their regular grade teacher, as part of their schoolroom work they have calculated the part of an acre they are cultivating; what part of the whole garden each boy has; the cost of fertilizing; the amount of fertilizer needed to cover the entire area an inch deep; the cost of the fence; the cost of each boy's plot; and the cost to the department of the entire experiment. After a heavy storm, the rainfall to the square inch was got from the daily paper, and a calculation was made of the amount that fell on each boy's plot, and how many times he would have carried the three-gallon watering-pot to put the same amount on. The garden has been correlated with the English work in composition and letter-writing.

In many cases the boys have made similar garden plots in the back yards of their homes, again bringing the school and the home into closer relation.

The question of summer care of a garden in connection with a school has been a troublesome one. We have had little trouble in that regard. It resolves itself into a volunteer vacation movement. All the boys who stay in the city or who do not go to work retain their plots, coming twice a week thruout the summer for work. The 95 per cent. attendance during last July shows it is popular, particularly when a baseball field and bathing-beach in the vicinity are so attractive. Three plots were given up at the close of school, for the reasons given. There were fifty applications for these. Without doubt, the experiment had proved of great educational value.

The recent widespread movement for civic improvement has awakened the teachers to the fact that the surroundings of school buildings should be the neighborhood ideal, that from which the neighborhood homes should receive their inspiration, and not the forlorn spots that they so frequently are. It has taken us in Washington one hundred years to learn this. The year 1905 is our centennial year, and it will also mark the introduction of school gardening for civic improvement; for at present that is the main thought of the authorities. For this work the Bureau of Plant Industry is responsible, but it could not have accomplished the marvelous results that have been gained without the hearty co-operation of our progressive superintendent of schools, Mr. A. T. Stuart. The bureau has taught us to recognize opportunities. The superintendent has given us every encouragement to use them. Again, to start the work it was necessary to present an object-lesson to the teachers of what could be done by children, with no available means on hand except belief in one's work. The building in which the normal school is located—the Franklin—was selected. It is also the administration building. It is in one of the best resident portions of the city, opposite a beautiful park, with everything about it charming but its own surroundings. Years ago there had been a lawn, but, as no attention had been paid to it, not a vestige remained. We begged two loads of manure from the school authorities. We offered a half-day holiday to every boy of the building who would bring a tool with which to work. The response was more than one teacher could desire. In one afternoon all of our ground was spaded, raked, seeded, rolled

with a roller that the boys pulled two miles to use. The normal students in their course of instruction are taught to plan school gardens. They were asked to submit plans for the improvement of our grounds, following these simple rules: (a) Keep a free central lawn. (b) Mass the shrubbery against the building, placing the tall permanent plants at the rear, reserving space for seed- and bulb-planting by the children in front. (c) Avoid straight lines if possible. The best plan was adopted, and has been closely adhered to. Sections of the garden were appointed to the grades of the building. The primary grades received first attention. A consultation on the part of the teachers made the color scheme harmonious. To impress the lesson that what is worth beginning is worth pushing, and still further to promote civic pride, it has been necessary to carry this work thru the summer. Each school appointed four volunteer vacation committees. Each committee served one hour a week for three consecutive weeks, mowing the lawn, weeding and cultivating the soil. One hundred children volunteered to serve on these committees this summer. Of course, there is a supervision of the work. During the first season we were troubled by vandals. The flowers were stolen, and the plants were torn up and thrown upon the lawn. At the beginning of the second season we gave talks to the children on "ownership," emphasizing "our garden." Little ones have scarcely anything to which "my" or "mine" may be attached, so we encouraged this idea, particularly related to the garden; the hard work necessary to accomplish it; its beauty and its harmony with the park opposite; the protection of rights of others. There has been no vandalism at the Franklin School for two years.

That our object-lesson was sufficient is shown by the fact that last year thirty-two buildings followed our example, and this year 120 of the 124 buildings in the city—every school in the city practically joining the movement. We have the full co-operation of the board of education, the parents, the public, the press. It is superfluous to mention the children. Their interest is unlimited. They stand ready, waiting to be guided. Recently one of our daily papers published a series of short letters from the principals of schools which had done particularly good work, stating how this work had been accomplished. One building whose front grounds are very pretty received no notice, for the reason that the children had not done the work, but it had been done by a wealthy resident. This was too much for the children: they insisted upon being allowed to cultivate something. The principal, with many misgivings, allowed each grade a small portion of the rear yard. An apartment house was being erected on an adjoining lot. Hoping to receive some assistance, but fearing refusal, she approached the contractor to borrow a wheelbarrow. Imagine her surprise when she saw a second-grade boy ahead of her step up to the contractor and say: "Mister, I want to borrow eight wheelbarrows." "What can you do with eight?" he asked. "The big boys want them to haul away the stones from the garden." The eight barrows were loaned, and shortly after eight picks, with occasional assistance from the workmen in the heaviest digging.

A garden with decoration as its purpose would not seem to give much opportunity for schoolroom work, but it does. We have added another room to the Franklin building, equipped with living things—plants, birds, insects, instead of blackboards, chalk, desks, and chairs. Here we take our children for work, the observation lessons promoting a freedom of speech that is difficult to obtain indoors, and furnishing abundant material for written English exercises. The little ones have measured the lawns which the older ones made, marked it off into sections, and studied, pulled, and counted the weeds in a section. The older ones have calculated the square feet in the lawn, and allowing so many feet to a dandelion. They have found how many dandelion plants it is necessary to grow to fruit before the lawn will be in their possession. Every child put a bulb into the ground last fall. The older children solved practical problems in regard to them. The younger children cut the tools used in paper. The first-grade children, in addition to planting gardens out of doors, planted tulip and hyacinth bulbs in moss and manure in glass dishes. These were buried until January, when they were brought in to add life to the winter schoolroom. Mohammed said that if he had but two loaves of bread, he would sell one and buy a hyacinth for his soul.

Our influence has been strong in the homes. Following the example of Cleveland, Ohio, a local seedman arranged to sell penny packages of seed to the children for home planting. They bought 120,000 packages. Simple instructions were issued to them thru the teachers' leaflets on the planting and care of them.

What has been accomplished by the teachers of Washington can be done by any teachers. We have no money for the purpose, and we are not allowed to raise it among the children. True, we have the Bureau of Plant Industry, but I quote from an editorial in a local paper:

It is evident that Washington is on the upgrade in its external experience, but more important has been the demonstration that this work is from a genuine love of the soil and its products, and that work is the result of the diligent, self-sacrificing work of the public-school teachers, the fruits of whose labors are far more substantial than the season's output of flowers. For, in consequence of this propaganda, there are now at work in the district thousands of young gardeners who will never lose their fondness for the soil, and will be better citizens in later years for their instruction in gardening. The general verdict from these hard-working, enthusiastic men and women is that the work has been a pleasure and a help to them as teachers, and an inspiration to their charges.

Thruout the country the movement is widespread. It has passed the experimental stage in many places. Courses of study are being adjusted, so that studies formerly theoretical may now be practical in the garden. The best instance of correlation with school work that I know of is at Hyannis Normal School in Massachusetts. Much practical arithmetic is derived from the work. The produce is sold, the money being deposited in the bank. All expenses are paid by check, the boys learning banking methods first hand. Business letters are written to seed firms for catalogs and for seeds. Drawing,

manual training, history, geography, spelling, and reading are connected with the garden wherever possible.

At Hartford, Conn., thru the generosity of Rev. Francis Goodwin, and under the direction of Mr. Hemenway, the ideal school-garden plan may be studied at the school of horticulture. This school offers to the children and to the teachers of the public schools a course at a nominal rate in theoretical and practical work. At Hartford also is the largest movement for kindergartners.

The Boston State Normal gives a course in elementary horticulture and agriculture. It is, however, an optional course. On a lot adjoining the school forty boys are given instruction by the students. The school yards of Boston are being used wherever it is possible. During the summer they are incorporated with the vacation schools. Last year five normal graduates were employed at \$50 per month to conduct the work. It is hoped, by those interested in this movement in Boston, that the effort will result in thinning out the crowded portions of the city by directing attention to the country.

The strongest effort for the promotion of the work in rural schools has been made by Cornell University thru its nature-study bureau. It has reached thousands by its leaflets. The children in the cities of New York state have been active. One of the most remarkable efforts is in Rochester, in connection with Grammar School No. 26. Colonel S. M. Moulthrop, the principal, guided the children in creating public sentiment, until the street upon which the school stands was graded and paved. The strip between the sidewalk and the curb, which is reserved for tree-planting and grass in so many places, was entirely neglected by the city authorities. Permission was obtained for the children to do this work. Sod was brought by them from a pasture in the vicinity to edge the curb, and the remainder of the strip was planted in flowers. These curbstone gardens furnished twelve clothes-baskets filled with flowers for the flower show in the fall.

Mrs. Henry G. Parson's work in New York city has attracted international attention. Thru the most marvelous energy and perseverance, her school farm has become a recognized part of the DeWitt Clinton Park, with an appropriation of \$3,000 a year to carry it on. Three hundred children of the West Side tenement region have individual plots, 3 by 11 feet, receiving everything that they raise.

On Rivington street, Public School No. 4 has conducted a small garden. The school is unique in that every child of the 2,400 attending it is of Jewish parentage. Nature-study statistics taken before the work began showed that two-thirds of the 2,400 had never seen grass nor a plant growing outside of a flower-pot. To one thousand of them a tree was but a name. They had never seen one. For sanitary reasons, the annex connected with the school was condemned and torn down. The principal obtained permission to use the ground for a season as a garden. One school planted radishes; another, grass; another, pansies. The enthusiasm and pleasure brought into these nature-starved lives were immeasurable.

In Yonkers the Woman's Industrial Union conducts a garden for 250

children during vacation. Each boy has 190 square feet—a space large enough to make it worth while to cultivate it.

Philadelphia has followed Mrs. Parson's example by establishing a school farm, but it has the honor of being the first place where a board of education has recognized its educational value and made a specific appropriation for it. Two large tracts of land, one in West Philadelphia and the other in one of its crowded foreign quarters, are cultivated by 250 children each, under the care of the board of education. A supervisor, at \$600 for the summer season, with three assistants, is employed.

Cleveland, Ohio, reaches more homes and more children than any other city at the present time. By the sale of the penny packages of seed, the Home Gardening Association enters the slums thru the settlement houses, and the better homes of Cleveland thru the public schools. A nature-study lecturer, paid jointly by the association and the board of education, gives lectures to the children in the schools on nature-study subjects.

President Patterson of the National Cash Register Co., Dayton, Ohio, conducts a garden for boys of the factory neighborhood as a business investment. The idle, loafing boys of the neighborhood, he claimed, caused his factory property to decrease in value. Having been raised on a farm, he realized the habits of industry, attention to business, and clearness of judgment that farm work produces. He set aside four and one-half acres of land, and employed Frederick Law Olmstead to plan the garden. Fifty-seven boys gathered eight tons of vegetables last season. A gardener is employed to supervise the work.

A summary of the work is not necessary. If it has not been started in your locality, study your needs and be a pioneer. Write to Dr. Galloway for literature and advice, and to your congressman for seed; and remember thru it all that it is the child itself that is to reach the greatest growth in this work. He is the most active factor. A noted educator has said: "A school without a garden is like a stag without water." Another: "Not trees, shrubs, grasses, and herbs alone do we offer the children in a school garden, but the love of nature, labor, and home."

Let me close as the Bureau of Education closed its report on the subject in 1898:

The idea of school gardens is so simple and natural that the coming century will wonder how educational institutions could have existed without them and been true to their purpose.

INDIAN EDUCATION AND METHODS OF INSTRUCTION

MRS. AMELIA S. QUINTON, PRESIDENT, NATIONAL INDIAN ASSOCIATION,
NEW YORK, N. Y.

I am very glad to be with you and to give testimony of what I have observed in the field, of the interest and devotion of the teachers in the government Indian schools, and of the progress in methods and spirit during the past

twenty-five years; also of the earnest endeavor to enlist the interest of pupils, and to find and touch the spring of greatest power in their minds and hearts. I was deeply impressed with the methods employed by one teacher, who in her reading class was instructor, inspirer, and preacher. This was done by reading, in the class, the story of some hero, philanthropist, artist, or other successful worker, to arouse ambition, to incite to patriotism, etc.; and the plan included all needed details of school instruction as well. This method aroused enthusiasm in pupils, awakened patriotism and noble resolves, and appealed to conscience as king of the soul. Indian boys and girls returning to their homes and to sections of small civilization could thus be lifted above discouragement by reading the life, *e. g.*, of Frederick Oberlin and his Ban de la Roche, and would realize that any wilderness could be made to blossom, industriously, socially, and morally. I believe that the reading of well-selected, brief articles in class on the oppressions of Russia and their outcome would foster hatred of tyranny and make champions for freedom and just government. Indian children are very sensitive to moral and religious teaching, and it is important that they be impressed with the truth that consciousness of God is the basic, all-including inspiration for all right living and best human achievement. Other inspirations are limited, temporary, and may fail in time of disaster; but to feel the presence of God, and to know him as he is, and to love him, is to possess the loyalty of love which includes all that is noble, strong, and which secures the motive for highest service and attainment.

THE ADVISABILITY OF CONDUCTING NORMAL SCHOOLS TO TRAIN TEACHERS FOR THE SPECIFIC PURPOSE OF INSTRUCTING INDIAN CHILDREN

JOHN D. BENEDICT, SUPERINTENDENT OF SCHOOLS IN INDIAN TERRITORY

Dr. Richard Edwards, who was one of the pioneers in the normal-school work of the United States, says:

When normal schools were first proposed as an educational agency in the United States, they were objected to in many ways. Persons who were thinking more of money than of the culture of the people objected to them on account of their cost. They affirmed that to establish normal schools for the training of teachers would be simply to throw away so much money; and this objection was a very popular one. It was claimed that people who offered themselves for teachers ought before doing so to be sure of their own fitness, and the public ought not to incur any expense in securing that fitness. But one of the most plausible objections came from the cultured class. The graduates of colleges considered themselves to be well qualified to instruct young people in schools, and they resented the thought that by these special institutions a class of persons whose literary and scientific education might be limited should become the educators of the young. Their logic was very terse: "Do you know Latin? If you do, you can teach it." And the same of any other subject that might be named. According to that view, the teacher's work was simply to impart information, and anyone possessing the required information

was assumed to possess all the skill necessary for instruction. To us in these days those ideas seem very crude. We are surprised that any time in the world's history scholarly persons should ever have adopted so shallow a philosophy. The worth of normal schools in training teachers is now quite thoroughly appreciated. The people have come to understand that the work of the teacher is not merely to convey information. He is to know something of the structure of the human mind. He is to know how moral forces are to be adjusted so as to influence the after-lives of children. According to the requirements of our time, knowledge is to be used by the teacher as a means, and not merely as an end. The methods of the schoolroom should be adjusted to the mental and moral needs of the pupil.

Notwithstanding the strong opposition which for years existed against the state normal idea, it is now a very generally accepted proposition that no state is doing justice to its children that does not support one or more well-equipped normal schools for the training of its young teachers. The proposition to establish one or more normal schools to train teachers for the specific purpose of instructing Indian children is far more plausible, and the arguments in its favor far more numerous and unanswerable, than were ever produced in favor of the state normal school. The young man or woman who has passed thru the eight grades of an ordinary public school, and has completed the course in an average public high school, has thru his daily and hourly contact with teachers acquired some knowledge of educational methods, even without training in a normal school. His or her experience as a pupil has been, in some degree, a preparation for the work of public-school teaching. But when such a person is called to teach in an Indian school, he or she is confronted by new conditions, by new and strange environment.

The Indian pupil has peculiarities of his own. His home life and training, his language, his habits of thought, his surroundings, his interests, his ambitions, his motives to action, his accumulation of ideas, are all new and strange, and often incomprehensible to such a teacher. We receive many applications from such teachers to come to the Indian Territory to teach. They seem to imagine that they are "specially called" (altho not specially trained) by some mysterious providence to teach the Indians. The majority of them would become homesick and disgusted with their surroundings within a month after entering an Indian school, and would resign, leaving no impressions upon the minds of the pupils, save possibly a sense of unrest and dissatisfaction with their surroundings. A young lady, belonging to this class of teachers, who insisted upon trying to teach the Indians, and who had unbounded confidence in her ability to succeed, was sent out to teach in one of our typical Indian day schools. After having stood the ordeal for three weeks, she wrote: "What in the world did you send me to such a place as this for? I can't possibly spend the winter here. The house is cold and poorly furnished. The pupils are dull and stupid. I have to walk a mile to school, and have a miserable boarding-place." A few days later, a letter came from an old Indian of the same neighborhood, saying: "Miss Johnson gone home. She nice lady, but no teach children. Please send good teacher." Miss Johnson's successor

was pleased with the neighborhood and succeeded, not because she possessed more book knowledge, but because she possessed more Indian knowledge, than her predecessor. Numerous similar cases might be cited where teachers fresh from the public schools, having high examination grades and excellent recommendations, have failed as Indian teachers, while others with less knowledge of grammar, but knowing something of the work which they were expected to do, and something of the difficulties which they would have to encounter, have succeeded.

In this connection it is well to remember that education is by no means confined to schoolroom or to schoolbooks. It begins with the cradle, and continues as long as life lasts. Thru the exercise of its five senses, the infant is constantly receiving impressions which sooner or later develop into concepts, and at the age of six, upon entering school, every child is already partially educated. It then becomes the duty of the true teacher to take an inventory of the child's mind. If we are intelligently to direct his mental growth, we must first find out what his mind already contains, what its likes and dislikes are, its inclinations or tendencies, its weaknesses or defects, its surroundings or environment. How widely must an accurate inventory of the mind of the average six-year-old child born in Boston or New York differ from that of the Indian born and reared on the reservation!

If, as Herbert Spencer says, "it is the purpose of education to fit one to live completely," how different should the education of the Indian boy of the plains be from that of the city boy or girl; for any system of education is a failure which neglects to take account of the immediate environment, the home life, and the probable future vocation of the person to be educated.

A city school board would be regarded as foolish and impracticable if it were to employ as its teachers persons who were totally unacquainted with the home life and environment, the habits of thought, the prevailing methods employed in its own particular locality. It may be truly said that it seems no less absurd or ridiculous to send the young city girl or boy to the reservation to teach the Indian child, to whose home life and surroundings he or she is a total stranger, and for which he or she, perhaps, has no love or sympathy.

The greatest need of Indian education today is a corps of teachers trained to understand Indian life and environment, its habits of thought, its possibilities, its prejudices, its peculiarities, and its tendencies; trained in the kind of knowledge which the Indian needs to know; trained to do the things which the Indian should learn to do; and trained in methods of imparting needed knowledge in such a manner as will appeal to the mind of the Indian child. They should also be trained in such a manner as to enable them to excite and promote the Indian child's interest in those things by which he is ever surrounded, and which he should be taught to control and make contribute to his own happiness and prosperity. And, above all, we need a body of teachers possessed of a sympathetic, missionary spirit that will enable them to give advice, assistance, and encouragement, not only to the young Indians, but to

the older ones—the simple-minded full-bloods, who do not understand or appreciate the new life which the abolition of tribal laws and the individual allotment of lands are gradually forcing upon them.

We hear much nowadays of nature study and miniature gardens in connection with public-school work. If such knowledge and training are of worth to the city-bred child, how much more important is a practical knowledge of nature and agriculture to the Indian child, the child of nature! He lives close to nature, and loves her with a spontaneous, sympathetic love. He is in close touch and sympathy with nature. Instead of trying to make a logician of him, we should strive to make him an accurate observer of the laws of nature. Instead of trying to feed and foster his mind upon the dry formulas and abstract ideas of books, we should first bid him open his eyes and ears to the opportunities for bettering his condition which immediately surround him. Instead of his school life and work being entirely foreign to his home and surroundings, there should be a closer bond of intelligent sympathy between them. Instead of educating him away from his home life, the school should train him to a better appreciation of his home advantages, and should inculcate in him a desire to improve, to beautify, to elevate, and to enjoy his home. To carry out this work successfully, it would not be necessary to build and maintain separate normal schools, but normal departments might be established in one or more of the Indian boarding schools, not too far from reservations. Besides furnishing a normal course for teachers, it might be advisable to establish training classes for prospective matrons, nurses, seamstresses, cooks, and possibly for farmers and horticulturists. These professional courses would attract many of our bright Indian boys and girls, giving them an opportunity specially to qualify themselves for positions of usefulness among their own people.

The following are enumerated as being among the reasons for establishing normal schools to train teachers for the specific purpose of instructing Indian children: (1) The Indian child needs to be studied and understood. He is not a white child with a copper-colored skin and straight hair, but a child of quite another and a different mental foundation. Generations of aboriginal inheritance have given him an entirely different type of mind. He needs another variety—if not another kind—of school. Therefore he needs a teacher with quite another training than the one that would fit for teaching the white child. (2) The inherited tendencies of the Indian child, his aspirations, his motives for action, all are so different from those of the white child that his teacher should have a training in a special school where all these peculiarities can be studied and made the pedagogical basis for methods of teaching as well as the subject-matter of teaching. (3) The Indian race is not an infant race. They are an old race, a mature race, a race of fixed habits. These things should be understood by those who are to be their teachers, that their teaching may be fitted to those to be taught. (4) Because all Indians are land-owners, it goes without saying that along those lines their teachers

should have a special training, which at present no normal, nor other school within my knowledge, now gives. This alone is an entirely sufficient argument for the establishment of Indian normal schools.

DISCUSSION

S. M. McCOWAN, superintendent, Chilocco Agricultural School, Oklahoma.—In my opinion, special normal schools should be established to train teachers for instructing Indian children, (1) because Indian youths are born and reared close to nature, and like her ways; (2) because they have land, and should be taught to cultivate it with a view to making a living thereby; (3) because they will not hold their land and work it unless taught to love the work and to make a profit from their toil; (4) because the vast majority of our teachers know nothing about farming in any of its branches, and care less, thereby consciously or unconsciously instilling a dislike for the farm in the highly impressionable minds of their pupils, thus defeating manifest destiny. It is a true pedagogical axiom that a child should be educated along the line of his prejudices or genius. The chief educational function is to prepare for complete living. The Indian child likes the land. He loves the smell of the soil. He gets his living from his garden largely. He is partial to horses, and loves the outdoor life. His mind is eager to grasp nature's hidden secrets. He detests the irksome labor of poring over abstract theories in books. He is a good observer; his senses are keen to detect, and his mind to grasp and retain.

Every child of any race hungers for knowledge. He glories in the acquisition of self-found information. But when he goes to school, in ninety-nine cases out of one hundred his entire nature is warped, his ambition is crippled, his hopes are frustrated. His mind is either starved or feeding on cold facts, or imagination and theory jostle and crowd out observation and the practical. Instead of doing the things he likes and does best, instead of developing his brightest talents, he is made to do the things he detests, and endeavor is persistent in striving to develop talents possessed in the smallest measure. Why, why, when a child loves the farm, should he be made to study law? Why, why, when a child finds his chiefest joy in the fields, should he be trained to live in town? The fault lies with the teachers. We all agree that Indians should be taught to make a good living right from the land they own, and yet we send them to teachers who do not know the difference between a section of land and a section house.

Our Indian schools are happily arranged on the half-school, half-work basis. Now give us teachers in our class-rooms who, by precept and practice, will stimulate the children's natural talents and bring them to proper fruition, and we shall find them eager and successful farmers. A teacher properly trained will rejoice in her school garden. She will be able to open nature's sealed books, and translate her hieroglyphics into beautiful stories more fascinating than *Æsop's Fables* or the *Arabian Nights*. She will be able to explain the why and the wherefore. And her teaching will promote wisdom, industry, judgment, skill, self-reliance. The boys will go back to their farms knowing how to do, what to do, and why; and girls will glory and expand in knowledge.

If a normal be established that will prepare teachers to impart to their pupils, in a way easily assimilated by them, the beauteous and profitable truths of growing things, which can inspire and stimulate a love for the garden, the farm, horticulture, animal husbandry, then, it seems to me, there will be nothing left in the educational world to be desired. I do not mean in all this that every boy should be a farmer, but I do mean that the education that should be given boys who are to be farmers will make the best kind of foundation upon which to rear the structure of any calling or profession—a great deal better than the crumbling bones of dead languages.

The kind of teacher we want and must have is the one who can gather the class

about her, as a hen her brood, and interest them in the conception, the growth, and the fruiting of things. This is the study of life. It is revelation—life revealed. It is mastering step by step God's creative processes in the sweetest, simplest manner. It begins at the genesis of things, when the world was young, and follows by easy, enthralling stages the series of evolutionary actions in the making of the world. It is a continuous performance of living, moving pictures.

Now, let us pioneer a normal system based on nature study. We cannot be the first in the world in this grand work, because other countries are already at work along this line; but we can be the first in our own land, and this will be glory enough. In France a feature of the normal schools is a course in gardening and horticulture. Men are taught gardening and agriculture, women gardening and horticulture; and graduates take this knowledge and experience with them to their rural schools. These courses were adopted in 1882. In one province in southern Russia 257 of the 504 rural schools possess small model gardens divided into sections for grain, vegetables, and fruits. Some of these schools possess nurseries and bee colonies. Switzerland has had school gardens in connection with both normal and rural schools for more than twenty years. Belgium makes the study of horticulture in her schools compulsory. A royal decree of 1897 called special attention to the necessity of instruction in the cultivation of vegetables. All public elementary schools in Belgium have gardens, and the government grants annually 6,000 francs as prizes among pupils who excel in this study. Sweden leads in the matter of school gardens, having established them in 1869. Austria, Germany, and a few other foreign countries insist upon instruction being given in gardening and horticulture, and prepare teachers in their normal schools for this work. A normal school for the special training of teachers for the Indian service should be established. I believe this department should be established at one of our non-reservation schools. I believe, too, that this department should be for both Indians and whites, and that all teachers in Indian schools should be required to take this course.

BENJAMIN S. COPPOCK, school supervisor for Cherokee Nation, Indian Territory.—I think a normal for the teachers in the Indian service would improve the personnel and the work accomplished. Strong leaders would inspire many workers with confidence in the Indian character and in his ability to succeed in life. Very much is lost to the service thru a feeling among some of the workers that the Indian will not amount to much anyway, and that extra effort and work for him is lost at best. This feeling should be corrected. There would result acquaintance, knowledge of the general service and its management, and sympathy that would be restful to many overworked and underpaid people. The teacher needs a quick perception of known conditions and a ready understanding of practical known methods, and suggestions from those who know the real Indian, his worth, his possibilities, his difficulties, and his handicap of thinking in his native tongue while all things come to him in English. These things are in addition to what would be learned in other normal schools, and are some of the reasons for holding special normal schools for the service.

W. M. PETERSON, superintendent, Fort Lewis Indian School, Oklahoma.—It has been the aim of all educational effort in behalf of the Indian to lessen the gap between him and the average American citizen, and, in fact, to make him such a citizen in as full a sense as is possible. But while we think of doing this in a generalized way, and speak of the "Indian" when we mean the race, we have to accomplish the result by dealing with individuals; and tho these individuals differ from an equal number of white individuals in most respects, there are as many differences among the minds of different individual Indians as there are among the minds of different individual whites, and these differences lie along similar lines. And the principal differences between the Indian mind and the white mind (if such an expression be allowed) modify very materially when given a continuous environment; but this environment must be continuous thru the forma-

tive period of several generations. It is not reasonable to give a child the advantages—from our point of view—of school, and expect him to demonstrate that he has had these advantages, while his parents are living and ridiculing every effort on the part of the boy or girl to adopt so-called civilized ways. Nevertheless, since it is certain that these ways must ultimately be adopted, not because we are convinced that they are fundamentally better than many of those of the Indian, but because they seem to be the inevitable product of our social evolution, it is needful that the Indian modify his mode of living to a degree. We mistake when we try to remove the whole of the Indian life, for there are many excellencies in it.

No one will question the fact that the average full-blooded Indian who goes to school must learn to read and write an ordinary letter, to figure out the number of cords in a pile of wood or the number of tons in a stack of hay, or to reckon the value of so many pounds of grain, or wool, or hops, at so much per pound, and to know how much cloth at so much per yard he ought to get for his dollar.

THE NECESSITY FOR MORE AND BETTER-EQUIPPED DAY SCHOOLS

J. J. DUNCAN, DAY SCHOOL INSPECTOR, PINE RIDGE AGENCY, SOUTH DAKOTA

To give the Indian youth a plain, common English education, and teach him to do the common, ordinary duties of life, is now the most popular policy. This is declared to be the policy of the present commissioner. The Department of Indian Affairs is determined to put the Indian to work, and the kind of schools that will help him to do his best, and so prepare him to find his own work, should not only be increased in number, but should also be allowed a reasonable expenditure for their better equipment. Of the three kinds of government Indian schools, the day schools would come the nearest to fulfilling this mission. They are the largest in number and the least known. These schools are common country schools as in the white settlements, and yet they are more so. To the inestimable value of the district schools to the white settlements I need scarcely refer, but the Indian day schools have even a greater mission. Many of the day schools (and they all should be) are neatly kept, model, Christian homes; and this, too, in the midst often of squalor and an uncivilized people. It is natural to suppose that good people, to teach these people at their homes, should be equipped to do a work for both children and parents that no other school can possibly do. Some of the good things in connection with these schools are as follows: bathhouses, with weekly baths; practical home cooking, laundry work, and sewing; children going back and forth to school, cleanly clad; the well-cooked noonday luncheon; the Lord's Prayer; patriotic songs; the sound of the school bell and the daily floating of the flag; evening entertainments at the school; visiting of the teachers and housekeepers at the homes of the parents; the distribution of simple medicines, and the opportunity to give advice; individual contact with the children and their homes; these and many others might be mentioned as mighty and silent influences, unconsciously and unobtrusively

drawing children and parents together nearer to civilization, and removing prejudice and opposition to education. In this natural process the Indian homes are not being broken up, and parental ties are not being severed. The children are being educated in the midst of the environments in which at least 95 per cent. will be better off to live, away from the temptations of city life, and amidst their large possessions of land, which if many a poor white boy had it would make him prosperous.

In the day schools should be placed the best, Christian teachers and housekeepers, of whom much should be required. The buildings should be kept well painted. Playgrounds should be well provided, so that the children below school age will look with longing eye to enter, as they do to some schools now. Small irrigation plants should be put in where needed, as at Rosebud and Pine Ridge, South Dakota. Fruit trees, plants, and shrubbery, suitable to the climate, should be planted. A few cows, pigs, chickens, etc., should be allowed in order to create a love for the domestic fowls and animals. By building day schools up and down the valleys where the Indians live, there will be a saving from the economical standpoint as well.

DISCUSSION

C. J. CRANDALL, superintendent, Santa Fé Indian School, New Mexico.—The education of the Indian is no longer a question to be disparaged, as it has proved the correct and humane way of settling the Indian question.

The little red schoolhouse is the foundation of our great school system in the United States, and so should the day schools for the Indian be the foundation for the system of Indian schools. We too often forgot that the Indian parent loves his child with a love that is akin to worship. Thru his love for the child we should work to improve and change the condition of the Indian. This can best be done thru the day school. The best blood and the best children are the last to leave the reservation as a rule. Then why not try to reach them thru the local or day school?

There is need for more and better-equipped day schools. Too often this school consists of a single schoolroom. The teacher's quarters may consist of one or two rooms; the roofs may keep out the sunshine, but not the snows and rain; the yards, instead of being neat grass plats or gardens, are often unfenced, and a gathering-place for the Indian dogs and burros. There should be, in addition to the regular schoolroom, a sewing-room, a workshop for the boys, a dining-room and kitchen; the teacher should be provided with comfortable quarters; the school should have its bathhouse and wash-room. There should be a school garden; the grounds should be fenced; and flower gardens and lawns should take the place of unkempt and untidy yards. Some poultry, a cow, and a horse will add to the school. In addition to the regular teacher, there should be a housekeeper, and there may be a matron and industrial teacher. The Indian parent should at all times be made welcome at the school, and thus will he take an interest in the school and what is being done for his child. The noonday luncheon is important. Above all, the employees in the day school must have an interest in their work and the Indian. The day school will thus become a feeder and a help to the more advanced Indian schools.

WALTER P. SQUIRES, day-school inspector, Standing Rock Agency, North Dakota.—There has been no time in the history of Indian schools when the necessity for more and better-equipped day schools was as urgent as at the present time. The recent decision of

the supreme court on the selling of liquor to allotted Indians not only has its influence on the liquor question, but on the school question as well. On many reservations the Indians are allotted. These allotted Indians, being citizens, cannot be compelled to put their children in boarding-schools, nor in any school longer than the compulsory term of the state in which they reside, which usually is not longer than three or four months; and to overcome this the Indian must be interested in his own day school. The Indian has inherited a disposition for a free, outdoor life, and his tendency is naturally toward the day school, where his child is in school only from nine to four, and has his Saturdays and Sundays to himself. In my experience, the Indian in nearly every instance has preferred to have his child in the day school rather than in the boarding-school.

A properly equipped day school, in charge of a competent teacher and housekeeper, improves the moral condition of the camp where the school is situated, and by example of a good garden shows the advantages to be derived from agricultural pursuits.

In following the plan for individual gardens, as given in the "Course of Study for Indian Schools," the pupil becomes interested in his garden at school, and talks it over at home in the evening; the Indian parents become interested; and it is a common occurrence to see the pupil bring the parents to school, to show them with pride the results of his labors. From these individual gardens the pupil is allowed to take home at least half of the produce, which not only increases the interest of the pupil, but by its influence has caused the parents to enlarge the gardens at home. Not only along the line of gardening can the homes be reached, but in other lines of industrial work, such as cooking, sewing, etc. This dual plan of educating the parents as well as the child makes the properly equipped day school one of the most civilizing factors in the Indian work.

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