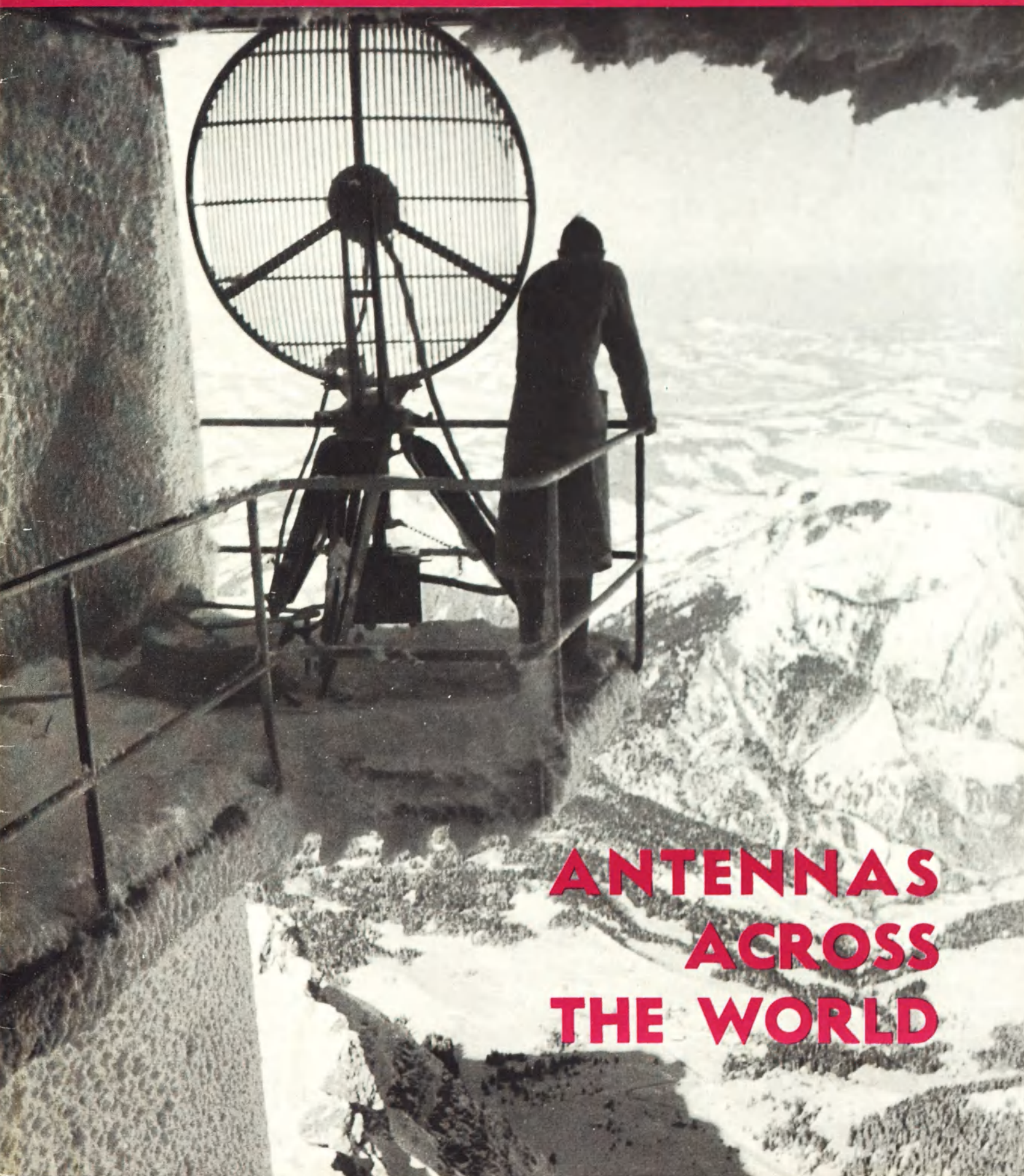
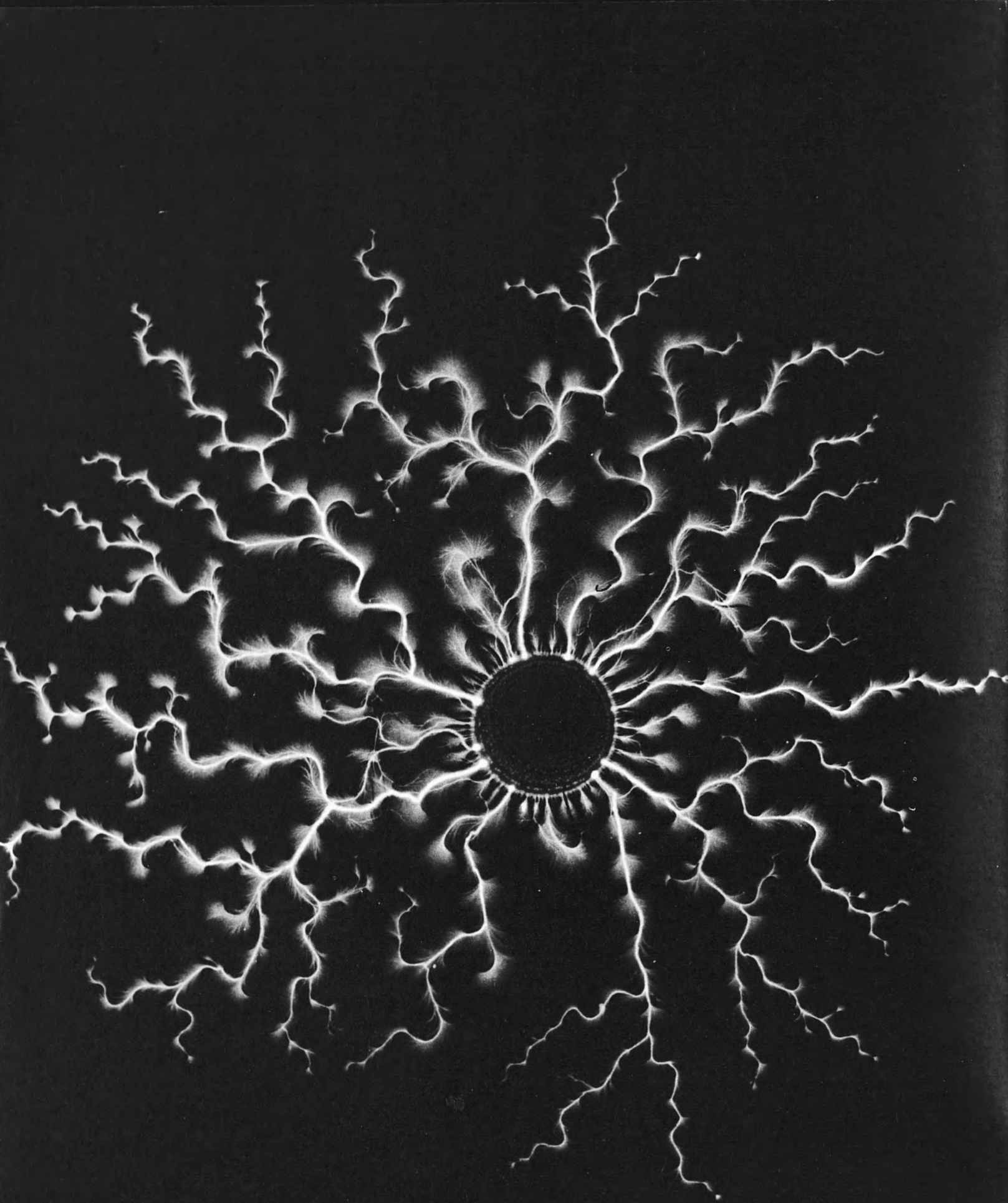
A WINDOW OPEN ON THE WORLD

The UNESCO Courier

JUNE 1962 (15TH YEAR) - PRICE : 1/-STG. (U.K.) - 30 CENTS (U.S.) - 0.70 NF (FRANCE)



ANTENNAS ACROSS THE WORLD



FORKED FLASHES, graceful as a baroque frieze, are Lichtenberg figures designed by an electrical discharge and named after the 18th century German physicist who first produced them experimentally. In our own time as science advances further into the worlds of the infinitely tiny and the infinitely huge, the work of the science writer as an interpreter and guide takes on new meaning and new importance (See page 14).

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JUNE 1962
15TH YEAR

Contents

No. 6

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French
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COVER PHOTO

Antennas perched on the 8.000 feet high Säntis peak in Switzerland are modern "magic mirrors" relaying television pictures over the mountains. TV is now an everyday fact for millions of people, but a recent Unesco enquiry has shown that more than 70 % of the world's people are still deprived of the basic means of finding out what is going on in the world around them. (See page 4.)

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A UNESCO WORLD ENQUIRY

Tremendous strides by press, films, radio and television have given 20th-century man a ringside seat on daily events in his world. Yet the basic right to know what is going on in the world around them is still witheld from to two thousand million people. A worldwide enquiry by Unesco shows that this right can only be made a reality through a vast programme of development in the information media which Unesco has proposed for the next 15 years.

by Mary Burnet

A little more than 13 years ago, in December 1948, the United Nations adopted the Universal Declaration of Human Rights, which affirmed, among others, the right of everyone "to seek, receive and impart information and ideas through any media and regardless of frontiers." About the same time, UNESCO launched a survey of information facilities, first in war-devastated countries and later throughout the world.

This survey provided the first global picture of the state of the information media—the press, radio, film and television. It confirmed what was already known in a general way: that about two-thirds of the people in the world were unable to keep up with events because they lacked the material means of doing so. Where information was concerned, the majority of the human race were like a big family whose right to eat has been recognized but who are unable to get enough food.

We have come a long way since then. In countries devastated by World War II, information facilities have been restored. The rapid development of many other countries has brought them increases in the means of information along with a general rise in the standard of living.. In African villages where a few years ago nobody could read or write, newspapers are now being sold. Over roads deep in mud or thick with dust, trucks carry film projectors into isolated districts and, after nightfall, set them up in the open air or under the thatched roof of a meeting hut, where the light of a kerosene lamp flickers over the faces of an eager audience. In more than 100 languages and dialects in India alone, the radio beams advice to farmers and housewives along with news and

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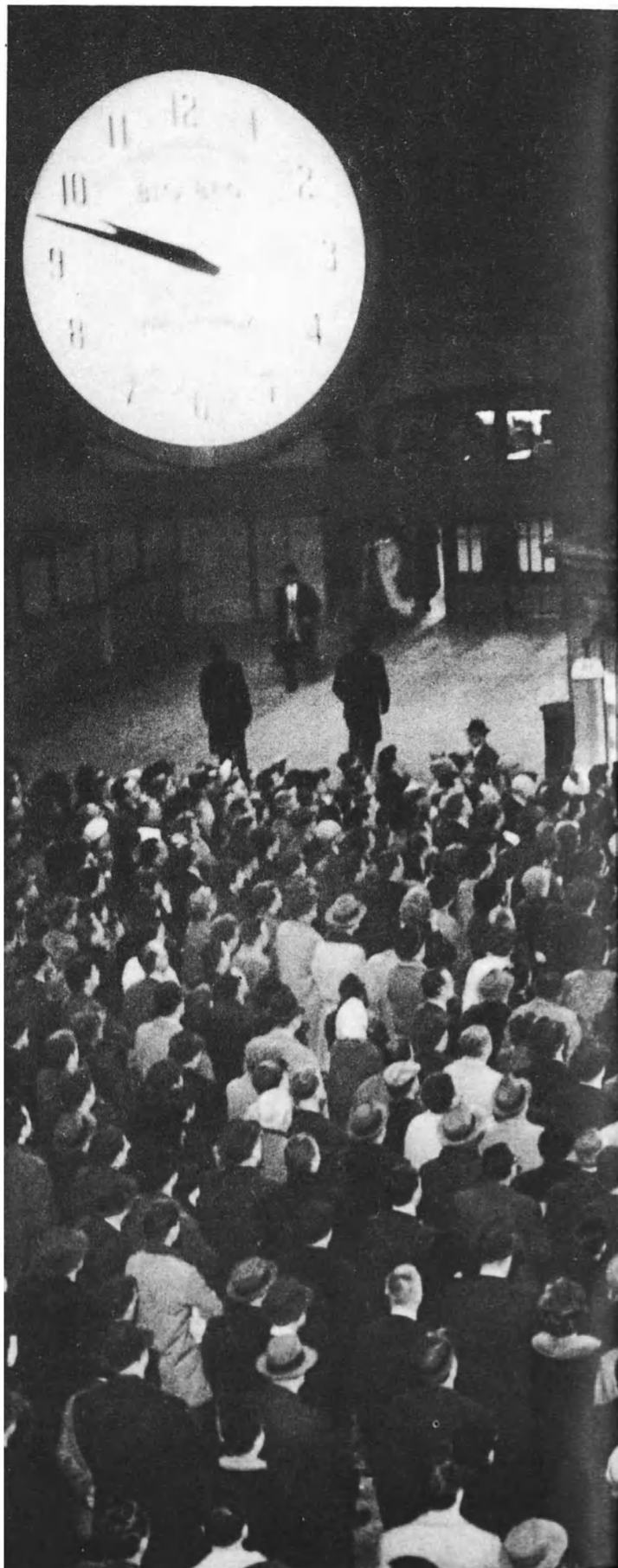

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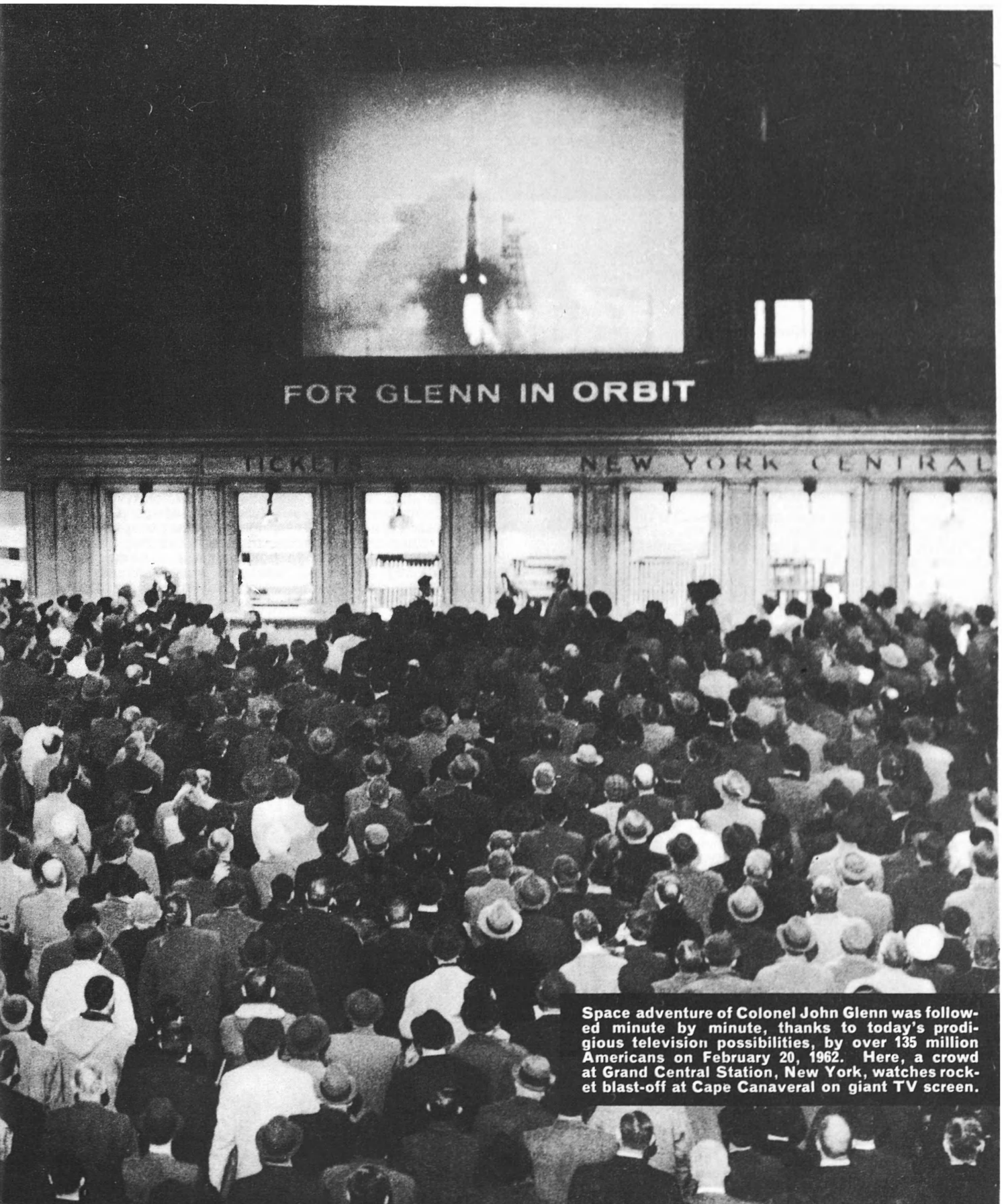
2,000 MILLION PERSONS WITHOUT ACCESS TO NEWS



Space adventure of Colonel John Glenn was followed minute by minute, thanks to today's prodigious television possibilities, by over 135 million Americans on February 20, 1962. Here, a crowd at Grand Central Station, New York, watches rocket blast-off at Cape Canaveral on giant TV screen.

BBC, London

100 MILLION TV RECEIVERS are now in use around the world. The Japanese who pioneered the midget transistor radio receiver are now applying the same skill to television. Portable receivers, shown in production here at a Japanese factory, will run either from a mains supply or a re-chargeable battery. A "pocket" TV receiver has also been designed and has been put on sale.

ACCESS TO NEWS *(Cont'd)*

A vital minimum for all by 1975

entertainment. In 1948 only four countries in the world had television stations; now regular programmes are being broadcast in 65, and the number of television receivers has increased from four million to 100 million.

In spite of all these encouraging signs, however, we still have a great deal further to go if we are to bring to everybody, and not just a large and fortunate minority, adequate means of being informed.

What are adequate means? UNESCO has tried to set some standard. It concluded that any group of people should be considered to enjoy the "vital minimum" of information facilities if, for every 100 persons it had the following:

Ten copies of daily newspapers;

Five radio receivers;

Two cinema seats;

Two television receivers.

Despite all the progress made since the Human Rights Declaration was signed, the majority of the world's population still do not have access to this vital minimum. At the same time, greater efforts than ever before are being exerted to make the right to information a reality.

As might be expected, the countries most lacking in information facilities are those where the standard of living is lowest, and most of them lie in the world's three great underdeveloped regions—Asia, Africa and Latin America. But almost without exception these countries are well aware of their handicaps, and trying hard to improve their situation.

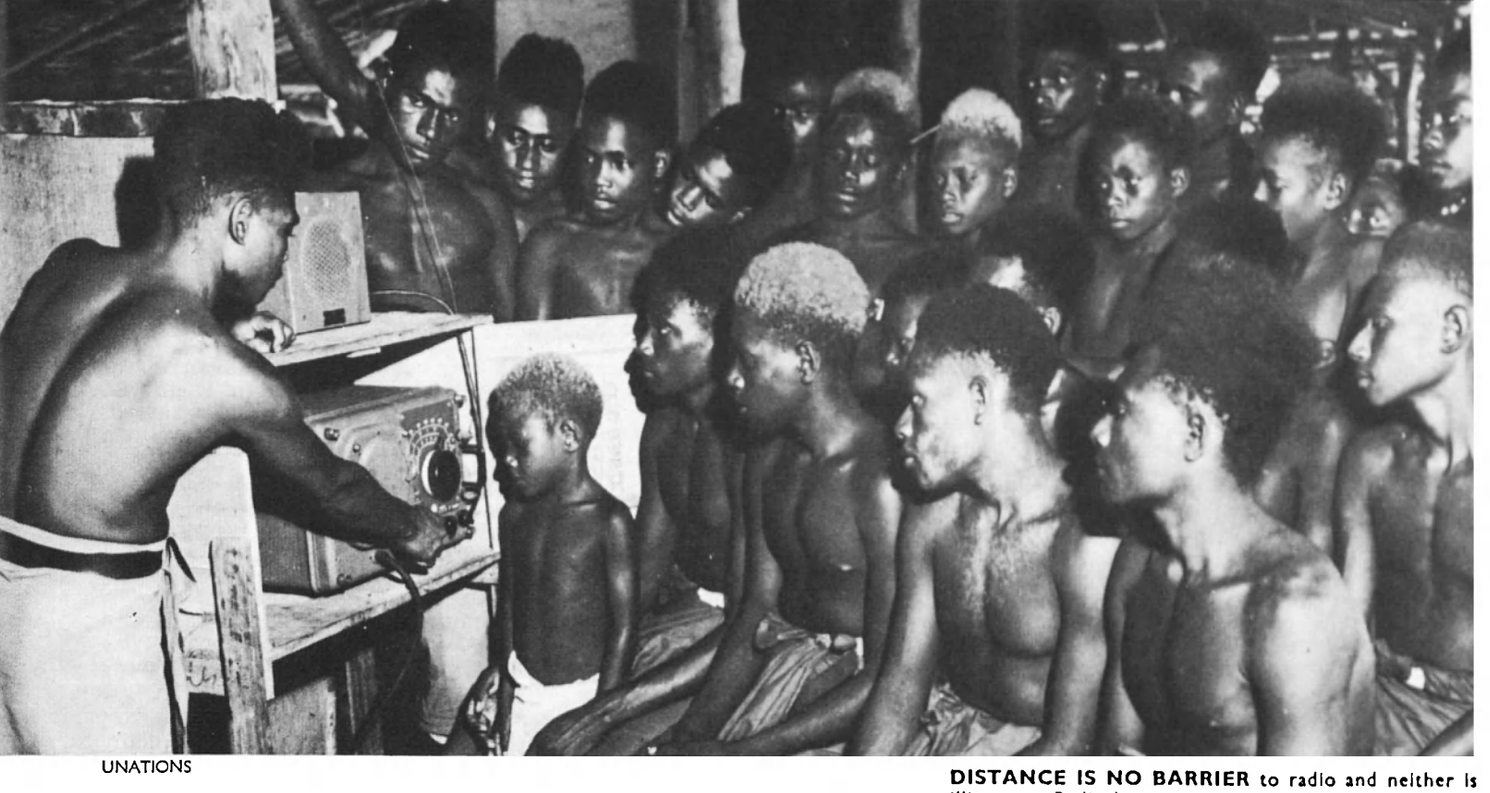
Convinced of the vital link between information and general economic development, the UN, three years ago asked UNESCO to make a special study of information facilities in underdeveloped regions and to suggest how they might be improved.

UNESCO organized a series of meetings, each focused on the problems of the information media in one of the three great underdeveloped regions of the world. These meetings brought together representatives of the press, radio, film and television, in Asia, Africa and Latin America, plus specialists from outside these regions, as well as observers from various inter-governmental and non-governmental organizations.

From these meetings, held over a period of two years, there has emerged a far more revealing image of reality than mere statistics could reflect. The pioneers working in the information media—and for most of them, pioneers is not too strong a word—knew not only what they lacked, but why. They had pretty clear ideas of what they needed and many suggestions as to how to get it. Along with the outside experts at the meetings, they outlined the steps to be taken if information enterprises in their countries are to be given the initial assistance they need in order to embark on a period of healthy growth.

UNESCO then worked out an overall plan which was presented by Mr. Tor Gjesdal, Director of the Dept. of Mass Communication, to the Human Rights Commission

Unesco-Schwab



UNATIONS

DISTANCE IS NO BARRIER to radio and neither is illiteracy. Radio has grown more rapidly in underdeveloped regions than any other of the mass media. Here New Guinea villagers tune in to news and educational broadcasts. Recent development of a $5 transistor receiver should bring radio to millions more people.

in April shortly after the UN General Assembly had officially proclaimed the 1960's as the UN Development Decade. The aim of the plan is nothing less than to bring the whole world up to the UNESCO target of a minimum standard of information facilities by 1975.

If this plan is carried out, the progress made in the past 13 years, however creditable, will be as nothing to the giant strides to be made in the coming thirteen. Information facilities in the world as a whole will be not increased, but multiplied. For the first time in history, virtually everyone on our planet will have at his disposal the means of keeping informed. Not all the means that might be desirable, perhaps, but enough to keep him in touch with events at home and abroad and thus give him a chance to play as enlightened a role as possible in the life of his community and nation.

How will the job be done?

The easiest and cheapest way of getting information to masses of people nowadays is the radio, modern successor to the signal fire and the jungle drum. Distance is no barrier to broadcasting, nor is lack of roads or airfields. Equally important to the underdeveloped regions is the fact that illiteracy presents no barrier either. A man who could not read a newspaper if he had one can understand the news bulletins he hears over the radio. All these circumstances are reflected in the fact that since 1948 radio has made more gains in underdeveloped regions than any other medium.

There does, however, exist one barrier to the further expansion of radio: the price of receivers. Often those people most in need of radio for information purposes are unable to pay for even a simple receiving set.

Already many developing countries have tried to help these people. In areas without electricity, receivers have been set up in village squares. They might be run by batteries or with a generator powered by petrol or even pedaled by foot. To the villagers loudspeakers have

CONT'D ON NEXT PAGE

TV IN THE SCHOOL & A SCHOOL FOR TV

Television as a classroom aid has developed individual forms according to the needs of different countries. Left, young workers in a Naples factory are given time off daily to follow special televised courses designed for young people who only completed primary schooling. Television, despite the giant strides it has taken, is still a developing medium and itself needs schools and experimental centres. Right, in Lima, Peru, future TV technicians and producers now receive a two-year comprehensive training course whose programme includes construction of receiving sets, programme production, camera work and lighting techniques.

Unesco - Almasy

The trials of the struggling backwoods newspaper

furnished news and entertainment, just as bards and minstrels have done for ages past.

But such group listening is obviously limited by the number of sets and operators available, and it does not reach really isolated people. So several years ago, the International Telecommunication Union (ITU) at UNESCO's suggestion, began working on specifications for cheap but efficient and durable receivers—a problem which the introduction of transistors had already simplified. The sets now being designed by the ITU can be produced for $5 if ordered in sufficient quantity. This is not a prohibitive price even to those—and in certain areas the case is not rare—who have incomes as low as $300 or even $100 a year.

So in its plan UNESCO has given highest priority to the development of radio. Of course there are other problems to be solved besides that of cheap receivers. Broadcasting in the tropics, where many of the underdeveloped countries are located, is beset by technical difficulties greater than those encountered in temperate climates. But with progress in electronics these difficulties can now be solved. There is also a much more serious human problem: the lack of technicians, operators and maintenance men, of good radio journalists and programme material, including a sufficient supply of news. This shortage of trained personnel and news sources is shared by all the information media, and the provision of training opportunities in all media is one of the questions to which most attention was given when UNESCO's report was drawn up.

Despite the convenience of radio, the basic and permanent medium of information remains the written word. A radio bulletin must be listened to when it is broadcast, but a newspaper can be read and pondered at leisure. Furthermore, newspapers, like radio, in a developing country can be not only a means of information and entertainment but a very valuable educational aid.

Most developing countries have a large proportion of illiterates and are making great efforts to teach them to read. Once they have learned to read, however, materials for further practice are often scarce. If its style is well adapted to its audience, a newspaper can do a lot to keep up reading skills.

NEWSPAPERS in the countries covered by the UNESCO report are generally scarce, and the ones that do exist range from complete, sophisticated dailies printed in large cities to the one-page sheet that appears on market day in some backwoods town. The modest one-pager may be printed on an antiquated press with type so worn as to be barely legible, by an editor-publisher-reporter, making a valiant effort to keep his readers abreast of local news and also to arouse their interest in more general issues.

At the UNESCO meetings, colourful stories were told of the difficulties these struggling newspapers run into. For the smallest, merely keeping their obsolete presses running often requires feats of ingenuity. If spare parts are needed they must usually be imported, at high cost and with long delays, and possibly with customs' duties added to the price. Paper must also, as a rule, be imported, and the prevailing system of newsprint distribution works to the detriment of the small enterprise. Newsprint can be bought at mill prices only in large quantities and under long-term contract. Small publishers, with their uncertain future and modest means, cannot place orders of this kind. So they must buy their paper on the spot market, where they will pay up to 300 per cent more than is paid by their larger—and wealthier—counterparts.

Except for strictly local items, they also have trouble getting news. For many it is out of the question to subscribe to a news agency, and communications facilities may be so scanty that they could not take advantage of an agency's services even if they could pay for them. So they must depend on radio news bulletins and whatever feature material—preferably free—that can reach them by air mail.

One may wonder what keeps them going. Yet the newspaper representatives at the three UNESCO meetings were among the most enthusiastic of participants. Obviously they have great faith in the usefulness of what they are doing—a faith that is probably increased by the knowledge that their papers are not discarded after a hasty glance at the headlines but passed from reader to reader until they have become tattered and torn. They also know that, as literacy spreads, they will have a more and more important role to play.

So in UNESCO's report a high priority is also given to newspaper development, and a series of measures, many suggested by the newspaper men themselves, are recommended for reducing their handicaps and encouraging others to follow in their path.

BY a happy paradox, recent technical advances may put these small newspapers in a relatively more advantageous position than many better-established ones where production is concerned. New processes, including offset and photo-composition, make it possible to produce attractively printed small newspapers, of limited circulation, with a small outlay for equipment and with operators who do not need to be highly trained. Clear reproduction of photographs and drawings is now possible at a cost that would have been unthinkably low a few years ago. This is important, since good illustration can do much to attract newly-literate readers and help them understand what they read.

As for that great bugbear, newsprint, the UN Food and Agriculture Organization (FAO) has been working for the past ten years on the problem of increasing the world newsprint supply. Largely as a result of FAO's research, newsprint can now be made from a variety of materials never before used for the purpose such as bamboo, rice straw and bagasse (sugar-cane residue). Many of these materials are produced in the tropics.

The manufacture of newsprint, however, is by nature a large-scale operation. So the current problem is to find steady markets big enough to make the establishment of new paper mills economically feasible, possibly on a regional basis. A pooling of orders by small enterprises, backed by careful estimates of needs, could do much to reduce the price of imported newsprint in the immediate future and to bring nearer the day when local mills can be established to provide the paper now shipped at high cost from abroad.

THERE remains the problem of getting the news—a problem which newspapers share with broadcasting stations. To cater to both, news agencies are needed. The number of these is growing fast—there are now 21 agencies in Africa, for instance, as compared with two in 1948—but most of them as yet can provide only limited services, and more than one valiant little agency still has to deliver mimeographed news bulletins to its subscribers by bicycle. Furthermore, throughout large parts of Asia, Africa and Latin America, there are not enough telegraph or radio links to provide adequately for collecting and distributing news.

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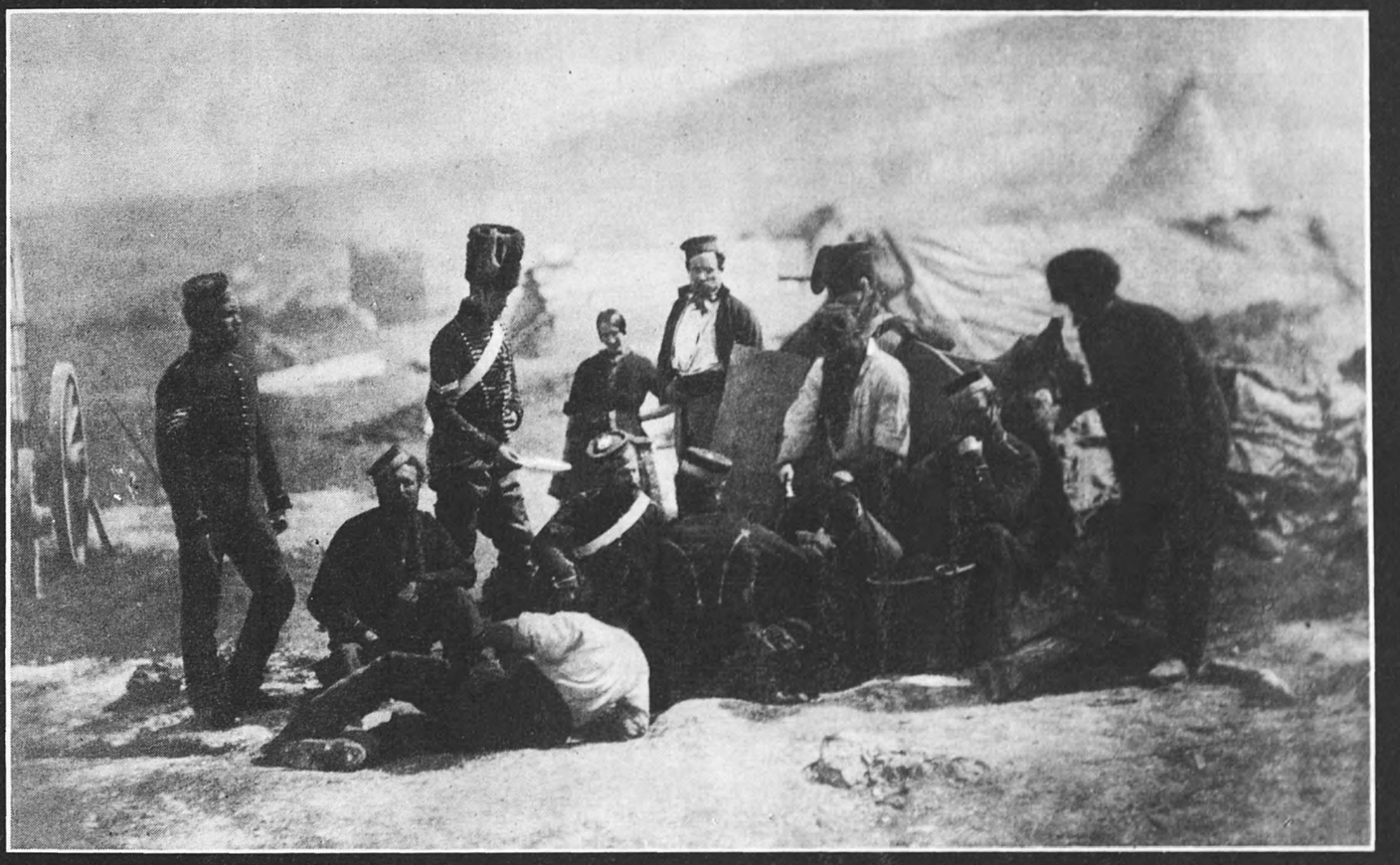
Over a century ago...

HISTORY PHOTOGRAPHED FOR THE PRESS

Photos Roger Fenton
© Radio Times Hulton
Picture Library



HARD LABOUR AND CULINARY CHORES

Physical resistance and patience were two essential qualities required by the early photographer-reporters. Right, an 1874 engraving showing the "portable" equipment needed by the photographer on the move. Progress since then can best be measured by reading the "recipe" for preparing an emulsion to cover the photographic plate given in 1864 by the English chemist, Sir J.W. Swan. "Take 4 ounces of gelatine and leave it to swell in 30 cubic inches of cold water for several hours. Then dissolve it over a gentle heat. Now add the beaten white of an egg, shake the mixture and bring it to the boil, afterwards filtering it. Now add two ounces of white sugar and mix with Indian ink..."

As early as the 1850's photographers were recording public ceremonies and other events, but the first great historic happening to be "covered" in the current sense by photographers was the Crimean War. The first of these was the British photographer, Roger Fenton, who arrived at Balaclava in March 1855 with two assistants, a photographic van and an immense quantity of equipment. Under difficult conditions—several times his van was shelled by the enemy batteries—he captured striking images of the British and French troops and their leaders and their day-to-day lives during the campaign. Above, two examples of this historic record of early news photography: the port at Balaclava and the cookhouse of the 8th Hussars.

World TV via satellite relays

News agencies and telecommunications are subjects which the layman rarely stops to think about, but they are of fundamental concern to professionals in the field. They provide the basic means through which all of us—in Helsinki, Rangoon, Chicago or Tananarive—get our news. Whether we get it promptly or late, in plenty or in snatches—depends largely on how efficient news agencies are and how well telegraph and telephone, cable and wireless services function.

Years ago UNESCO approached the ITU for help on the problem of improving information facilities. The ITU provides expert advice to countries wishing to improve their telecommunication networks and has already completed plans for such networks in Asia and Latin America in co-operation with UN and regional organizations. In all such plans the ITU is now trying to make adequate allowance for the expanding needs of the press and other information media.

At the regional meetings on information problems convened by UNESCO, special emphasis was laid on the need for establishing or expanding news agencies. This need was acutely felt by participants in all the meetings, and, at all three, recommendations were made for fostering the development of national news agencies and encouraging co-operation both among them and with the great world agencies which are the main source of international news.

Since then, at another meeting convened by UNESCO at their request, directors of national news agencies in Asia have formed a regional association, the Organization of Asian News Agencies, to increase the exchange of news between them and with the rest of the world.

© Almasy. Paris.

TOMORROW'S NEEDS IN NEWSPRINT

In many African countries today the average annual consumption of newsprint per person is only a few ounces (in the U.S.A. it is 80 lbs). With the decrease in illiteracy, however, tomorrow's needs in newsprint will increase considerably and world demand is expected to triple in the next 15 years. As present sources of production will be unable to meet this rising demand and as the costly process of importing newsprint is already a barrier to press expansion in the less economically developed countries, efforts are now being made to develop the manufacture of newsprint on a regional basis, using fibrous materials found in the tropics. Above, editor of a Dakar newspaper. Right, newsprint production in Canada (today the world's largest producer).

PEOPLE go to the cinema for entertainment. If they see a newsreel or a documentary they are receiving information as well. But so far, the role of the film as a medium of information has been overshadowed by its entertainment value, as the newsreel is overshadowed by the feature film. Yet this informational role is already considerable and could be developed much further, as is fully realized in the developing countries of the world. In its report to the UN, UNESCO made recommendations for increasing the number of documentary films produced in these countries and improving their quality, and also for distributing them in the broadest and most effective way.

There are plenty of commercial cinemas in the big cities of Latin America, Asia and Africa, and one Asian country which in many ways still considers itself underdeveloped—India—is the world's second largest producer of feature films. (Japan is the largest and the United States of America third.)

But the production of features is confined to a very few countries, and these cinemas live and thrive by showing imported European, American or Asian films. Some of the films are so ancient that, as one observer put it, "you wonder how the prints can still be in existence." The double feature is common practice, so that there is little room on the programme for newsreels or documentaries.

But, cinematographically speaking, the back country is a desert. It is into this desert that mobile projection units have been making their forays within the past few years, armed with documentaries or sometimes just educational film strips. There is a fine art to presenting this material as well as to making it; people who have never seen images on a screen before cannot be approached in the same way as city audiences.

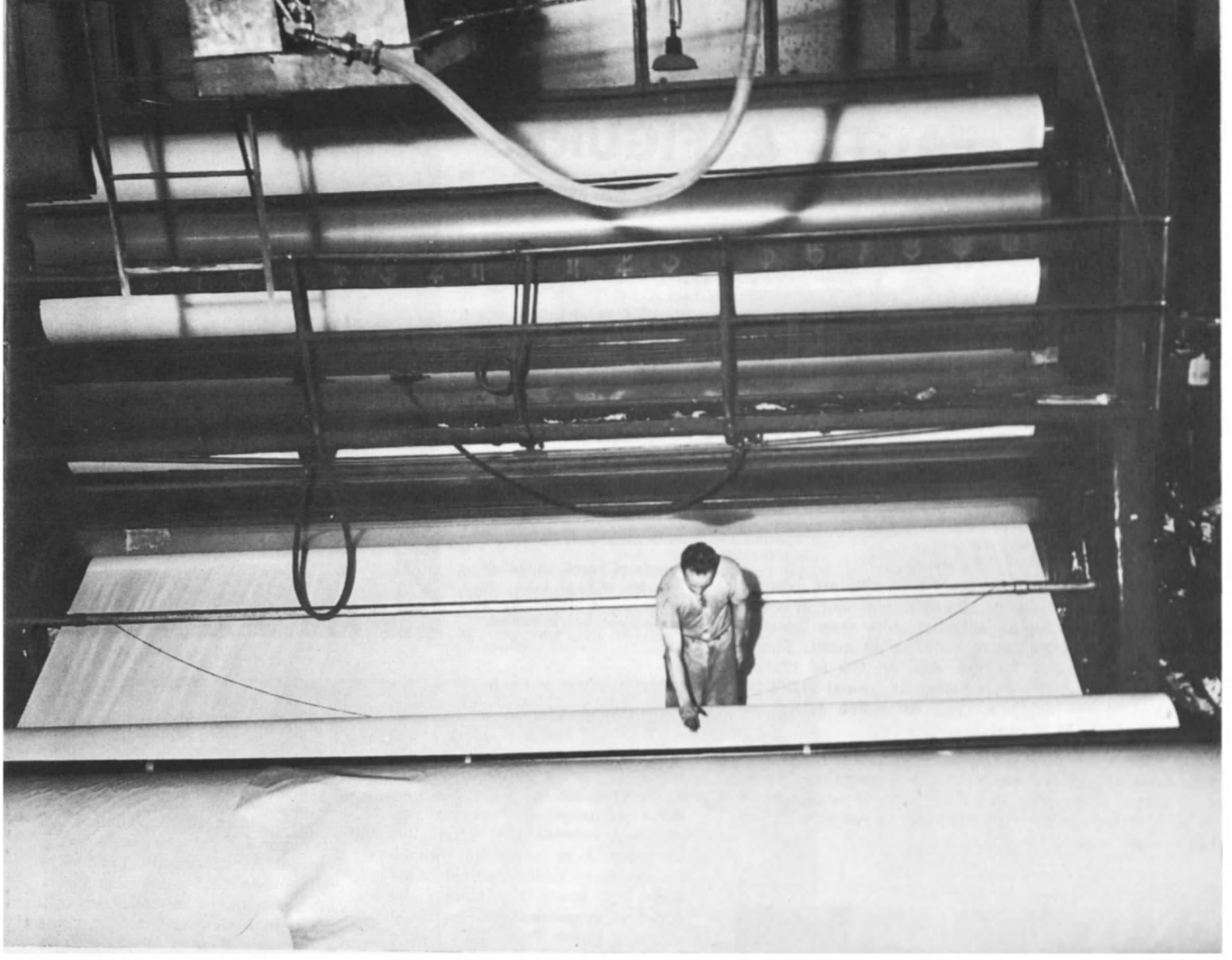
So there is a need for all types of informational films, from the simplest to the fairly sophisticated. While their most important users will probably be mobile units, schools, and community centres, UNESCO has suggested, that the showing of such films by commercial cinemas be encouraged in the developing countries. Nor, the UNESCO report reminds us, should producers overlook the future demand for films by the newest of all the information media—television.

In the 13 years since the Declaration of Human Rights was signed, television has grown from infancy to what many people would call a turbulent adolescence whose promises and problems are a matter for anxious concern. So far, two factors have worked to hamper the spread of television in the underdeveloped countries: technical limitations and expense.

But one by one the technical limitations are dropping away. At a time when experiments are being made on the use of communications satellites as relay stations, we may envisage the physical possibility of providing television broadcasts to any spot on the globe. The introduction of transistor receivers will permit T.V. programmes to be watched in regions devoid of electric power. There remains the barrier of expense, but it is not impossible that further technical advances may considerably reduce costs.

One thing is certain: in regions now underdeveloped, television will spread like a forest fire. So it is not too soon, the UNESCO report warns, to lay plans for making the best use of it. Technical problems, like allocation of wavelengths, and problems of policy, like how to ensure sufficient emphasis on informational and educational programmes, had best come under study now.

From the discussions in Bangkok, Santiago and Paris (where the meeting of African specialists was held), it was clear that the needs of the information media in underdeveloped countries were essentially two: financial means and human skills. Money may be hard to come



National Film Board of Canada

by, but it can be borrowed. Know-how cannot be provided overnight ; it must be developed gradually.

Translated into concrete terms, this means that the greatest problem of the press, the radio and the film in three continents is for more trained workers in every branch of their activity. Master printers, cameramen, radio technicians, newspaper reporters are needed; so are accountants, layout men, programme directors and film editors.

In most of the numerous fields in which specialists are required, opportunities for systematic training in the underdeveloped regions themselves are now scanty or non-existent. The UNESCO survey looks forward to the time when they can be provided on the spot—or rather, at centres serving one country or a group of countries.

MEANWHILE, it suggests, the present shortage could be alleviated by providing scholarships in more advanced countries for promising trainees. (This is already being done to some extent by various public and private agencies, but the number of openings provided must be multiplied.)

Furthermore, as the delegates to the UNESCO meetings were the first to point out, a great deal could be accomplished through exchanges of personnel among newspapers and news agency bureaux, radio stations and film units in the underdeveloped countries themselves. In some of these countries the information media have already made considerable progress and are thus in a position to give valuable on-the-job training to colleagues from neighbouring countries which are still in the pioneer stage.

Such exchanges are only one of many forms of co-operation proposed by participants in the three UNESCO meetings. Never before had representatives of the mass media in either Asia or Africa or Latin America been able to get together to discuss their common problems, and they were determined to make the most of the opportunity to do so. They fully realized that they needed outside help, but they were aware, too, that much could be accomplished through their own collective efforts.

Finally, they were deeply concerned not only with safeguarding the freedom of the various information media but with encouraging a corresponding sense of responsibility. In the areas which they serve, this responsibility involves not only the usual basic requirements of accuracy and objectivity, but a further special obligation to contribute to the education of their audiences as well as to keep them in touch with what is going on.

To carry out the programme UNESCO has calculated that a sum of about $3,400 million will be needed. This sounds like a tremendous investment, but it becomes less formidable when one realizes that most of it would be shared among the national budgets of the some 100 countries in need of development of their information media. A portion would also be made available through the kind of bilateral co-operation programmes which have already shown themselves an effective form of aid from advanced countries to developing ones. Some capital may be expected to be raised in the form of long-term, low-interest loans from various international financing agencies and through private investments from local sources.

The success of the programme will depend mainly on the developing countries themselves, on their determination to find the resources and skills needed. UNESCO is encouraged by the fact that the regional economic commissions of the UN in Asia, Africa and Latin America have all endorsed the plan. So has the UN Economic and Social Council. There is hope that during the decade ahead, for many millions of people the right to information may become a reality.

GLOBAL FACTS & FIGURES

RADIO

IN the last 13 years, radio and T.V. have made giant strides. The number of radio transmitters rose from 5,450 to 11,670 and receivers from 161 million to 366.5 million. Despite world population growth, the number of receivers per 100 persons rose from 7 to 13.

In Africa, radio transmitters increased from 119 to 368 and receivers from 930,000 to 5.5 million. However, owing to the growth in population, the number of sets per 100 people rose from 0.5 to 2.3 only.

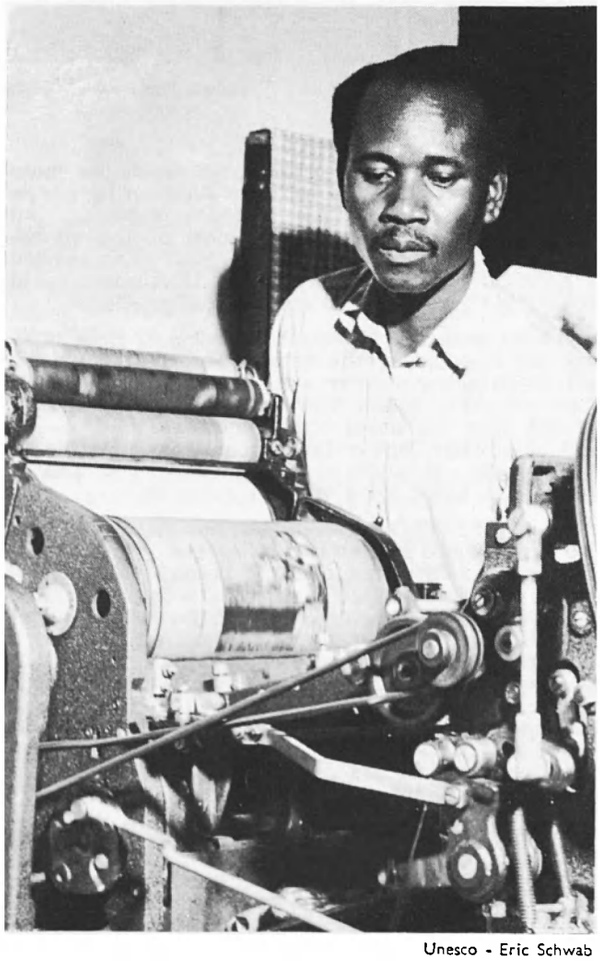
Asia has tripled its broadcasting and receiving facilities and now has 1,100 transmitters compared to 398 in 1948. Receivers rose from 10 million to 31 million. Nevertheless, the number of sets per 100 people only increased from 0.8 to 1.9—the lowest level of all continents. South America, Oceania, U.S.S.R., Europe and North America have respectively 10.2, 17.9, 19, 21.3 and 69 radio receivers per 100 persons.

People of Lomé, capital of Republic of Togo, take part in recording session for a subsequent radio broadcast.

Unesco

■ Population growth and increased prosperity are expected to boost the demand for press, radio, film and television facilities in the developing countries more than threefold by 1975. A UNESCO estimate, covering all media, forsees the following increases (on the basis of 100 in 1955) : Africa 338; Latin America (excluding Argentina) 341; Near and Middle East, 384; Far East (excluding Japan and mainland China) 382.

■ In some African and South American countries, the cost of an annual subscription to a daily paper is as high as 28 per cent of average per capita income, compared with less than one per cent in the U.S.A.



Unesco - Eric Schwab

Multilith press at Tamale, Ghana, prints texts for publications in the country's vernacular languages.

■ The first communication satellite serving the mass media is expected to be launched this month. An initial exchange of television programmes between the U.S.A. and Europe will be conducted through the satellite Telstar, orbiting the globe in 2 hours 40 minutes. The American programmes will be picked up by a British Post Office station in Cornwall and then piped into the Eurovision network, in which television systems of the major Western European countries participate.

■ Charges for sending press messages over similar distances may vary by as much as 300 per cent in Latin America, 600 per cent in Africa and 700 per cent in Asia. This is due largely to inadequate and costly cable and radio services which sometimes double the cost of sending a message in one direction as compared with the reverse.

■ Lack of telecommunication services often force routing of messages sent between two points in tropical Africa through London or Paris, instead of being sent direct. For example, it is easier to telephone to Paris from Abidjan, Lomé or Cotonou than to telephone from these West African capitals to Lagos (Nigeria), and vice versa. A cable from Conakry reaches Accra more quickly via Paris.

■ In Asia, telegraph services are often beaten by the airmail and the number of telephones in proportion to population (0.1 for every 100 persons) is one of the lowest in the world. Present development plans should provide at least one telephone within a radius of ten miles in all South East Asian countries.

PRESS

ALthough the press has lost ground in North America and Europe, it has scored gains in the U.S.S.R., South America, Asia and Africa, since 1948.

The world total of daily newspapers rose from 6,120 to 7,660. Total circulation, while increasing from 219 to 288 million barely kept pace with the growth in world population. The number of copies of dailies per 100 persons increased only slightly—from 9.3 to 9.7.

In Africa, the press registered a notable advance and the number of dailies rose from 171 to 262, and circulation from 1.9 to 3 million. However, the number of copies of daily papers per 100 people remained almost unchanged: 1.3 in 1960 as against 1 in 1948.

In Asia and South America, increases per 100 people were from 2.2 to 3.8 and from 6.9 to 8.1 respectively.

■ Geography and politics can make or mar the development of one means of communication as compared to another. Reporting to the UN Economic Commission for Asia and the Far East (ECAFE), experts on telecommunication development point out that "if a country is flat and there is little trouble from rebels, aerial lines or cables would be suitable. If, on the other hand, the country is undulating or there is danger of civil disturbances, microwave or VHF radio links would be satisfactory."

■ Japan, which has the most highly developed mass media in Asia, claims 77 per cent of the total daily newspaper circulation, 73 per cent of all radio sets, 40 per cent of all cinema seats and 97 per cent of all television sets in the region of South and East Asia. Fifty-five per cent of all Japanese families now have television. Three networks are telecasting in colour. Meanwhile, Japan is building a giant television transmitter which will permit retransmission of the Olympic Games in Tokyo in 1964. Programmes will be relayed around the world through U.S. communication satellites.

■ News agencies are developing more rapidly in Africa than in any other part of the world. Over 20 African countries now have national news agencies, compared with three countries five years ago.

■ In many tropical countries, short-wave broadcasting is widely used for local services. Short-wave broadcasts in the tropics are, however, severely affected by solar interference from October to April. To solve this problem, telecommunication experts urge the introduction of frequency modulation broadcasting, combined with medium-wave "booster" services.

■ Among the islands of the South Pacific, radio services are more widely developed than the press and have become the main source of news and other information. Scattered over a vast ocean area, and with small populations, the island groups face formidable obstacles of transport and finance in developing their press and cinema facilities.

Unesco - Gerda Bohm

Villagers in the Tafilalet region of Morocco turn out in force when the mobile cinema pays them a visit.

FILM

Cinemas have increased in number from 95,000 to 167,000 since 1948 and total annual attendances rose from 11,691 million to 15,000 million. Annual attendance per person remained at 5, owing to the growth in world population.

The U.S.S.R. registered the largest gains in the cinema field, increasing its cinemas and projectors from 15,200 to 59,000 and its annual attendance from 600 million to 3,520 million. The level of attendance per person increased fivefold—from 3 to 16.4.

In Africa, cinemas increased from 1,335 to 2,300 and annual attendance from 121.5 million to 250 million. Annual attendance rate per person, although increasing from 0.6 to 1, still remains the lowest of any continent. Asia now has 15,900 cinemas as compared to 6,800. There was a parallel rise in annual cinema attendance—from 1,140 million to 3,385 million—and in per capita attendance —from 0.9 to 2.1.

In Europe and Oceania total annual attendance declined, but most ground was lost in North America, under the impact made by television—some 9,000 cinemas closed down and annual attendance per person fell from 24.2 to 10.7.

South America had a slight increase in cinemas and per capita attendance (from 3.5 to 4).

■ Radio has overcome physical barriers, as well as illiteracy itself, in Colombia, where a private educational radio service has in ten years become the most powerful network in the country. Over 170,000 village listening groups receive programmes daily at 5 a.m. and late afternoon, when farmers can most easily spare time from their work. Similar programmes, known as farm forums, are also being conducted in India and Japan.

■ UNESCO's survey for the UN on the development of the mass media in Africa, Asia and Latin America, the first of its kind, used the services of 400 people, including press, radio, film and television experts. Some 80 Member States or Associate Members of UNESCO also took part.

■ Ceylon and Thailand are to set up news agencies and existing services in India and Pakistan will be expanded as the result of a meeting recently convened by UNESCO in Bangkok on the development of news agencies in Asia. The meeting of Asian news experts also brought together representatives of world news agencies of France, the U.S.S.R., the U.K. and the U.S.A.

■ The first journalists' association, the Newspaper Society, was founded in England in 1836. Today several million mass media professionals throughout the world are grouped in over 1,200 organizations, which play a powerful role in promoting freedom of information, improving professional training and raising professional standards.

■ A pioneer in the development of the French cinema, the Société des Auteurs et Compositeurs Dramatiques (Paris) is the oldest professional organization in the mass media field. It was founded in 1777 by Caron de Beaumarchais, author of "The Barber of Seville."

■ Cultural and artistic subjects are more favoured as feature stories by Asian newspapers than by Western ones, says Mr. A.M.A. Azam, editor of the Associated Press of Pakistan, in a report to UNESCO. This preference has not so far been satisfied by agencies serving the Asian press. "A 1,000 word feature on a Hollywood star's wedding or divorce", he observes, "is not esteemed as a cultural or social subject in the Orient."

■ Television preferences among African viewers are noted in a UNESCO report, "Mass Media in the Developing Countries". "In Nigeria," the report says, "news broadcasts and programmes of African music and dances are far more popular than the imported serials favoured in Western countries." News broadcasts also figure prominently in Middle Eastern radio programmes.

■ "Pisin Niuspepa Bilong Ol Man" (Pidgin English News) claims to be the first Pidgin English newspaper published in the world. It appears once a week in Australian New Guinea and its circulation is estimated at 40,000. In outlying areas, it is read to groups by village headmen.

A SCIENTIST LOOKS AT POPULARIZATION

by Pierre Auger

The notion that "science" is something that belongs in a separate compartment of its own, apart from everyday life, is one that I should like to challenge. We live in a scientific age; yet we assume that knowledge of science is the prerogative of only a small number of human beings, isolated and priestlike in their laboratories. This is not true. The materials of science are the materials of life itself. Science is part of the reality of living; it is the what, the how, and the why of everything in our experience. It is impossible to understand man without understanding his environment and the forces that have moulded him physically and mentally.

— Rachel Carson

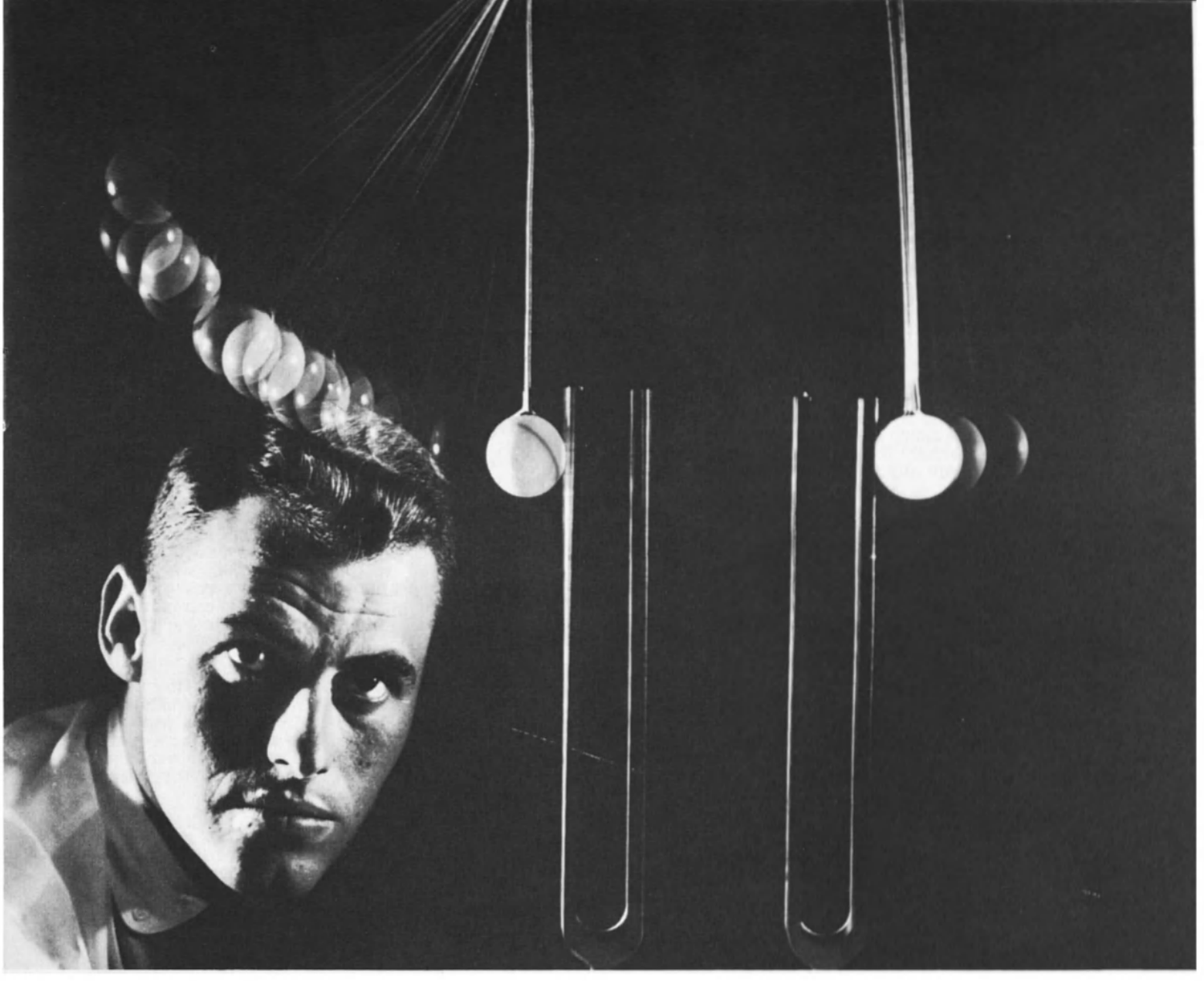
(In an address in 1952 when accepting the 1951 non-fiction U.S. National Book Award for her book on oceanography, *The Sea Around Us*)

The principle of the gyroscope, whether made as a toy or for special scientific uses, (at perhaps 20,000 times the cost), is exactly the same. That is why this research engineer can still sometimes make use of the toy version, spinning on his fingertip, which was once used as a plaything by his daughter.

NEVER in history has there been a greater need than today for the popularization of science. It has now become almost trite to speak of the gap which separates the scientist and specialist from the ordinary man in the street; and it hardly seems necessary nowadays to repeat that the steady widening of this gap is fraught with danger. Nevertheless it may be worth stressing two distinct aspects of the dangers involved.

The public is usually ill-equipped to judge scientific and technical developments adequately and so is at a loss when called on to take decisions which may have serious social or political consequences. Similarly, the scientist and technician run the risk of losing contact with their fellow citizens and hence of becoming an isolated group in their community. The scientist and research worker need a public which can understand them, just as the public needs to be able to follow the work of the scientist. But the task is far from easy.

People are no longer content to learn about the more or less classic achievements of science in the past fifty years; they are eager to understand and talk about the new thinking of science today, such as the discarding of the principle of parity or the new theories of Heisenberg in certain nuclear reactions.



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Common, everyday objects like the tuning forks seen here are sometimes used by research staffs to test important scientific principles. Above, testing a new super-alloy for high temperature steam turbine blades. It demonstrates how the alloy (metal tuning fork at right) minimizes vibration because it is built in magnetic structures, while ordinary steel tuning fork (left) vibrates freely.

Even more demanding in their desire for knowledge, people would like to attempt an understanding of such complex subjects without any recourse to mathematics, and simply by applying their common sense, helped by a few comparisons with already familiar phenomena.

Let us take a closer look at the difficulties faced both by the popularizer and his readers. In the biological sciences, for example, it is often impossible not to mention the names of species or refer to certain animal or plant organs and tissues. Yet a little patience on the part of the author and reader alike can overcome this obstacle, especially as the writer can assume, quite reasonably, that he has the reader's confidence and therefore the latter will accept as scientifically established facts certain phenomena and their effects, even though he had no previous knowledge of them.

One example which comes to mind is the explanation of how bees transmit to each other information on the whereabouts of food, which has been given by Professor Karl von Frisch, the Austrian scientist (and 1959 winner of the Kalinga Prize for the Popularization of Science.)

Professor von Frisch's studies showed that the eyes of bees see polarized light in the sky, thus enabling them to distinguish zones of different shades by which they orient themselves. As the human eye, unlike the bee's, is not sensitive to the polarization of light, the reader here has to use a certain degree of abstract thinking in order to follow the explanation.

Complaints about the use of obscure, scientific jargon, common enough in the past century, have nowadays become less frequent thanks to the efforts of science writers and to a higher level of general scientific knowledge among their readers. But the obstacles to clear and simple explanation greatly increase once the science writer moves away from observed facts and technical achievements and begins dealing with fundamental laws and principles. Yet this is the realm in which the most effective pioneer work in popularization could be made.

Modern sciences, or many of them, have long passed the stage of merely accumulating knowledge; they have succeeded in taking fundamental ideas that are linked with one another by principles which can be stated in a few lines and situating these ideas within a logical framework of highly simplified structure. Without going as far as Louis de Broglie's wave formula or Schrödinger's equation, it can be said that the principles of the conservation of impulse or energy, like the Carnot principle, represent the syntheses of thousands of experiments and calculations.

It is from these heights of the scientific world that the observer can expect to see all the valleys converge on a common source; it is from these heights that he can hope to reach the pinnacles from which he will obtain a synthetic view of the whole complex system whose exploration has taken so many years.

What is it that prevents the untrained public from following the scientist in this ascent? I personally believe that it is the capacity for abstract thought that is lacking. Just now I mentioned those fundamental concepts which are linked with one another by basic laws and principles and the synthesis of which provides the vast framework of modern science. Those concepts are essen-

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The hazards of oversimplification

tially abstract. Certainly they are based on familiar ideas, on those things that are self-evident—numbers, size, speed, position in space and time of similar or dissimilar objects; but these familiar ideas must be the groundwork for intense intellectual effort leading to abstract structures like those of mathematics. Only thus is it possible to clearly understand a fundamental concept such as that of the relativity of space and time.

Some highly skilled writers have believed it possible to present to a reader who is intelligent, but has had no fundamental scientific training, the chain of reasoning and the logical construction that lead from the concrete and familiar concept to the abstract one. In certain cases this can be done without mathematical formulæ and by using everyday terms. Unfortunately, however, such a feat produces scarcely any more real understanding than does the watching of a conjuror's tricks. The reader thinks he understands; each step of the argument seems to be within his grasp; but if afterwards he tries to handle the abstract concept which he believes he has acquired, if he tries to make use of it in other arguments, he at once realizes that he has still not acquired a sufficiently deep understanding.

There may even be some danger in the simplicity and extreme neatness of certain expositions, however brilliant they may be. I remember at the university a particularly able professor of mathematics whose lectures were so clear that they could be followed without the slightest effort and who could lead his students through the mazes of integral calculus in such a way that they seemed like broad avenues beautifully laid out. But once his lectures were over, as soon as we wanted to use these concepts in order to make an actual calculation, we often realized that we had to start all over again and that we had travelled, as in a dream, through a wilderness for which in fact we had no map.

So let us not delude ourselves. To understand these abstract concepts and to reach the syntheses they make possible, much thought is needed and much reflection. The chain of reasoning must be followed over and over again from the beginning and each time we must recognize that in fact we are only advancing a little further, only parting a little wider the veils that enwrap the new idea we wish to grasp.

This is an individual task; no one else can do it for us. The scientific writer can guide us, help us ,supply us with all the equipment needed to move forward, but he cannot "think" for us. Newton said that he had discovered his principle "by thinking about it." Similarly, we must think and re-think if we are to make any worthwhile progress along the path which the great scientific explorers have blazed for us.

The difficulties of abstract thought are not the only ones which the popularizer encounters in his work. There is also, so to speak, the question of "shock." The brightest rockets of modern physics or biology have so shocked the common sense of many highly developed people (their common sense, not their good sense) that these people have been unwilling or unable to make the effort needed to follow their flight. The principle of relativity, and more particularly the relativity of time, still seem inadmissible to many people who, although educated, are insufficiently trained in the intellectual discipline of science. The same is true of the uncertainty principle and the principle of genetic information.

Generally, moreover, such people are under the impression that there is no reason to make any undue effort since these things are only the provisional speculations of scientists, useful perhaps for their specialized work but meaningless from the point of view of real life. Others, having thought more deeply, see in them the overthrow of certain "values" which mean so much to them that their elimination is intolerable.

In regard to genetic information, for example, there are some people who, for religious or other reasons, cannot admit that all the characteristics of life are materially embodied in a list of chemical molecules, however complex. They remain persuaded that life cannot be explained on the basis of physical-chemical phenomena

KALINGA PRIZE TO SPACE-AGE WRITER

THE selection of Mr. Arthur C. Clarke, a British science and science fiction writer as winner of this year's Kalinga Prize means that this annual international award for the popularization of science has honoured for the first time an interpreter of the space age.

Mr. Clarke is a former chairman of the British Interplanetary Society and is now President of the Ceylon Astronomical Association. Interplanetary flights, spaceships and expeditions into the cosmos are among the subjects of his twenty-eight books, both fiction and non-fiction, which have sold two million copies in fifteen languages.

The Kalinga Prize of 1,000 pounds sterling is awarded by an international jury appointed by Unesco. It is a personal donation of Mr. Bijoyanand Patnaik, an Indian industrialist, who is Chief Minister of the State of Orissa and a director of the Kalinga Foundation, named after the empire ruled by the peace-loving Asoka in India twenty-two centuries ago.

The jury which awarded this year's Kalinga Prize was composed of Professor I.I. Artobolevski of the Academy of Sciences of the U.S.S.R., Professor Giuseppe Montalenti of the Institute of Genetics of Rome University, and Dr. M. S. Randhawa, adviser on natural resources and scientific research to the Planning Commission of India.

Arthur C. Clarke

Previous winners of the prize since its foundation in 1951 have been: Louis de Broglie (France), Julian Huxley (United Kingdom), Waldemar Kaempffert (United States), Augusto Pi Suner (Venezuela), George Gamow (United States), Bertrand Russell (United Kingdom), Karl von Frisch (Germany and Austria), Jean Rostand (France) and Ritchie Calder (U.K.).

The tenth Kalinga prizewinner, Mr. Clarke has, in addition to his interest in space questions, also delved into and written about another great unknown—the ocean depths. He has done much underwater exploration and photography along the Great Barrier Reef of Australia and the coast of Ceylon.

Aged 44, he now lives in Ceylon and was nominated as a candidate for the Kalinga Prize by the Ceylon Association for the Advancement of Science. Among the books he has published are "Interplanetary Flight", "The Exploration of Space", "Voice Across the Sea", "The Challenge of the Spaceship", "The First Five Fathoms", "The Challenge of the Sea", "The Other Side of the Sky" and "A Fall of Moondust". A special study, "The Challenge of the Spaceship", appeared in The Unesco Courier in November 1957.

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Scientific research sometimes calls for simple apparatus ranging from balls and toys to bubble blowers. Because soap bubbles tend to join and balance like atoms grouping themselves into orderly structures, they can be used, as here, to duplicate actual atomic crystal structures of which all metals are composed. Research scientists can thus "see" and investigate on a vastly larger scale the patterns and defect structures formed by atoms in nature. (In the case of actual crystal structure, spaces between atoms would be approximately six million times smaller than shown here).

and that a totally different type of entity, often termed a "vital" force, must be invoked. They will not be convinced until a chemical synthesis of the first artificial living organism has been achieved, even if it be no more than a virus.

In such cases, the popularizer cannot hope for anything more than to transmit a clear understanding of the problem, an exact definition of what must be accepted if the scientific adventure is to be followed further. We can, of course, also make this adventure so attractive that the lure of the quest becomes stronger than the traditional attachments. It is here, incidentally, that the fantasies of "science fiction" might have their most valuable effect.

If the difficulties are so great, just what can the scientific writer do? Let us make use of a comparison. Everyone knows that the actions of any specialized group, when seen from a distance, remain incomprehensible even to the attentive observer. The crew of a sailing ship or the workmen on a building site or mountain climbers on a rockface all behave in a seemingly bewildering manner: they stand about doing nothing, for no apparent reason; they hurry to and fro, gesticulate, concentrate themselves on the effort, again without any apparent reason. Their behaviour can only be understood if they are observed from close at hand and even then some technical explanations will be needed.

It is the same when scientists and specialists are at work: they toil away, they give up, they exult and broadcast their triumph in their publications. But we understand nothing of it, it is all too far off. The popularizer offers us an admirable telescope with which we can peer into the very place where the work is going on. He provides us with a hearing aid by means of which we can hear the replies to the questions we put; he gives us the explanations which become necessary as we proceed with our exploration.

Nevertheless, he will not turn us into mountain climbers or sailors. For that, we should have to live on the ship or cling to the rocks, with every movement having a definite and often vital inner meaning. The reader comes to share the research worker's outlook and, having understood him, will be interested in his task and will be ready to help him as far as possible. He may even become enthusiastic about this science whose spiritual value he can at last appreciate, whereas before he knew nothing of it but its material implications. If he is still young enough, he may be tempted actually to bridge the gulf which the popularizer has enabled him to cross in his mind, and become a research worker himself. What better justification could one wish for the scientific writer?

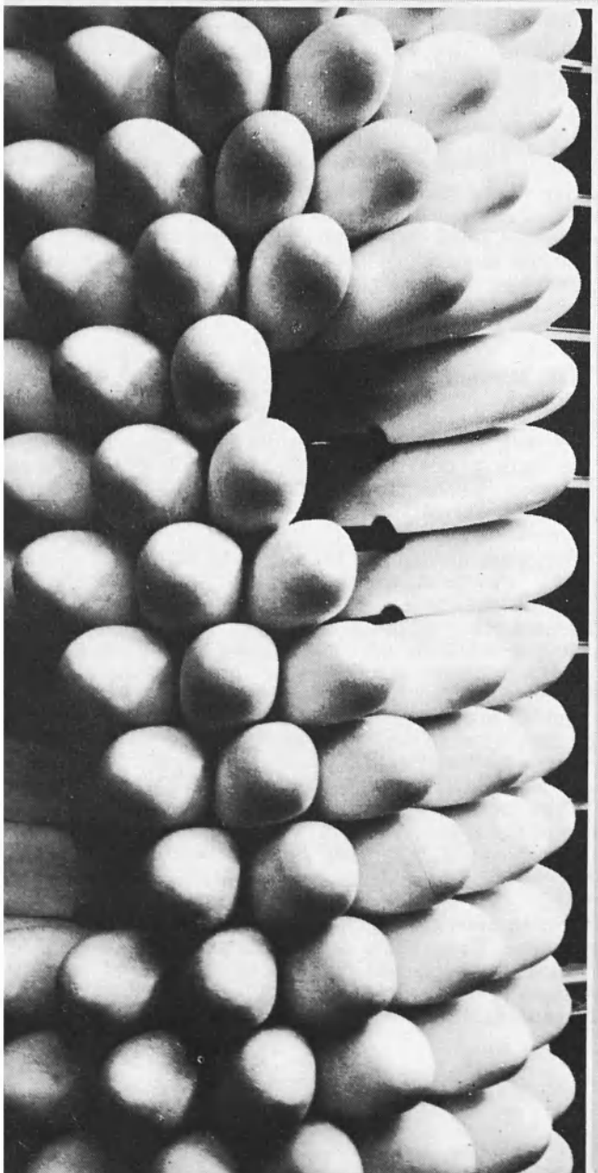
Men of the highest distinction, sometimes even famous scientists, have devoted themselves to this task of popularizing science which is at once so difficult and so enthralling. They have not hesitated to give much of their time and thought to the exposition of scientific knowledge in its most accessible form and without diminishing its value.

WONDERLAND OF NEW LANDSCAPES

Revealed by the eyes of the microscope and the telescope and written in images visualized by the oscilloscope, a new world, which is simply a new view of the old everyday world, has risen before us. It has been conjured up by the scientists who, in order to give us a good insight, have enlarged it hundreds of thousands, millions of times, photographing it in every possible light—normal, polarized, ultraviolet, infra-red. It is a world which offers us startling and beautiful images: atoms made visible by the ionic microscope, crystalline structures which recall caves and rocks, flowers and arabesques.

Photo Robert B. Smith - Eastman Kodak Research Laboratory

Tulips under X-rays.



Model of the tobacco mosaic virus.

Photo taken from "The Practitioner":
"The Nature of Viruses" by K.M. Smith

Photo CNRS-Observatoire de Haute-Provence

Interference rings appearing on a twilight photograph

Photo by Professer G. Möllenstedt

Zinc oxide crystals.

PAUL GEHEEB

In a world of violence the search for a new humanism

by Aurobindo Bose

To live in the idea, means so to deal with the impossible, as if it were possible. (GŒTHE.)

Every child comes with the message that God is not discouraged of man. (TAGORE.)

THESE quotations from Gœthe and Tagore aptly describe the reason for and the essence of Paul Geheeb's activity as an educationist in our time. The official educational policy in every country gradually gets into a rut; it is then that we need pioneers and revolutionaries like a Pestalozzi, a Tagore and a Geheeb to bring fresh life into the dead, mechanical system, to blaze a trail into the unknown and beckon us to follow and strive to realize the impossible.

The UNESCO charter says that the ideals of peace, of brotherhood and tolerance should be planted in the tender hearts of children—then only can we emerge one day from the jungle of national rivalries that is the world today. From this lofty height alone should we appraise the activities of "Paulus," as his children and fellow workers endearingly called him.

He was born on October 10, 1870 in Geisa in the mountains of the Rhön in Germany and died on May 1, 1961, in Goldern, Switzerland, amidst his children and co-workers, who were so near to his heart till the very end.

Both his grandfather and father were pharmaceutical chemists, and his father was also an active botanist, a specialist in mosses, who had a unique collection of mosses from all over the world. The young boy was greatly inspired by his father's hobby and accompanied him in his wanderings through the nearby forests, so that at eight years of age the precocious child signed his letters: "Paul Geheeb, student of Natural Sciences."

After his matriculation he studied for 20 terms in the Universities of Berlin and Jena, and was almost what Germans call an *ewiger student,* for his thirst for knowledge was insatiable; his striving to reach the heights of a perfectly integrated being (in whom science and humanism, philosophy and activity should blend into a whole) was unceasing.

Wilhem von Humboldt, the friend of Gœthe and Schiller, was his dearest teacher all through his life. In the university he studied theology, philosophy, oriental and classical languages (Latin, Greek, Hebrew, Aramaic), anatomy, physiology and psychiatry. He took his theology degree and was ordained as a pastor. But soon after his first sermon from the pulpit he strongly felt the call to spend his life educating young growing minds.

The subject of his doctor's theses under Professor Rudolf Eucken was: "Spinoza's Conception of God and Its Influence on German Thinkers of the Classical Era." But the almost penniless student, who had with great effort saved 300 Marks for the doctorate fee, thought that this sum could be more usefully spent to save the family of a drunkard from ruin, and so he never became a "Herr Dr." so all-important for the German bourgeoisie! However, on his 90th birthday both the Universities of Tübingen and Tagore's Visva-Bharati awarded him the honorary doctorate.

Before he left the university, Paulus felt that his real vocation was among the poor children of great cities and so he started work among them in the poorest quarter of Berlin. In 1902 he joined Hermann Lietz (one of the early pioneers of the new education) in Haubinda, who later appointed him as its head. But two years later Lietz leased it out and, as many parents were eager to have their children remain under Paulus' care, he started "a free school community" in Wickersdorf.

Here Edith Cassirer, the daughter of a rich Berlin industrialist, who hated the narrow constraints of a very well-to-do family, joined Paulus as a kindergarden teacher. It was nothing less than a revolt on the part of the young lady at the turn of the century, who was not willing to wait with docility for a rich man to come and ask for her hand, but claimed a woman's right to work, and further her self-development! She too, like Paulus, had her novitiate among the slum children of Berlin.

Three years later she became Paulus' wife and for nearly 52 years stood by his side, firm as a rock. She helped him, sustained him and served him to the last and still is serving his ideal, with selfless devotion. Without Edith, Paulus could never have realized his dreams. And it shows the nobility of Edith's father, Stadtrat Max Cassirer, that he who had at first bitterly opposed the marriage, now lavishly poured out his wealth, to found the Odenwaldschule in April 1910—with its extensive grounds and twelve houses.

CHILDREN from the elite of Germany (in literature, arts and music), flocked to Paulus' school, where blew a fresh wind in the stifling atmosphère of Imperial Germany in the day of the last of the Kaisers. It flourished and grew, till the chilling blast of Nazism came like a hurricane and ushered in a new barbarism. As a matter of fact Hitler wanted Geheeb to stay, because of his great international reputation, especially in the USA, but Geheeb was, as Einstein wrote to him after the war, "one of the few upright men" who kept the honour of Germany.

So with rucksacks on their backs Paulus and Edith wandered to the land of Wilhelm Tell in April 1934 and started again from scratch. In Switzerland they were without money, without properly trained teachers and they had few pupils (as the war soon broke out). They had to change the location of their school five times, till

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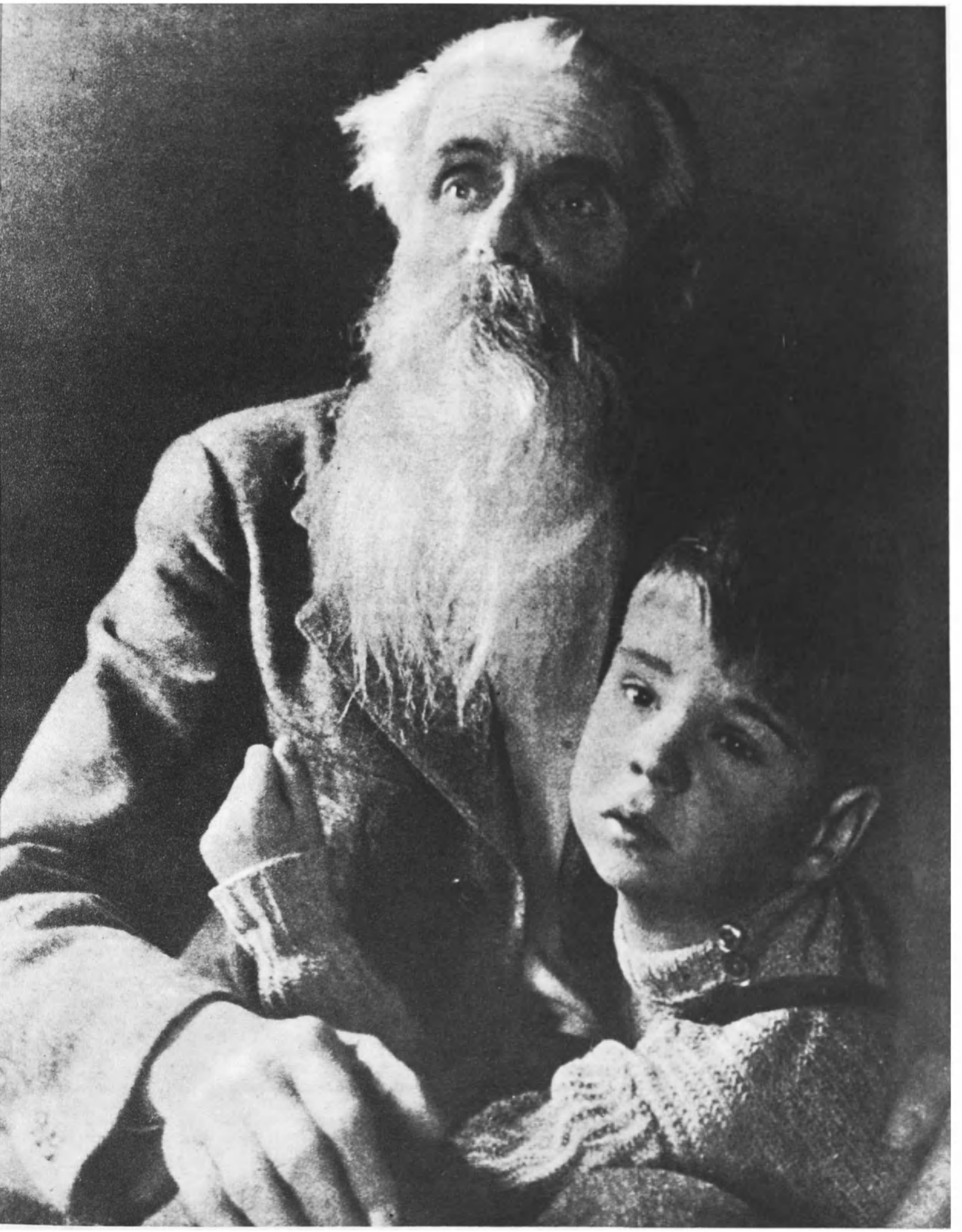
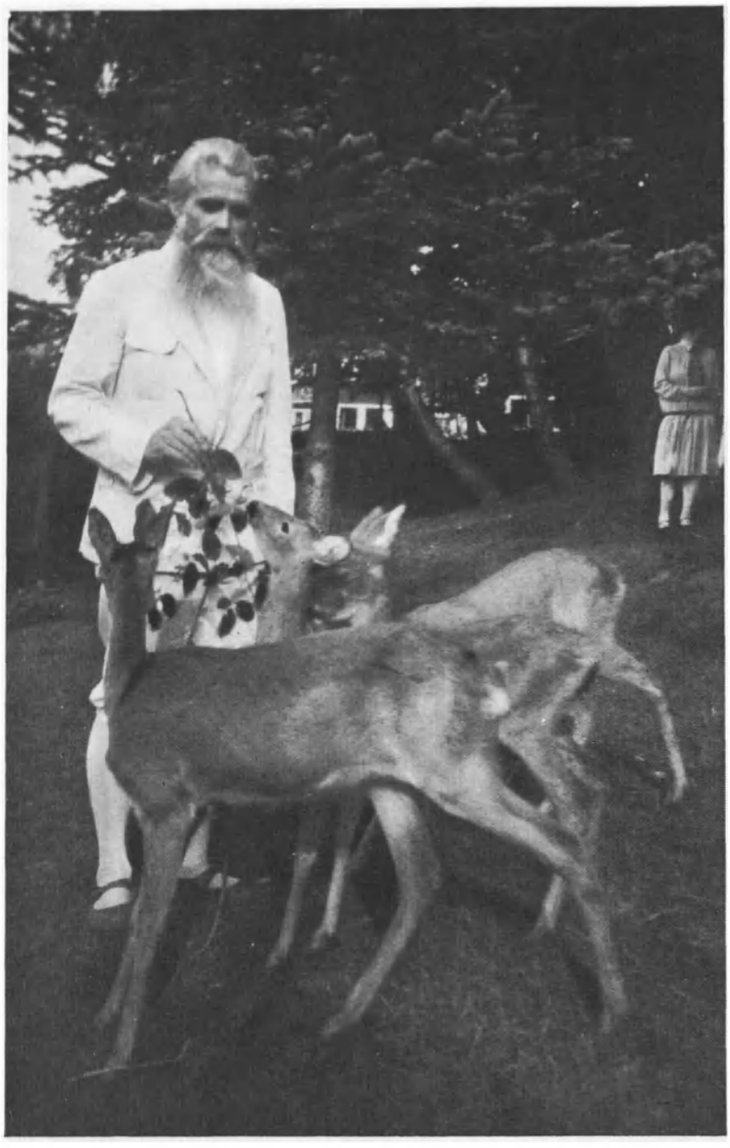


Photo Ecole d'Humanité, Goldern

After a life devoted to the training of young, growing minds, Paul Geheeb, died one year ago, aged 90.



Love and affection for the animals and children surrounding him; respect and tolerance for the concepts and religions of others: these were the dominant precepts of Paul Geheeb, who counted among his friends men like Gandhi, Albert Schweitzer, Romain Rolland and Albert Einstein. In 1930 he first met Rabindranath Tagore (above) who was visiting Europe, and they became life-long friends.

'Beyond all borders, go beyond'

they found a permanent home for their "Ecole d'Humanité" in Goldern, Bernese Oberland, in 1946.

I have heard Edith Geheeb say that they were proudest of their work during the war-years in Lac Noir (near Fribourg), in a tiny "Home for the Friends of Nature," which stood empty. There, persecuted children with no money in their pockets, escaping from various countries of Europe, partly from the horror of concentration camps, came and found a home and warmth of love, while the world outside was drenched in blood and the atmosphere poisoned with hatred. And the Geheebs shared what little they had, with these hapless children.

When the war ended, the Americans (in occupation of Hessen) asked Paulus to come back and re-start the Odenwaldschule, but he refused to go, because, as he said to me, "My countrymen have disappointed me too deeply." But there was a more profound reason. The minds of the truly great, develop and grow; they do not remain static. Just as Tagore's tiny experimental school slowly developed into an International University, so Paulus' ideas were growing into a "School of Humanity," where children of all colours, races, and faiths might gather, to cultivate universal tolerance and learn each others' ways of life and culture. And where could it be more ideally situated than in a country, where people speaking four languages live in harmony and amity? Today, among a hundred boys and girls in the "Ecole d'Humanité" are children from fourteen countries.

Having been brought up in Tagore's school, I was keen to visit the Odenwaldschule. I saw so many things that the two schools had in common that I persuaded Tagore to visit Paulus. They became life-long friends.

Among his friends Paulus counted men like Romain Rolland, Gandhi, Tagore, Albert Schweitzer, Einstein—men who put their stamp on their Age. What did all these men have in common? To answer in the words of Tagore, they were all:

Travellers
Whose eternal journey is toward the future.
Climbing barriers, crossing mountains.
Through the gaping century they strode out
Into the Unknown, into the Unseen.
In their blood the trumpet sounded:
'Beyond all borders, go beyond'.

A BOLD EDUCATIONAL REFORMER AND A SCHOOL FOR MANKIND

by Henry R. Cassirer

An "educational laboratory", Paul Geheeb called the school which he founded in 1910. He conceived the Odenwaldschule as a place for "daring, bold experiments in educational reforms", a pacemaker for "the enormous and therefore more sluggish organism of public education." In this spirit, the forty-year old educator began his work in Germany, and he maintained this air of adventure in the world of education until he ended his days more than fifty years later in the midst of his community, high in the mountains of Switzerland.

When Geheeb placed his school in the beautiful countryside of Western Germany, not far from such centres of urban culture as Heidelberg, Darmstadt and Mannheim, his choice was inspired by the philosophical tradition of which he was an outstanding heir.

Speaking in Darmstadt in 1929, Geheeb said:

"In the 18th century, there developed among the German people an ever-growing anxiety that civilization would destroy humanism. More and more passionately the cry arose: We do not need priests, nor learned men, nor officials, nor future artisans, but human beings! At that moment Rousseau sounded his call for a Return to Nature!—but not in the sense of turning one's back on culture. For Rousseau did not think of retreating into the cave of a virgin forest; he called for a true humanism. We know how Kant and Gœthe were moved and inspired by Rousseau's *Emile*, and how the young Pestalozzi avidly read this book though it was at that time proscribed in Switzerland. It was then that the Magna Carta of new education was illuminated in Gœthe's *Wilhelm Meister*."

Closeness to nature was for Geheeb not escape but a vital force for education. In this eyes there was no greater natural wonder than the child. "There is no greater

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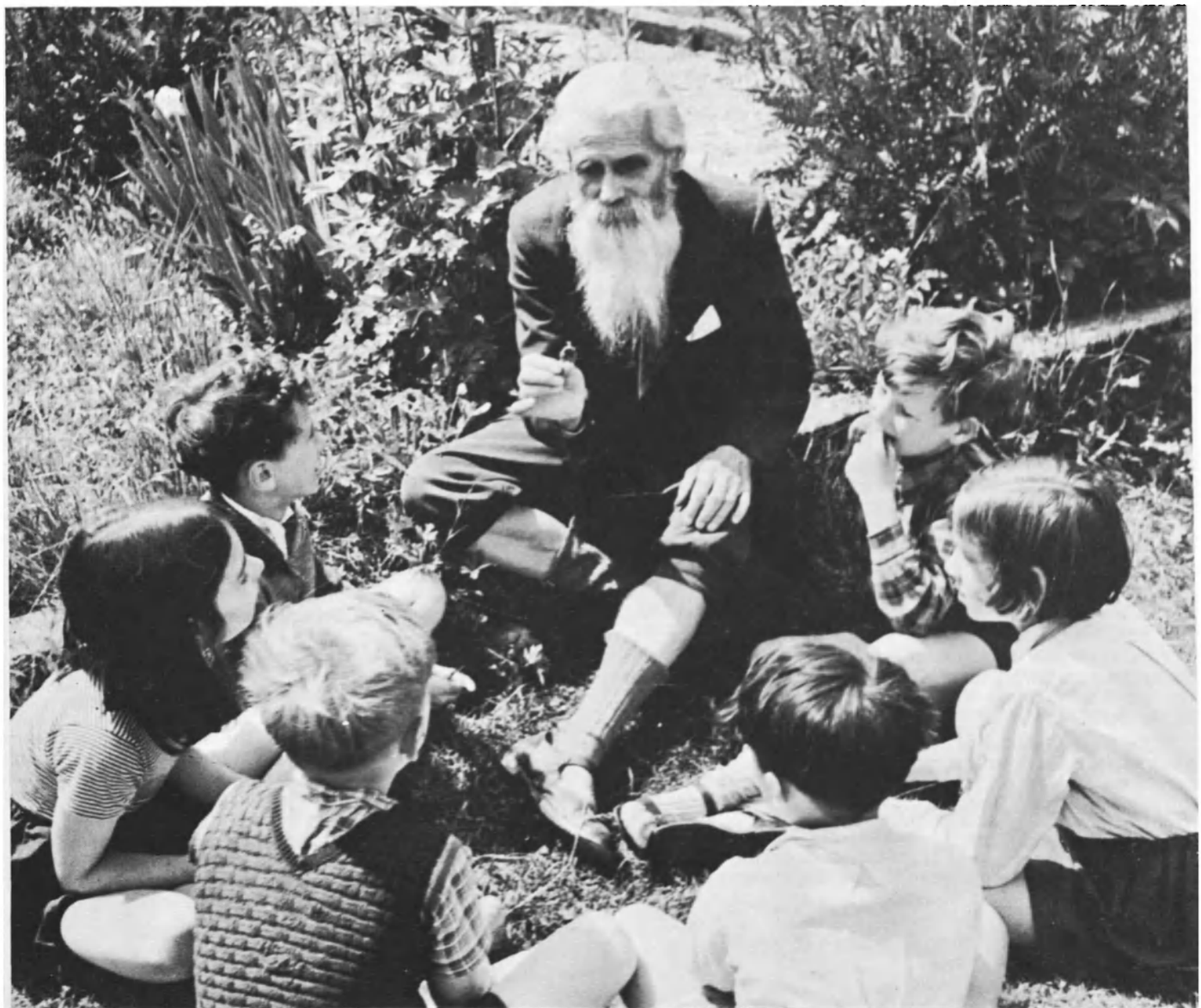
All photos École d'Humanité, Goldern

At the age of eight, Paul Geheeb was already a keen student of natural sciences, and in preparing himself for his work as an educator of youth, he strove to become a teacher in whom science and humanism, philosophy and activity were blended into a whole. Here, surrounded by boys and girls of his École d'Humanité in Switzerland (grouping children from 14 countries) he gives a biology lesson.



Established in 1910, Paul Geheeb's Odenwaldschule in Germany quickly became a focal point for progressive education with its liberal views, co-education, family groups under a house "father" and "mother" and a remarkable degree of self-government. Above, students at work in the school metal-working shop.

PAUL GEHEEB *(Cont'd)*

Not equal rights but equal responsibilities

miracle," he said, "among the inexhaustible miracles of creation, which in the strictest sense is unlimited in its richness, than the miraculous fact that nature dispenses its seed every day with generous amplitude and that not one of its fruits is exactly the equal of the other. The younger the child the more we enjoy it because we rejoice in the wealth of individuality and originality."

Geheeb felt that it was not possible to develop the individual personality of the child in isolation or even within the limitation of the family circle. A living community of adults and children is needed. "The idea that the community exists only to serve the individual by no means implies that the community as such is unimportant," he said. Every individual emerges from and depends upon his community, and without it he could neither come into being nor exist in isolation. Moreover, the individual can never reach fulfillment except through society with its immeasurable power of love, and this can best be promoted through the community."

"To be only *governed* is completely unknown in our school," Paul Geheeb said, "for it is a community without superiors, a *school without a director*... We have never quarrelled about *rights,* no one was interested in *equal rights* for old and young. The central idea of our community is *responsibility,* responsibility of everyone, for himself and for the community."

His emphasis upon responsibility as the guiding factor in education, inevitably led Geheeb to adopt an aristocratic rather than a quantitatively egalitarian approach, for "the degree to which the individual is conscious of his responsibility depends upon his experience and maturity in life." Though formally democratic in its constitution, with equal votes for children and adults in the school council, Geheeb's emphasis was neither upon the authority of the majority nor upon that of the teachers.

As one of the teachers in the Odenwaldschule put it: "The authority of the teacher is replaced by the authority of those who together represent the idea of the school; this authority is heeded by adults as much as by children."

This approach was not only in stark contrast to the authoritarian tradition of German education but also to the opposite extreme where undue "freedom" is granted to children in the name of progressive education.

"The teenage child of 12 to 14," Geheeb wrote, "often completely lacks a sense of humility, and his unchildlike sophistication is actually encouraged by contemporary thinking which is based on a confused notion of the 'right of the child,' and a well-meaning reaction against the inhuman relationship between teacher and pupil which was so prevalent in the past. As a result, teenagers frequently have no understanding of the reserve required in one's conduct with other people: they have lost the feeling of respect for greater maturity, and are unable to establish a fruitful relationship with adult friends, that is, a relationship from which they can profit and develop."

These words, written by Geheeb more than forty years ago, go to the root not only of the problem of teenagers but also of the harmful impact of a misunderstood "progressive" or "child-centred" education. Geheeb valued and respected the individuality of each child and adult; but he called for equal respect on the part of others, no matter what their age or alleged "rights."

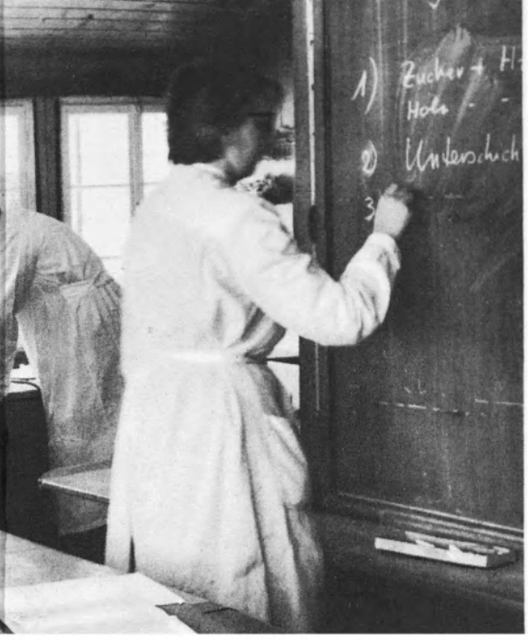
In Geheeb's eyes, life in the community for each child was therefore not only a school of democracy but a source of personality development and an appreciation of the true human values in the relationship between man and man.

This approach led Geheeb to proclaim a criterium applicable to all educational communities: "The key to the right of existence and the validity of a community which pretends to serve young people, is whether the prevailing atmosphere is harmful and a hindrance to the development of the child, or whether it promotes such growth and favours its flowering."

THE human community is composed of men and women. The school community must similarly include both boys and girls. Co-education is fundamental to education, in the view of Geheeb. It took courage and far-sightedness in 1909 to establish a school in which boys and girls not only were taught together in the same classroom but shared their life from morning till evening. The school was divided into *families,* each headed by a teacher, who took care of a group of children in one of the school buildings. Each family resembled the natural family in that it included both sexes.

Geheeb, who had formerly been militant in the movement for the emancipation of women, considered co-education so vital that the 44-page application to the government for permission to open the Odenwaldschule contained 30 pages on this subject. "Co-education means joyfully to affirm the polarity of the sexes in both theory and practice," he said, "in attitude and living, to integrate pedagogically the rich sources of wealth it produces into all fields of life and culture, and to apply them fruitfully to the development of the child."

Geheeb saw in co-education not merely a way of educating children by raising them together and teaching them in the same classroom, but a directive as to how



The Ecole d'Humanité at Goldern in Switzerland is a testament to the tenets of Paul Geheeb's philosophy of education. Formal instruction, like chemistry (above) is kept to the mornings, and afternoons are devoted to art, handicrafts, music and the open air.

Youngsters find a common interest in art. For Paul Geheeb, the education of the whole man, as he saw it, comes first. In his school, children of all colours, races and faiths, cultivate universal tolerance and learn to understand other cultures and ways of life.

human beings should live with each other throughout their life despite and because of the differences between the sexes. He conceived co-education as a force opposed to all contemporary tendencies which seek to destroy respect and tolerance among men.

Life and learning must advance together but in the view of Geheeb public education fails in either respect. The address with which he inaugurated the Odenwaldschule in 1910 has a modern-day ring to it.

"I do not want to criticize the teachers in state schools," he said. "Many of them are of course capable and are filled with the most noble intentions. But the government schools are teaching institutions with more or less overcrowded classes, where contact between the old and the young is only superficial. Yet it is only in communities of life and work that children can grow into full human beings."

"There is widespread dissatisfaction with public education and innumerable are the vain attempts at reform. Complaints are made that the schools are overburdened, and learned men disagree over whether the curriculum should be cut in one place or another. But it is impossible to reform the school with scissors. Today we see schools in which children sit listening passively to lecturing teachers, and then spend the remaining free time of the day in a painful effort to learn what has been taught in the lesson. What needs to be done is to turn these teaching institutions into working communities where children actually can collaborate with their teachers."

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All photos Ecole d'Humanité, Goldern

At the Ecole d'Humanité every child contributes to the communal life, in the house and garden. The family group of about eight is the basic unit of the school. Life is spent as far as possible in the open air: in summer there are long tramps over the mountains: in winter there is skiing for all.

PAUL GEHEEB *(Cont'd)*

Respect & tolerance transcending all barriers

A new approach to learning and to work was therefore required. Here Geheeb built upon the ideas of Ellen Key, expressed so forcefully in her famous work, *The Century of the Child* (1903), in which she said: "Until we have succeeded in driving the phantom of *general education* out of the curricula and out of the heads of parents, and have replaced it by the education of the individual, it will be vain to draft plans of school reform."

Geheeb therefore introduced a new structure into the lesson plan, the *Kurssystem*. Its essential feature was that for a period of one month each child had to choose courses in three subjects, each taught daily for 1½ hours. This made it possible for the student to concentrate on intensive studies in limited fields. Other subjects were then taken up during subsequent periods. The emphasis in teaching was less upon learning facts, than upon learning to learn, to work independently, to study and to understand.

Another feature of the *Kurssystem* was that the children were to be gathered in study groups according to their level of maturity and knowledge, rather than according to age groups. Thus a child might find himself with older children in one subject for which he was gifted, but with younger children in another subject where he had had little previous schooling. Adjustment of pace and content to individual interests and abilities, all within the framework of preparation for the final state examination was a key goal of Geheeb's educational method.

GEHEEB expressed his purpose in these words: "The organization of the curriculum should take into account equally the needs of the subject matter and of the student. So that the material can be presented and grasped in its essence, we insist that each field be studied coherently and with as little distraction as possible from other subjects. But, we also require that the pupil be given a certain freedom of choice in deciding the field of study which he takes up at any particular time in order to give scope to his needs and initiative."

Overcrowding of the curriculum, lack of adaptation of teaching to individual ability and pace, the need to teach the capacity to think and work independently rather than merely to accumulate facts and information—these ever-present concerns of all educators were clearly seen by Geheeb over fifty years ago and given practical solutions in his educational laboratory.

When National Socialism carried virulent nationalism and racialism to their extremes, Paul Geheeb turned his back upon Germany, not in a spirit of defeatism but in one of defiance. His School of Mankind, which he founded under difficult conditions in Switzerland in 1934 was as yet more an ideal and a challenge for the future than a reality.

In his inaugural speech he stressed that this might not appear to be the appropriate time to speak of a school of mankind, for while the concept of *humanity* had lived as an abstraction in the minds of Kant, Herder or Schiller, history had since demonstrated that humanity did not yet exist.

"But precisely because the idea of a school of mankind may easily be considered untimely," he said, "our age probably needs it most of all."

"The ideal which firmly stands before my eyes is the economic and cultural co-operation of mankind with each bound closely to the other. The microcosm of a living community in a school should correspond in its essential characteristics to this."

Out of deep respect for the personality of the individual in his community and a profound belief in the humanism of man as the supreme goal of all education, there grew his amity for other cultures, including in particular those of the Orient.

Ecole d'Humanité, Goldern

Paul Geheeb and his wife, Edith, who for nearly 52 years helped and sustained him in all his educational endeavours. She is still serving his ideal in the Ecole d'Humanité seen here (left centre), against the backdrop of the snowcapped Bernese Oberland.

A community is not a contradiction of individuality, but rather its confirmation. Similarly, a school of mankind requires that children shall not lose their national cultural roots in favour of a synthetic hotchpotch of cultures. "The more a child is rooted in the culture of his own nation," said Paul Geheeb, "the more forcefully and creatively is he able to establish his relationship with another cultural community."

It is love that binds man to his fellows; it is love that is the principal source of Geheeb's force as an educator. This was the theme of his inaugural address at Odenwald in 1910. "If there is anything which serves eternal values," he said, "it is the union of men attuned to each other, it is the spiritual community which consciously cultivates its soul and sees the true service to God in a community in which everyone feels that he is sustained by the love of others and carried upward toward higher goals."

This remained the theme of his life. Love and affection for the animals and children who surrounded him, respect and tolerance for the concepts and religions of others, inspired an atmosphere which transcends all barriers of nationality or religious dogma.

Dr. Henry R. Cassirer speaks of Paul Geheeb from long acquaintance with the educator. A nephew of Geheeb, he received all his schooling at the Odenwaldschule. Dr. Cassirer is head of the radio and television section, Mass Communication Techniques Division, at Unesco and is the author of Unesco's popular book, "Television Teaching Today."

MUSIC OF THE ORIENT

A new language for Western ears

by Alain Daniélou

Photo A. Martin © Atlas Photo

Governed by different rules and based on other forms, the music of Asian peoples is often unintelligible to the peoples of the West, whose musical training and tastes are too dissimilar for them to properly appreciate its beauty. Above, a flute player from Sumatra.

With the greater ease we now have in making contacts across frontiers, we are gradually coming to know more about the ideas and art forms of other peoples. We thereby lose any feelings of uniqueness or superiority and this, for all of us, is an immense gain.

Yet there are always some fields in which our ideas and tastes have more difficulty in adjusting themselves to unfamiliar forms of expression and we are apt to deny, or at least to disparage, the value of anything that strays too far from our own aesthetic standards. One of these fields is music.

Several times while I have been in Asia I have been asked, for example, to help in answering UNESCO questionnaires dealing with the musical life in Asian countries. The distinguished musicians and musicologists who drew up these forms cannot be accused of bias and partiality, yet I have often been embarrassed by the questions which, unintentionally yet unmistakably, left no doubt that "music" here was being considered exclusively in terms of Occidental forms and traditions.

This fact alone seemed to reduce anything else to a kind of folk music which, however charming and attractive it might be, could not be regarded as anything more than a simple and unsophisticated musical form surviving among peoples who had still not attained the level of polyphonic maturity.

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MUSIC OF THE ORIENT *(Cont'd)*

Learning to accept the unfamiliar

How should I have answered these questions? "No! We have no orchestras, no conductors, no composers, no concert halls, and yet our musical art is skilful and erudite, refined and richly developed. It has the power to move immense numbers of people, it lends itself to grandiose and complex melodic structures and, all things considered, it is perhaps even more suited than Western music to express human emotions at their most subtle or their most intense—those, in fact, of humanity in general and not simply of the people in the Orient.

I have often wondered how one could possibly approach such a problem except through a long, difficult and somewhat pedantic statement which would strike at the very roots of accepted musical theory and inevitably provoke stormy reactions. As it happens I have never been asked for an explanation of this kind since the inquiry was simply seeking material facts and figures on which to base a programme for helping musicians and disseminating musical works.

Before we can hope to look realistically and effectively for answers to questions of this kind and before we can expect to deal with the manifold problems which a reconciliation of the world's musical cultures would involve, it seems to me that priority should be given to putting the facts of the case before as many people as possible. And what better and more eloquent evidence could there be than fine works of music taken in their purest and most original state from the musical treasuries of countries with highly developed cultures and in particular those of Asia?

Already audiences in America, Great Britain and Germany, and to a lesser degree in France and Italy, have had the chance to hear great musicians from countries like India, Iran and Japan, as well as orchestras from Indonesia. The success of such concerts has exceeded all expectations.

Yet however great the impact of a concert (the personality of the musician and "local colour" have to be taken into account) the musical impression it leaves is transitory, thus making it difficult for us either to analyze a work or to perceive and understand the outlines of a musical system.

If we wish to see beyond the superficial aspects of technique and feeling in a performance, we need to hear the same work repeated (and where improvisation plays a major role, the same rendering) in order to grasp, little by little, its meaning and understand its structure.

We should remember too that a concert artist, always mindful of success, tends to "play" to his audience, to adapt his style to what he believes to be the public's tastes and habits. In the kinds of music where improvisation is all-important, this colouring of performance can go to extremes, as many famous examples have shown.

Today, however, in the gramophone record we have an unequalled instrument for listening reflectively, intelligently and perceptively to music which has been recorded in its natural surroundings and for its usual audience. Freed from any picturesque aspect, from showmanship and the exotism which the presence of musicians with their costumes and instruments creates, we are able to listen to this music in complete tranquility, under conditions when we are best prepared from every point of view to understand it.

I am sure it is through records that we shall gradually grasp the meaning of musical systems that differ from our own, learning to appreciate to the full their beauty, quality and values. This too can open up vast new horizons to us, revealing fields of musical experience whose existence we had never suspected.

Richly garbed musicians of a Japanese orchestra perform the classical Gagaku court music whose history goes back over ten centuries. From left to right: flutes, oboes and a mouth organ with vertical pipes. The orchestra also uses a kind of horizontal harp and percussion instruments.

Photos © Almasy

The zither, with some variations, is a stringed instrument common to countries both in the Occident and the Orient. Here two girls from Viet-Nam play the melodies of their country on an Oriental version.

Today the economic predominance of the Occident creates a serious problem for Asian cultures. Few indeed are the people of the Occident capable of realizing that modern progress and Western cultures do not necessarily go hand-in-hand. The same mistaken idea seems nowadays to be spreading in Asian countries.

The real problem today is how to safeguard some intensely precious aspects of cultural life associated with peoples who, because temporarily they are economically less prosperous than the countries of the West, are too often lumped together as "under-developed" when, more often than not, the reverse is true.

Peoples with complex social structures and "over- developed" cultural systems have always been at the mercy of invaders less cultivated than themselves in so many ways. We quickly see the absurdity of a supercilious attitude when we are dealing with monuments, architectural masterpieces or examples of the graphic and plastic arts which need to be saved from damage or destruction. But the problem becomes far less straightforward when it is a question of the living arts and, in particular, music, though this is of equal importance. Here we come up against difficult problems of evaluation.

When we hear a language being spoken which we do not understand we readily admit our ignorance. Curiously enough this does not seem to be the case with music. Even when we hear a musical language, whose syntax and vocabulary are completely different from what we are used to, we believe we have understood it all and at once feel competent to express our views on it, more often than not basing them on a few inferior examples of the music in question.

Tired of hearing absurd criticisms not only from unqualified visitors but sometimes from eminent musicians whom they admire and respect, most Oriental peoples today try to produce musical forms which, while still based on their traditional music, have been adapted to their idea of international standards. What they are trying to do is to make Asian music more comprehensible to foreign visitors and to avoid criticism and thereby gain a place of high repute in world music. The disquieting thing about it is that psychologically speaking they are not entirely wrong, although as a technical proposition the idea is absurd.

In the case of art music the theoretical problems involved in producing skilled adaptations make the task an impossible one. It can only be done at the lowest level and this generally corresponds to what in the Occident would be an adaptation into jazz of say Bach's inventions or Chopin's preludes.

In other words an alien rhythm is applied to melodic forms which are not, in fact, the essentials of the original music. In the case of Asian music the addition of polyphonic forms and attempts at modulation are utterly destructive to the very foundations of the musical language. Even if the melodic forms appear to have been preserved they no longer have the same meaning, nor in fact any meaning whatsoever.

The only effective antidote to this strange sickness is a psychological one and it will come from a much wider appreciation in other countries of the masterpieces of Asian music presented in their true and original forms and in an uncompromisingly traditional style.

This musical education can come initially through recordings and be carried on subsequently over the radio. Primarily the need is for recordings of the great

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A unique Unesco record collection

musicians and traditional orchestras of the various Oriental cultures made under ideal conditions so that selected examples of the musical systems which they represent will be available for wide distribution. An equivalent problem for the diffusion of Western music has already been solved to a large extent.

These recordings should have more than a simple ethnomusicological interest. The purpose is not to enrich the musicological records of museums with the last examples of musical arts which are doomed to extinction. On the contrary, records of great living artists must be made and widely circulated to pave the way for concerts and cultural exchanges which could not only help to preserve Asia's chief musical systems, but also introduce us to a musical art of which we at present know but little.

The production of these recordings is being supervised by the International Music Council, a UNESCO-sponsored organization, and they are being made in collaboration with schools of traditional music, radio organizations and, in most cases, with the support and help of governments. Independent specialists are also helping to create a record library which, both as regards quality of works and level of interpretation, truly represents the classical traditions of different countries in their purest forms. Modern adaptations and concessions to fads and tastes of the moment have been scrupulously avoided and arrangements of folk music of an orchestrated kind which have become quite common in some countries are being systematically excluded. (See details page 35)

In assembling these collections we have tried as far as possible to draw a distinction between the different kinds of music. Instead of offering a fragmentary sampling of items, it has been decided to devote several records to specific aspects of a country's music. This provides the room needed to present complete works and the success so far achieved by the collection shows that even from the viewpoint of musicians and music lovers belonging to other cultures this choice was the right one.

MUSICAL anthologies of Iran (two records), of Afghanistan, of Laos and of Cambodia have already been issued. Now in production are two records of an Indian anthology (Vedic songs and music for dancing and for the theatre from Southern India) and a record of Tunisian music. Three records of Tibetan music and a Moroccan record are now being made and Japanese, Indonesian and Korean anthologies are also planned.

A parallel series of recordings of folk music will shortly make available important traditional forms of music from countries which do not possess, properly speaking, an art music for which a written theory exists. This series will not be limited to Asian music, but will eventually deal with the traditional music of all countries including African and European.

This collection of recordings is not considered as something final or complete in itself, but rather as the first step in the creation of constructive links between the world's different musical cultures. Thus a larger place will be opened up for the great Asian musicians in international musical life and a greater measure of mutual comprehension created, for we can never hope really to know another people unless we understand the kind of music which moves and stirs them.

ALAIN DANIELOU *is Director of the Oriental Music Study Centre at the Institute of Musicology, University of Paris and a professor at the School of Oriental Languages in Paris. He is adviser on questions of oriental music to the International Music Council.*

Harpists and cymbal players accompanying singers and dancers who are depicted on this bas-relief at the temple of Angkor-Vat testify to the importance of music in the civilization of Cambodia. City of Angkor with its masterpieces of art and architecture came to light only a century ago.

Village orchestra in Thailand. Players with their percussion instruments are grouped on the left and those with xylophones on the right.

© Giraudon

Sehtar player depicted by a 17th century Indian artist. The Sehtar, a kind of small lute, is also one of the popular instruments in Iran where it is chiefly used to accompany songs.

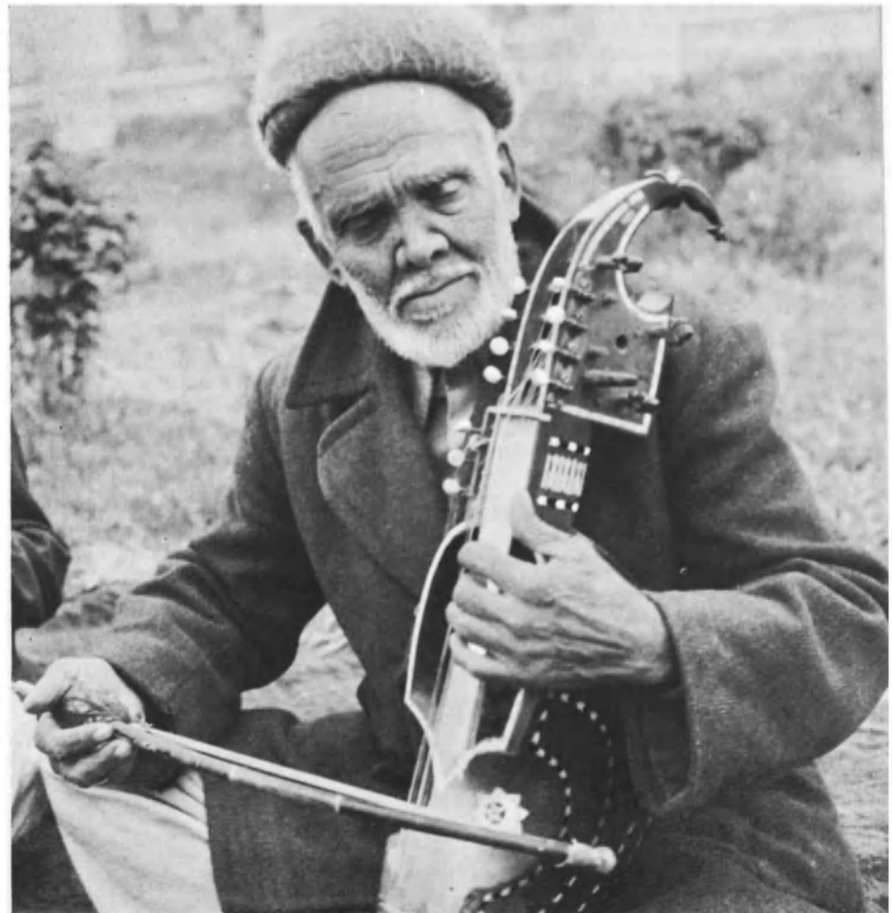
Unesco-L. Cottrell

Unations-Louis Falquet

Ravi Shankar, a leading Indian musician, playing the vina at a United Nations Day Concert in Paris. The vina, one of India's chief—and most ancient—musical instruments, has three drone strings and four fretted strings on the bamboo fingerboard, and is plucked just like a guitar.

Afghan sarinda player (below). This bowed instrument of South Afghanistan is used like a gypsy violin, whose ancestor it might well be. The music traditionally played upon it has much in common with the gypsy music that is usually associated with Eastern Europe.

© Alain Daniélou



LATEST PANORAMA OF THE WORLD'S TRANSLATIONS

LENIN was the world's most translated author and the Bible was the world's most widely translated title in 1960, according to figures listed in the latest (thirteenth) edition of "Index Translationum", published annually by Unesco. Shakespeare's comedies and tragedies were the most translated works of literature by a single author. Among writers of fiction, Tolstoy and Jules Verne are tied for second place while Agatha Christie and Dostoievsky are tied for third.

Translations of Shakespeare numbered 134, spread over 29 different countries. Tolstoy's "Anna Karenina" and assorted other works count up to 122 as do titles by Jules Verne, grandfather of science fiction. Mystery lovers around the world read Miss Christie in 109 different languages.

Unesco's thirteenth annual volume lists 31,238 titles translated in 58 countries. They are indexed under General Works; Philosophy (including Psychology); Religion and Theology; Law, Social Sciences and Education; Philology and Linguistics; Natural and Exact Sciences; Applied Sciences; Arts, Games and Sports; Literature and History; Biography and Geography.

More than half of the titles listed (over 17,000) fall in the category of Literature. Law, Social Sciences, Education, History and Geography, Applied Sciences, and Religion and Philosophy come next in that order. As usual, Language and Philology trail the list with only 81 translations recorded for 1960.

The U.S.S.R., a multilingual nation, continues to head the list as the country with the most titles translated—5,507. Germany, both East and West, is second with 2,859 works translated, and Czechoslovakia third with 1,584. Other countries listing more than a thousand translated works are Italy (1,513), France (1,426), Spain (1,416), the United States (1,292), the Netherlands (1,287) and Sweden (1,075).

Although literary works account for most translations listed in Unesco's annual, a few countries have given preference to other subjects. In the United Kingdom, for example, out of a total of 411 translations listed, 186 fall under the subject of theology and religion. In Bulgaria, with a total listing of 548 translations, law, social sciences and education account for 149 titles with another 135 translations listed in the field of applied science. Works on history, geography and biographies account for 205 translations listed by the United States in an overall total of 1,292. Applied sciences are the most frequently translated in Czechoslovakia and arts, games and sports take the head in Switzerland.

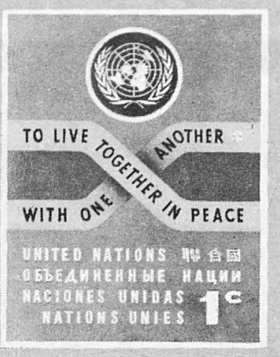
In Unesco's latest edition, the Bible is listed the most often with 258 translations published of many different versions, both classic and modern. Most translated single author of non-fiction is Lenin with 240 listings, and in second place is Nikita Khrushchev whose works have been translated into 211 different languages in 12 countries. Stalin, once at the top of Unesco's lists was translated seven times.

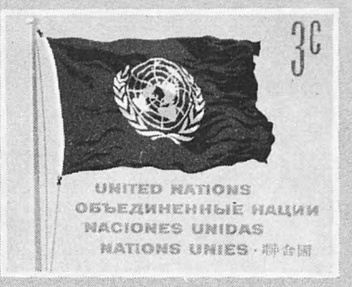
NOBEL prize-winners for literature are well represented among those authors who have translations listed in the two-figure category. Pearl Buck has 59 translations listed; Ernest Hemingway 36; Albert Camus 31; Rabindranath Tagore 30; George Bernard Shaw, Thomas Mann and Henryk Sienkiewicz all with 26; Rudyard Kipling, Boris Pasternak and Bertrand Russell all with 25; Romain Rolland 22; William Faulkner and Selma Lagerlöf 21; and André Gide with 17.

Chekhov ranks next to Shakespeare as most translated dramatist. Other writers who have 60 to 100 titles listed are Enid Blyton, English author of children's stories; Georges Simenon, the creator of "Maigret"; Karl Marx, Honoré de Balzac, Michael Sholokhov, Charles Dickens and another mystery writer Erle Stanley Gardner. Close to this group is a new-comer, Graham Greene, the English novelist, for whom 58 titles are listed as having been translated in 1960.

Old favorites continue to multiply themselves in foreign languages with Sir Walter Scott's romantic novels listed for 33 translations; Guy de Maupassant's stories 39 translations; Edgar Allen Poe's tales 25; the Arabian Nights 27; the love stories of Colette 30; and the "Robinson Crusoe" creator, Daniel Defoe, 34. Most translated authors of ancient times are Plato (45 titles) and Homer (42), with Sophocles, Cicero and Æschylus close behind.

Index Translationum XIII. *International bibliography of translations, Unesco, Place Fontenoy, Paris* (7e). *Price : 65 NF;* $18.50; 92/6d *(stg).*





THE UNESCO PHILATELIC SERVICE

Most countries issue regular stamps which remain on sale for several years, certain values being added and others discontinued as postage rates change. The first definitive stamps of the United Nations, issued on U.N. Day, October 24, 1951, and in regular use since then, have now been re-issued with new designs as from May 25. These new regular U.N. stamps in 1, 3 and 5 cent denominations are shown here together with an 11 cent stamp which has been added to meet today's postal requirements. These stamps and other philatelic items can be obtained from The Unesco Philatelic Service, Place de Fontenoy, Paris (7e).

Letters to the Editor

TEST FOR QUALITY

Sir,

In reference to the quality of THE UNESCO COURIER, may I point out to those who feel it at all wanting in any way, that any thick North American publication, of which I take several, when stripped of their advertising, contain no more meat for the intellect than does your magazine and in many cases, contain considerably less. This is in addition to the fact that THE UNESCO COURIER gives the most complete treatment to its chosen subjects.

I can't pick an outstanding issue for 1961, they have all been adequate and satisfying in their various fields. May I humbly suggest to those readers who feel THE UNESCO COURIER does not appeal to, or cover their fields of interest, that they broaden their own horizons. In today's world how can a person who aspires to world fellowship or world cultural citizenship, at the very least, say "Africa, or South America or Abu Simbel or anthropology do not interest me, I am only interested in philatelics." I do feel that a type of world cultural citizenship, to use the phrase loosely, can be attained and must be in the back of the minds of those who read your magazine with deep contemplation and appreciation. Perhaps this is a first step towards world citizenship in the full sense, for the individual at any rate.

May I suggest as a final criterion of magazine quality: What magazines' articles remain in your mind the longest? For me, those of THE UNESCO COURIER rank at the head of my memory. May it also become required reading in all schools one day soon: it will be in effect a current world encyclopedia.

G. H. Armstrong
Virden, Manitoba, Canada

THE OTHER SIDE OF SCIENCE

Sir,

I have been extremely interested in certain of your issues—Velasquez, the Racialism issue, in particular. Here you seem to me really aware of the demands and interest of your readers. However, your issue on African fauna perturbed me. My main objection is your placid acceptance of science and its necessity as a whole. You dealt with African fauna, some members of which you admitted have to be destroyed for "utilitarian" reasons. What of vivisection which in UNESCO countries is today a mainstay of physiology, surgery, and medicine? The vivisectors themselves admit that many experiments even in their eyes are useless, cruel and wasteful. A few scientists believe it is the main cause of the failure of medical research in its fight against disease. One medical registrar went so far as to say that he thought it "The greatest mistake the world has ever committed."

Yet, we hear nothing of this side. Vaccination, research, the strong arm of Man, is all I have read of. I am confident that you are not a magazine that pampers to the majority just because they want to be pampered to. I believe that you sincerely wish to present the truth to your readers. In a nutshell, my wish is that you would begin with the ideals of fraternity, liberty and equality, in which you believe, and work outwards wherever they lead, and not try to reach them by routes which might never get you, or me, or any of us there.

Roger Moody
Bristol, England

WORLD-WIDE REFERENDUM

Sir,

Among the letters published in your March issue was one from Australia, headed "A Plea for survival." Is it not crazily macabre that free people have to make this plea? I agree whole-heartedly with the contention of the writers that "it seems pointless addressing ourselves to or through our governments."

Why should we not have a voluntary world-wide "referendum"? Simple letters could be written by ordinary people of every race and nationality to the Secretary-General of the United Nations asking him to put before the General Assembly our demand to be allowed to live in a world free of contamination from nuclear tests.

The fear in the world today is so widespread that I am sure with a minimum of publicity and with the provision of a simple letter that could be copied by all nationalities, the flow of letters would be such that our Governments would be forced to take account of the views expressed. A target date could be set to achieve the maximum impact.

Surely this scheme would appeal to the imagination of all who feel helpless and frustrated by the present situation? Would not the flow of letters become an avalanche which could sweep all before it? Your publication, distributed in so many countries seems the ideal starting point for such a scheme.

Lilian M. Fox
Sevenoaks, England

A FAIR DEAL FOR GEOGRAPHY

Sir,

Your article "The World of Prehistoric Man" (UNESCO COURIER March 1961) was, overall, most interesting. However, I would like to correct just one statement that may give a wrong impression of our schools' curricula. This is the inference that the subject of geography is dealt with inadequately in Australian schools.

It is true that until the completion of the State School, when the child is about 12 years, geography is incorporated in a general subject, Social Studies. But in the succeeding years of the child's education, geography is recognized as a subject such as the author of this article, Nino Frank, would wish.

By the time the student has reached Form VI level, he is about 17 years, If he has chosen a Humanities Course, as distinct from a Science course, he has covered World Geography as a study of the earth's crust and atmosphere. Specialized studies of various countries have also been made.

Recently the University of Melbourne has appointed a Chair of Geography. I believe too that our new Monash University also recognizes geography as an entity in its curricula. Thus, in a Humanities Course of Education, the study of geography ranks with history, languages, philosophy, etc., as an integral part of education in Australia.

S. R. Karp
Melbourne, Australia

TRAVEL AND TOURISTS

Sir,

The importance of the "seasonal migration" of tourists both on national and international levels, and the manifold human and economic factors it involves are rightly regarded as one of the most significant developments of our time. Would it not be a suitable subject for one of your future issues? The great many forms taken by it, the international efforts to stimulate it and the thirst for discovery which brings men closer together through recreation would, I am sure, interest the majority of your readers.

R. Castelnau
Bordeaux, France

ED. NOTE: *We hope to devote part of a future issue to this important subject.*

BEWARE OF HISTORY BOOKS

Sir,

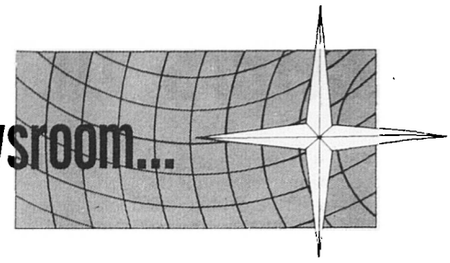
I was very surprised to find in your March issue (The Story of the Metric System) a kind of panegyric to the French Revolution. UNESCO, symbol of order, civilization and culture, sings the praises of the most savage and sanguinary period of French history.

You speak of Lavoisier, but do not mention that he was executed in the Place de la Concorde, condemned by a court which declared: "The Republic has no need of scientists." You also speak of Talleyrand, but do not say that he was always a friend of order and remained a monarchist.

One should beware of school textbooks; they give an entirely false picture of this terrible period.

M. Thumble
Paris, France

From the Unesco Newsroom...



RADIOISOTOPE LIGHTING: German scientists report that six substances among the thousand or so isotopes so far known produce radioactive light energy. Since these radioisotopes have a half-life of several years they would provide economical light sources in places where permanent illumination is needed.

READERSHIP MOUNTS IN WESTERN NIGERIA: Western Nigeria, which spends nearly half of its revenue on education, is planning expanded readership facilities including the construction of a new Central Library at Ibadan, its capital. The Government is already sending books to schools and villages through a series of mobile libraries, and local and district councils operate over 50, including special ones for children.

NEW WAYS IN TEACHING: Demonstration centres where educators could see how new techniques—radio, television, films, electronic computers and teaching machines—can be applied to school programmes should be set up in various parts of the world. This recommendation was made by educators, psychologists and telecommunications specialists from 15 countries who met under UNESCO's auspices in Paris recently.

MEASURING ANTARCTICA'S ICE CAP: A six-man party of Australians from the Wilkes Station in the Antarctic now moving inland across the ice cap of the continent has been measuring its thickness by seismic soundings. In several places bedrock was found 1,000 to 1,500 feet below sea level and at one point underlying rock was about 9,000 feet below sea level.

SHAKESPEARE IN ARABIC: The complete works of Shakespeare are being translated into Arabic under a project sponsored by the Arab League which is also preparing translations of classics of ancient European literature including the "Iliad", as well as of works in Oriental languages.

INTERNATIONAL SURVEYS OF THE SEA: Plans for large-scale oceanographic expeditions with international fleets of research vessels operating in the Atlantic and Pacific under the auspices of the Intergovernmental Oceanographic Commission have been announced by the United States and the U.S.S.R. at Unesco House in Paris. The vast programmes proposed would include studies of ocean currents; the ocean's influence on the weather; physical, chemical and biological processes; gravitational, magnetic and electrical fields in the ocean; and the geological structure of the ocean floor.

WORLD THEATRE DAY: Special theatre performances and television and radio broadcasts marked the celebration of World Theatre Day on March 27, a date chosen to coincide with the opening of the 6th season of the Theatre of the Nations in Paris, where 23 countries are presenting productions ranging from classic Greek dramas to works by Strindberg, James Joyce and Lorca.

PACT AGAINST DISCRIMINATION: The Convention Against Discrimination in Education adopted by the 11th Unesco General Conference entered into force on May 22. It conforms to the Universal Declaration of Human Rights which asserts the principle of non-discrimination and the right of every person to education.

REVIEWING AFRICA'S EDUCATION: Ministers of Education from more than 30 African countries met in Unesco House recently to take stock of progress made in implementing the master plan for developing education in Africa adopted a year ago in Addis Ababa. Primarily the meeting reviewed national plans in the general context of each country's economic and social development.

CLEARER WORLD WATER MAPS: A standard system of signs, symbols and colours to be used on maps of the earth's water resources was adopted by scientists from eight countries meeting in Paris recently. The standard legends approved will ensure greater legibility on hydrogeological maps which group data on climate, surface water, the permeability of rock formations and the underground water table.

EUROPE DEFEATS MALARIA: Reports reaching the World Health Organization show that malaria will be eradicated from the whole of continental Europe by the end of this year. In 1961 there were only 141 new cases of malaria in a total population of 304 million Europeans living in previously malarial areas.

NORWAY HELPS HONG KONG: A new hospital attached to the Chu Hai College in Hong Kong which is a gift from the Norwegian people in connexion with the World Refugee Year was inaugurated recently. It will serve as an educational training centre for more than 2,000 students.

OXYGEN AT YOUR SERVICE: The world's first Red Cross oxygen service is now operating in Germany ready to meet emergency needs for cardiac or pulmonary patients around the clock. Oxygen supplies are delivered to private homes on request in a specially equipped ambulance, and a Red Cross worker gives full instructions on the use of the equipment.

SCIENCE SURVEY IN AFRICA: A UNESCO mission has now returned from a survey of scientific training and research facilities in fifteen countries of tropical Africa. Its report will help to guide UNESCO's future long-term science programme for Africa and will cover such fields as the higher educational facilities needed for research workers and the conservation of natural resources.

CUBA'S FIGHT AGAINST ILLITERACY: According to a Cuban Government report to UNESCO, 707,212 adults learned to read and write during 1961 in the "Year of Education" campaign to wipe out illiteracy in the island nation. Last year the number of illiterates in Cuba was estimated by the Government at 979,207. The report states that the number has dropped to 271,995, which corresponds to 3.9 % of the population, and puts Cuba's literacy level on a par with countries like Switzerland, France, the U.S.S.R., Czechoslovakia and Japan. According to the report, people from all walks of life joined to form a force of 271,000 volunteer teachers, including 35,000 regular teachers, 121,000 "popular instructors" and 115,000 members of special teaching brigades. Teachers also came to help from Costa Rica, Brazil, Mexico, Uruguay and Panama.

News Flashes...

■ *Yemen recently joined* UNESCO, *becoming the* 106*th member state.*

■ *Over* 1,200,000 *pages of historic documents in libraries, museums and official archives of eight Latin American countries have been microfilmed by* UNESCO's *mobile unit since* 1957.

■ *In the north Pacific, the U.S. naval laboratory ship, "The Pioneer" has discovered a mountain range of* 34 *underwater peaks ranging from* 3,000 *to* 6,000 *feet in height.*

■ *Circulating art exhibitions sponsored by the National Gallery of Canada reached more than* 250,000 *people last year.*

■ *Thirty-four radio stations in Chile relay twelve lessons a week to more than one thousand local schools.*

■ *The Surf Life-Saving Association of Australia, an association of volunteers, has saved over* 200,000 *people since its inception.*

■ *To mark the* 100*th anniversary of Jules Verne's "Five Weeks in a Balloon" the science correspondent of the London "Daily Telegraph" is to make a similar trip starting from Tanganyika.*

■ *Research into the use of chlorella, a single-cell alga with high protein and vitamin C content, as an item in the diet of space travellers is being made in the Soviet Union.*

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Edited by the International Music Council under the direction of Alain Daniélou.

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(See article page 27)

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ASIA'S ANCIENT MUSIC

Dressed in traditional robes, Japanese musicians perform their country's oldest music—Gagaku. The rich heritage of Asia's ancient musical culture is still a closed world to many peoples, but through recordings, concerts and cultural exchanges, the musical languages of Asia can become more intelligible to Western ears (see p. 27).