A window open on the world

The UNESCO Courier

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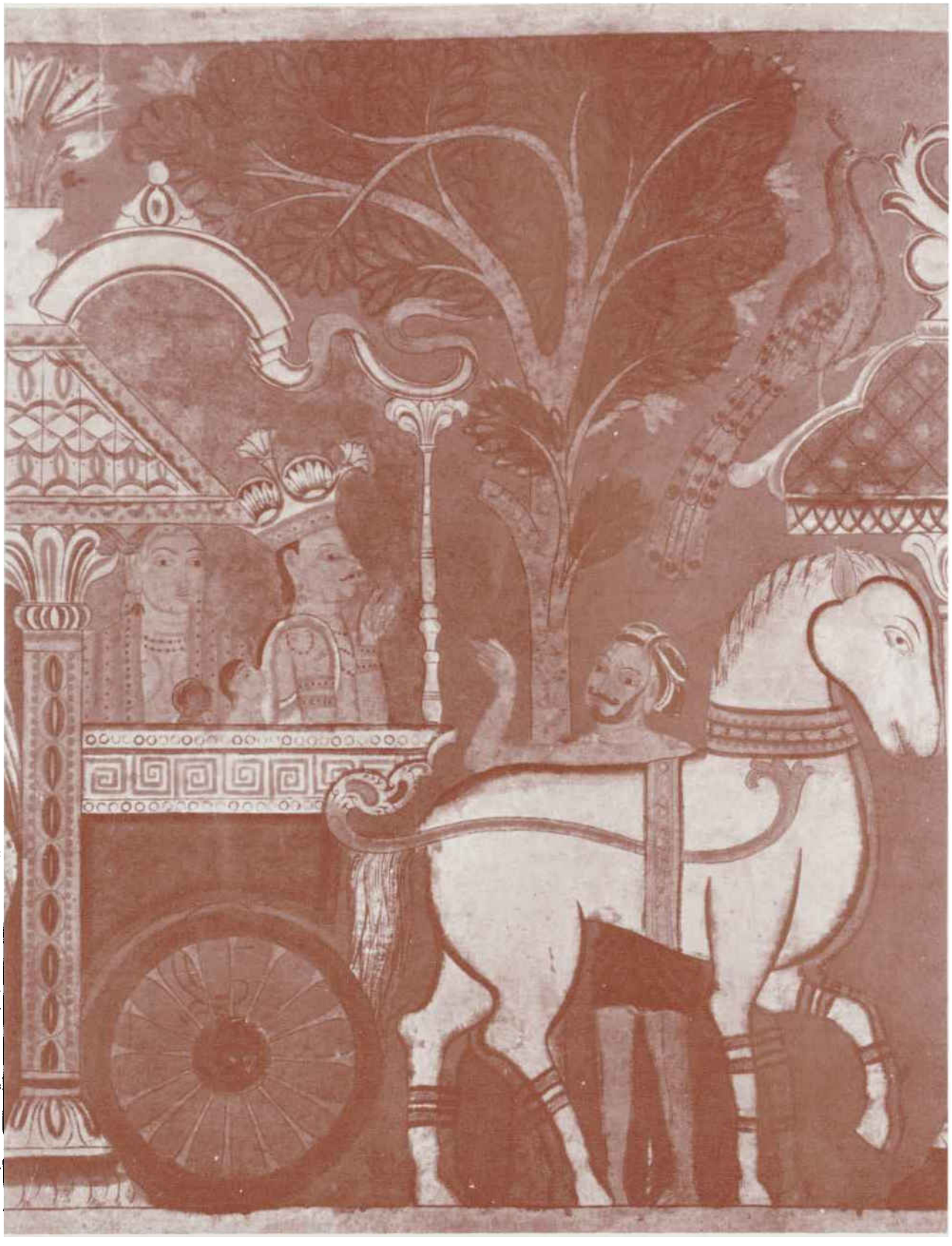
25 YEARS

OF UNESCO

VIEWED BY

A STUDENT

OF 25



From "Ceylon: Paintings from Temple, Shrine and Rock" © Unesco

Road to asceticism

TREASURES OF WORLD ART

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Ceylon

Buddhist artists have never tired of recounting in paint and stone the Jataka stories—tales of Buddha's previous lives before he attained Enlightenment. This 19th century painting, one of a series of panels in the rock and cave temple of Mulgirigala, southern Ceylon, depicts a scene from the *Vessantara Jataka,* the last birth of the Buddha-to-be as a king who gave away all his worldly possessions and departed to the forests with his wife and children to lead a life of asceticism. It is reproduced from "Ceylon: Paintings from Temple, Shrine and Rock", one of 23 albums published in the former "Unesco World Art Series" that presented many little-known or inaccessible masterpieces of art. Other unfamiliar works from the treasury of world art are featured in 38 Unesco paperbacks comprising a "Pocket Art Series", and are also available as colour transparencies in 48 sets of Unesco art slides.

The UNESCO Courier

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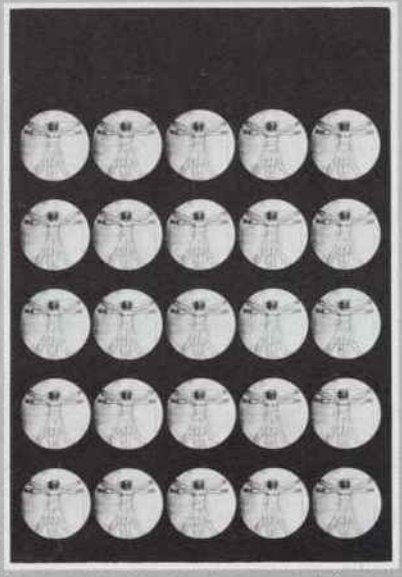

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Cover

On November 4, 1971, Unesco celebrates its 25th anniversary. The 25 medallions on our cover reproduce the drawing of the Universal Man by Leonardo da Vinci, while the back cover symbolizes the unflagging march forward of men and women everywhere toward a better and richer quality of life.

N° 8-9 - 1971 MC 71-2-269 A

YOUTH OF
YOUTH OF

by René Maheu
Director-General of Unesco

ON November 4, 1971, Unesco will be twenty-five years old.

To those who have served Unesco throughout this quarter of a century, giving unstintingly of themselves and being rewarded a hundredfold by the exhilaration that comes from dedication to man in all his universality, this anniversary provides a wealth of material for reminiscence and reflection concerning the past.

But it is to the future that I look. The future is the true dimension of Unesco which has as its mission to usher in a new spirit and which draws its whole strength from the hope inherent in its purpose. My thoughts turn to those who were not yet born when Unesco was created, the young people who are the future of the world and who make up more than half its population.

It was fitting to ask a young person, who had played no direct part in the history of Unesco, to tell the story of our first twenty-five years, as he himself saw them with the clear, fresh eye of youth. Those of us who have lived this history have lived it chiefly for the young people of his generation, ever since that "great and terrible war" when everything was so nearly lost, up until today when our efforts—with all their shortcomings—are under the sweeping scrutiny of tomorrow's generations. And it is precisely on them that Unesco's tomorrow depends. Even if they may misjudge certain aspects of our activities or some of our intentions can we fail to ask youth about their attitudes towards our work and whether or not it comes up to their expectations?

In the past twenty-five years Unesco has had to face situations and tasks that its founders had never foreseen such as the cold war of the Fifties and aid for development in the Sixties. Unesco thereby has demonstrated a capacity for adaptation and invention which testifies to its vitality, and at the same time it has shown a remarkable insight into present-day realities and their probable aftermath.

These qualities will be especially needed in the immediate years ahead which, I feel sure, will see the opening up of a new era. Here I am not referring to political

THE WORLD UNESCO

events, to modifications in relations between States—although some very important changes are already emerging on the horizon; I am thinking of those more profound transformations that are now taking place in the thinking and actions of men which are bringing into question the very meaning of life and the order of society.

ALMOST everywhere, especially amongst the younger age groups, it seems to be increasingly felt that the quality of life of the individual is the only real justification for the efforts made to promote growth and prosperity in a community. It is clear that the quality of life sought by many persons—including those who choose withdrawal from society or the path of revolt—calls for a re-examination of currently accepted values. Development is coming less and less to be equated with growth pure and simple. Growth for what? is the often heard question.

We can therefore be quite sure that education, science, culture and communications, that is, learning and training, research and the creativity of the mind which enable man to explain his existence and give purpose to life, will be matters of the utmost concern for governments and citizens alike in the quarter of a century to come. This is already the case with education. What has been called the crisis in education, or more properly, the need for the total regeneration of education, is clearly evident in different forms and to varying degrees all over the world. For some, this "crisis" is merely a symptom heralding the approach of a vast cultural revolution.

Faced with such great changes, the focus of which is still unclear, it is not unfitting that Unesco in its youth should be entrusted to the youth of the world. Their destinies are inseparable.

25 years of Unesco viewed by a student of 25

by Ehsan Naraghi

ON November 4, 1971, the United Nations Educational, Scientific and Cultural Organization celebrates its twenty-fifth anniversary. To mark this occasion we are publishing in this special issue of the "Unesco Courier" a "youth's eye" view of Unesco, its achievements, its failings and its problems.

The outcome of months of probing and delving in and around Unesco's Paris headquarters by a young Canadian student, Wayne McEwing, this lively survey gives a new perspective to the work of the least specialized of the United Nations specialized agencies.

With all doors open to him, McEwing examined Unesco from top to bottom, assessing it with the objectivity of an outsider and putting his reactions down with the critical candour of youth.

The story of how he came to write about Unesco in itself speaks volumes for the keen interest of young people everywhere in the international scene and for Unesco's own interest in the questions and points of view of youth. Moreover, it demonstrates how Unesco's approach to the world of youth has evolved over twenty-five years.

Broadly speaking, before 1968 emphasis was placed on youth activities in the fields of leisure and sport activities. In 1968 came the realization that the problems of youth were of deep concern to society as a whole. Now a further step forward has been taken with the recognition that the problems of society as a whole are of direct concern to youth.

In 1969, Unesco held the first of a series of three-month, summer study courses for students from all over the world, and these have now become an annual event. The aim of the courses is to involve young people directly in the work of Unesco and at the same time to benefit from the impact of fresh vision and a new approach—in fact, to establish a two-way traffic of ideas.

Each student works in a field of direct interest to his outside activities. A student teacher, for example, finds himself alongside members of the permanent staff of the Education Sector working out a functional literacy project for South America ; in the Science Sector a would-be geologist studies new methods of assessing earthquake hazards.

At the end of three months, the twenty or so students attending a course evaluate what they have

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EHSAN NARAGHI *is director of Unesco's Youth Division, and was formerly professor of sociology and director of social studies and research at the University of Teheran (Iran). As a sociologist he has collaborated for many years in the work of international scientific associations. In 1965 he prepared for the United Nations the first world-wide study on the "Brain Drain". He has written widely on sociological problems in the developing countries, and since 1970 he has given courses on youth, education and society in the Third World, at the University of Vincennes, Paris. His latest book, "Université, Jeunesse et Société" (University, Youth and Society) will appear shortly in Teheran.*

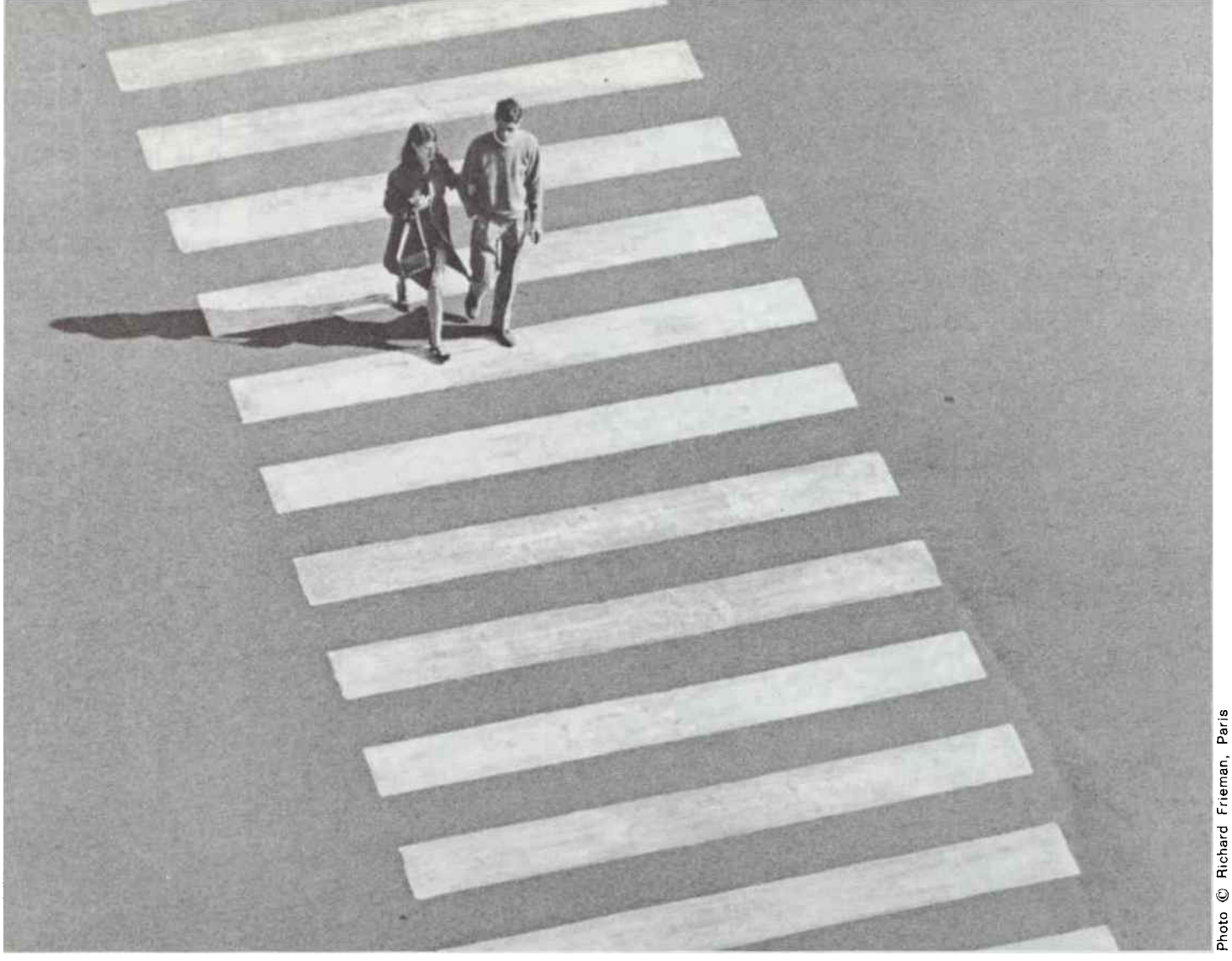

Photo © Richard Frieman, Paris

learned and make their own observations and criticisms of the way Unesco operates.

Wayne McEwing attended the first of these courses, dividing his time between the Office of Public Information and the Division of Higher Education. He completed his three months convinced of the value of the work being done by Unesco. But he was equally convinced of the need to explain what Unesco was doing in a graphic way that would give young people a greater sense of involvement. This was particularly true for young people is developed countries who are often less aware of Unesco and its achievements than their counterparts in the developing nations.

After returning home he explained his viewpoint in a letter to Unesco's Director-General, René Maheu. McEwing was then invited back to Paris and given a free hand to tell the Unesco story in his own words.

He listened to the opinions of representatives of the Member States, quizzed experts who had returned from missions in the field, and watched the personnel of the Secretariat at work.

Whatever their philosophy of life, their conception of the world and of modern society, young people throughout the world, are eager to share in the achievement of those ideals for which Unesco stands. Unesco is equally eager to establish a permanent dialogue with and provide a rostrum for the youth of the world.

However, Unesco knows that young people consider that international co-operation, whatever its apparent dimensions, does not go far enough to eliminate the disparities between rich and poor which exist within each nation and between developed and developing countries. The danger that this gap will continue to grow makes youth critical of a society in which progress is too often measured in quantifiable terms rather than those of renewal and social change.

Beyond this criticism of the instruments of international co-operation, many young people question current political, economic, social and cultural options; they feel that one cannot hope to right the ills of the world if one remains impotent and silent before the arms race, the repression practised against groups and individuals, the degradation and waste of natural resources. For all of these preoccupations, all these inspirations, can only find an outlet in action if the members of the international community commit themselves to a new phase of co-operation among peoples. The creative energy which youth brings to this will for co-operation is a promise for the future.

We hope that the publication of this series of articles on Unesco's twenty-five years will help to provoke amongst our readers both young and old a broad discussion of Unesco's contribution to the development of Education, Science and Culture in the world and of youth's preoccupation with international co-operation and peace between nations. ■

'Since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed.'

Constitution
of the United Nations
Educational, Scientific and
Cultural Organization

Photo © John D. Schiff - Galerie Rose Fried, U.S.A.

"Spring", an oil-painting executed in 1938 by the French artist-poet Francis Picabia.

SEASONS OF THE MIND

1 - Thoughts of peace

by Wayne McEwing

WAYNE McEWING *is a young Canadian who studied English language and literature at the University of Western Ontario. He has done post-graduate work at Exeter College, Oxford, and Harvard University in Cambridge, Mass.*

THERE is an ancient story about two men ploughing a field. The earth was stony and the season was bad, but as they ploughed their furrows one man's face was tight-lipped and cold-eyed. He was thinking of the hardness of his life, the aching of his feet and legs. His horse did not go fast enough to suit him and he was convinced that his neighbour's wheat would grow taller and fuller than his.

His neighbour, meanwhile, worked with rhythm and grace, concentrating on how straight he could direct his plough, stopping now and then to rest his mare.

As the sun beat down on them both and the heat of the day increased, the first farmer lashed out again and again at his horse with the reins, sweat poured down into his eyes, the veins of his hands stood out as he grasped the handle of his plough. He could think only that his neighbour was mocking him by purposely going so slowly about his work, and his rage built to a violent crescendo. If he had his neighbour's horse, he could plough twice as easily, and twice as much. He threw down his plough and, his tongue thick, scooped up the largest rock he could find. Then with a wild cry he flung himself across the field toward the other.

The next day, the neighbour was back ploughing the field, but now he was using both horses. He walked more slowly than usual, however, saddened by the strange memory of the day before. He had looked up to see his fellow farmer running wildly toward him. Before he had time to react, the man fell dead at his feet, his hand still grasping a stone. Till the day he himself died, he was never able to understand what had gone on in the other man's mind or from where his savage violence had sprung.

The moral of the story may be obvious, but it is far from being simple. Both rage and a sense of peace are very private qualities, both are given birth in the fascinating, secret places of the mind.

It is not enough to say simply that the two men had a different state of mind and leave it as that. Clearly the difference between them is a question of value; the man in harmony with his world is better, more "human" than the other.

By extension, the only really human nation is a nation composed of people with that same sense of inner peacefulness. There was a time when it was considered possible to make people and states get along by setting down laws of conduct, but now when the stakes have become so high, we are beginning to realize that that kind of uneasy, imposed peace is just too unstable and dangerous.

Where would one begin to stimulate that kind of ideal peace in individuals and nations in a world only too obviously full of discord and selfishness?

That was exactly the problem facing the people who were setting up the United Nations system at the end of the Second World War. It was all very well to bring governments together to iron out differences, all very well to get food and medicine to the millions of emaciated, disease-ridden citizens of the world, but even at that, it was not enough. To stop there would be like giving an accident victim painkiller and a hearty meal and not trying to treat his wounds.

To really promote peace and generosity of spirit, they saw they had to

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Photo © Institut Géographique National, Paris

10 HELICOPTER VIEW OF UNESCO IN PARIS

Unesco's headquarters with its distinctive 3-pointed, star-shaped Secretariat building is clearly visible (lower left) in this helicopter view of part of Paris's Left Bank. The headquarters complex stands in the Place de Fontenoy, at the end of an axis formed by a number of famous Parisian landmarks comprising (from top right of photo) the lena Bridge, leading to the Eiffel Tower (not easy to spot here as photo was taken almost at its vertical), the gardens of the Champs de Mars and the Military Staff College. Fittingly, the Unesco H.Q.

replaced old military barracks. With its striking modern architecture Unesco's H.Q. has now become a familiar Paris landmark since its inauguration in 1958. Corrugated pattern in left corner of Unesco site is the roof of the main conference building. Six rectangles facing it contain blocks of underground offices and conference rooms, all looking on to six patios, each with a garden and fountains. Another Unesco building (not shown in photo) has recently been constructed a short distance from the main headquarters complex.

deal with the minds of men. The theory was that when you saw how your neighbour's mind worked what he ate, what he had accomplished, what he had learned about the world around him, how his family and cultural background had shaped him and how he looked at you, it would be almost impossible to hate him. The human mind cannot seem to reject what it tries to understand.

Scientific knowledge, educational background, cultural heritage... these seemed the general areas that had to be explored. And without too much thought it becomes clear that in all these respects there are people in the world who are light years apart. Some men are literally living in the stone age, and just because society might feed them and take away their hatchets (sometimes in exchange for guns) it hasn't, begun to bring them into the twentieth century.

SO here is the United Nations Educational, Scientific and Cultural Organization, Unesco, facing the task of figuring out and developing the mind of man, always toward peace and mutual understanding, but very often toward being able to write a name, plant a field, or run a tractor.

To be honest, the United Nations proved just how idealistic they were by creating Unesco. The very thought of heightening the consciousness of the entire world is staggering, and it stands to reason that any progress is painfully slow. No one knows that better than the people who work at Unesco headquarters in Paris. Psychologically, there can be few tasks more frustrating than trying to put an idealistic scheme into practical operation.

When you are looking with a shrewd eye at any organization, if you really want to know how it ticks, it is wise to find out who makes the decisions and, even more bluntly, where the money to support it comes from.

At Unesco the decisions are made at a General Conference of the one hundred and twenty-five member states. Each delegation at these conferences (they happen every two years) has one vote in spite of the fact that the contributions they make vary a great deal, according to how much they can afford to pay.

The people who work in various departments of the headquarters in Paris prepare detailed sets of proposals for projects they think should be attempted or pursued in the interests of the community of member states, submit them to the conference and then wait to find out if the majority are willing to accept their ideas.

It is difficult enough to have one boss, but when one has one hundred and twenty-five of them, all with their own views and interests, life can seem incredibly complicated. To put it mildly, the job of being Director-General of Unesco (at headquarters he is reverentially referred to as the DG) requires boundless quantities of tact. But one thing that comes across more and more forcibly as time goes on is that these 125 different states actually *can* agree, and though the odds against it seem enormous, they *can* be brought into a working arrangement together.

An interesting change has come about in the membership of the organization. At the beginning there were 20 countries involved, on the whole, part of that cultural block called "western civilization" and the atmosphere was more or less like a fashionable, post-war club for intellectuals. However, life has speeded up considerably since then and as new nations have appeared literally by the score (especially in Africa), the whole tone of the place has changed.

When you take the lift in the Secretariat, or especially when you look into one of the conference rooms, you get a very strong sense that this is not just a building in a particular city, in a particular country, it is a building on the face of the earth. The first thing you notice is the blend in styles of clothing, then the mêlée of languages, many not even identifiable to the ear, and then the exciting business of simultaneous translation into the five official languages... English, French, Russian, Spanish and Arabic.

More important, as far as Unesco's work is concerned, the emphasis is no longer on the exchange of ideas alone, but now the key work is "development". Unesco has taken on an active role in education, science, culture and communication, so for every person working in the Secretariat in Paris, there are two people working on Unesco projects "in the field". And that phrase has come to cover a startlingly large range. It can mean an expert giving advice on how to set up a university in Iraq, another shoring up the ruins of an ancient temple in Indonesia, or yet another working on a project in marine biology at a centre in Mexico.

Again the question of money comes up. If Unesco has taken on all these projects, who pays for them? If

CONTINUED PAGE 14

HISTORY IN A GLOBAL PERSPECTIVE

One of the outstanding achievements of Unesco's 25 years of effort is the six-volume "History of Mankind", a vast pioneering effort to bring an international approach to the writing of world history. Sponsored by Unesco and produced by the International Commission for a History of the Scientific and Cultural Development of Mankind, it spans the years from prehistoric times to the 20th century. Over 1,000 historians, philosophers and scholars from 62 countries laboured for eighteen years to produce this 7,000 page world history with its many illustrations and maps. Editions have already been published in seven languages (English, French, Spanish, Greek, Dutch, Serbo-Croatian and Slovenian) and further editions in Hebrew and Catalan are in preparation. Unlike other world histories, that have laid stress on war and conflict between nations and peoples, this history was the first attempt to place man's scientific and cultural development in a truly global perspective. Leaving aside the traditional nationalistic approach to the writing of history, the "History of Mankind" presents a detailed study of the cross-fertilization of scientific ideas, of religions and cultural life, of economic and social events and the forms of artistic expression and the scientific thinking of many peoples and cultures.

From "Estampages Han" by Zao Wou ki and Claude Roy, Club Français du Livre, Paris

Above, a Chinese rubbing of the Han period, 206 B.C. to 220 A.D. Below, "You are free in order to realize your dreams." reads an inscription which accompanies this mural on the faculty of law building of the University City at Quito. The mosaic was designed by Guayasamin, Ecuador's most famous living artist.

Photo © Holmes-Camera Press

Unesco people just had their own budget of about $90 million to go on, they could make suggestions, do some studies for governments and arrange conferences, but as far as putting projects into operation, their hands would virtually be tied. So, Unesco has become an administrator of other people's money. For instance, from the vast lump of money put aside by the U.N. for world-wide development, Unesco, under the watchful eye of the people in New York, uses a sizeable chunk for projects of the mind.

Also, individual organizations and countries sometimes make specific contributions to special projects in other parts of the world, and here Unesco plays the part of a generous investment counsellor.

Often when you hear about aid being given to a particular country, it seems that they are merely being given a hand-out by the so-called richer nations. But in reality the nations receiving aid have to put up the money for as much of the project as they can afford and do as much of the work as they can. They may get free advice and supplies, but as far as possible, they are given the dignity of paying their own bills and helping themselves.

Another important question comes to mind. How does Unesco decide on doing a project in one country and not another? Do they send people around telling different nations that their educational systems are bad or that they had better get busy and start co-operating intellectually? Hardly, when it is up to the nations and up to Unesco to wait until the member state decides to ask for advice.

Let us invent the imaginary country of Sutch. For our purposes Sutch is a member of Unesco and every two years three prominent Sutcherians come to the conference in Paris. (Incidentally, at the request of Unesco, one of their delegates is a promising young man beginning a career in his native country and for him the conference will be in itself a new kind of educational experience.) The head of the delegation, let us say, is a charming, worldly-wise Sutcherian who was educated abroad and then went back to his native Sutch to make a name for himself in educational circles.

He comes to Paris full of enthusiasm for a project that he has been nursing in the back of his mind ever since he himself had to go half-way across the world to school. If only Sutch had its own university, he feels, its educational system would really be complete. Sutch might be small and relatively poor, but since his student days the quality of its schools has improved immensely, and he feels that, with Unesco backing, now is the time to found the University of Sutch.

Like most people, he feels that his educational background is just what everyone's should be, and when he envisions the new campus, he pictures a place very similar to his *alma mater* transported to a pleasant hill just outside the capital city of Sutch.

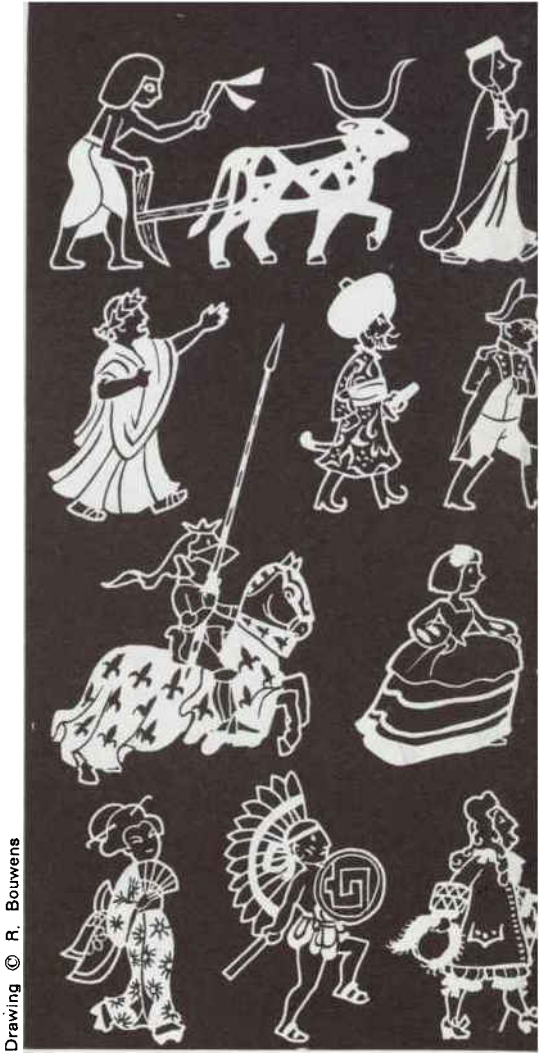
His proposals are all carefully set out in detail, giving estimates of the cost of the project, the need for Unesco's advice and aid, the expected enrolment and all the other facts that seem relevant. To all of this, the delegate adds his own enthusiasm as he meets with many different educational experts at headquarters. They listen, ask questions, pause, compare the Sutcherian project to others they have worked on, check the information that they have about the Sutcherian school system, look at the national economy, the political situation.

A project of this size is going to take several years of concentrated work and a lot of capital, and no matter how tempting the idea might seem, it has to be questioned and tested from every possible angle; this is not only to prevent Unesco from wasting its time and other people's money, but even more important, to make sure the Sutcherians aren't getting into something that they won't be able to handle.

FOR a while, the questions that Unesco asks are random and exploratory, but as the negotiations go on some of them begin to fit into a pattern. In the course of the discussions, one man asks how many engineers Sutch is producing per year and where they get their training. They, too, have to go abroad to get their instruction, do they not?

The Sutcherian delegate is not too sure of the precise number, but he suspects that at most four or five of them are produced per year. Technological and scientific education haven't caught on in his country, he says, and most people want to study humanities for a general education. These statements strike the Unesco expert as all too familiar. Where are all these arts graduates going to get jobs, and what are the chances for Sutch to develop its technology without technicians?

Someone else asks the Sutcherian delegate what form he thinks the university should take that would really reflect the Sutcherian culture? That question stuns him; he has never thought about an educational system as part of any particular culture, but the more he thinks it over, the more he begins to suspect that the institution he had in mind was more a reflection of himself and of his own experience than of the Sutcherian culture as a whole.



Drawing © R. Bouwens

Ideally, at this point the Sutcherian delegate will begin to see that, economically, a technical school will be much more beneficial to the country as a whole, that his idea of a university will have to wait, and that when it finally does become a reality it will be very different from what he had in mind. Ideally, Unesco and Sutch will be able to raise the money to set up the technical school, and Sutch will be on its way to a technological renaissance and a new phase in its history.

All these things will happen if the delegate is willing to put off his dream for a university, if the Unesco experts have asked the right questions about the project, if the Sutcherians themselves are willing to study science and engineering instead of the humanities, if there isn't a more pressing need for Unesco work and money in another country. But in actual fact, where human foibles and limitations are concerned, things don't always work out so smoothly.

HELPING TO RE-WRITE HISTORY

While Unesco lends no support to one industrialist's view that "History is bunk", it has long been aware that a great deal of bunk still masquerades as history. As early as 1950, Unesco set in motion a series of investigations of history textbooks which revealed appalling distortions of fact, superficial treatment of major historical events and whole cultural areas of the world, out-of-date accounts of the life styles and customs of foreign countries and even huge lacunae in the presentation of certain major facets of history. "In less than one lifetime", wrote Arnold Toynbee in 1956, "the face of the world has changed almost out of recognition... Our vision of the history of mankind, since the rise of the earliest known civilizations about 5,000 years ago, has been enormously enlarged and has also been brought into much sharper focus. And since curiosity is one of the characteristics of human nature, we find ourselves moved, in our time, to take a new look at the new face of history as a whole. As soon as one looks at the new panorama of history, one sees that it bursts the bounds of the current framework within which our western historians have been doing their work for the last 250 years."

Unesco has no power nor the desire to re-write any country's history textbooks; the only people who can do this are the people in each country. But, by organizing special meetings with history book writers and publishers, Unesco has encouraged the "de-bunking" of history textbooks so that pupils all over the world can be given a more balanced and more objective view of other countries.

For one thing, this example makes Unesco look very wise and experienced, but just as easily, the Sutcherian delegate might have come to Paris bubbling over with exciting new ideas and plans for educational reform, only to find that Unesco wasn't ready for them yet. No matter who is doing the suggesting or who is lagging behind, the important thing is for governments and Unesco to work together in spite of all the possible obstacles.

In that kind of relationship it is easy to see why in Unesco there are so many people concerned with liaison between states, organizations and the secretariat itself. Proposal, counter proposal, compromise, re-thinking, changes of tactics, breakthroughs in understanding... out of it all a project gathers energy and support and gets under way.

Then you have to add the new dimension of the understanding, tact and efficiency of a great number of individuals putting it into operation in the field and you begin to get an idea of the full working of a project, the research and planning involved, the diplomacy, and the solid hard work.

Another factor of Unesco's job is that most of the things it tries to do have never been done before, so by their very nature the projects are elaborate experiments, experiments often run on a limited budget and, above all, designed to be practical when governments want to put them into use throughout their country. One expert offers his solution, another expert insists that his is better. It seems that there is a constant tugging in two opposite directions, one toward ultra-modern ideas and one toward suggestions that are at least somewhat tried by experience.

OF course, it is up to the government itself to make the final decision; their intuitions as to what techniques will work and what will not are bound to be more reliable than those of even the most experienced Unesco advisors. It might seem easier for them to stay with the tried and true remedies, but sometimes countries which are developing at a breathtaking rate do not have time to rely on twentieth century answers and have to call on technology that really belongs to the twenty-first century.

Just to complicate matters further, in many cases there is no way of knowing how a particular project is working until it has been in operation for a number of years. How do you tell if a new educational system is working until someone has had an entire education in it?

When you consider that several thousands of individual young men and women could have their entire education wasted and their lives seriously hurt if your system doesn't work out, you use every bit of foresight and draw on all the wisdom you can muster. Or as another example, after you carefully draw up a treaty about copyrights or the preservation of monuments, you can only find out if it is going to work when it has been tested by circumstance. In the meantime, writers' life works may have been pirated and irreplaceable churches and museums destroyed.

You do your best. You can never succeed completely, but hopefully you never fail completely, even if all you have managed to gain is experience for the next attempt.

But enough of the general nature of Unesco. The categories "education, science and culture" cover a huge range. For instance, education includes teaching both young people and adults to read and write, setting up primary schools as well as universities, teaching sciences as well as humanities. So instead of dividing the subject matter into big blocks, we shall try to be as specific as possible about some Unesco projects and goals, and from that you should be able to get an idea of the whole. ■

2 – LITERACY

The mind awakening

A good place to start discussing Unesco's work in education is with the most basic kind of teaching... leading people on their first steps from illiteracy to the simplest kind of reading, writing and calculating.

The very fact that you are reading this page sets you apart from a lot of the world's population. It is impossible to say exactly how many people in the world are illiterate; naturally, governments who must supply the statistics are eager to present as bright a picture of their educational systems as possible, but conservative United Nations' guesses put the present total at around 800 million people over the age of 15.

Eight hundred million people... one of those figures that are always being thrown at us. Look at it another way. That means about one-third of the world's adult population, over the age of 15, or about four times the population of the United States.

It may seem surprising, but there are still people in the twentieth century who think that "what folks don't know won't hurt them" and that "a little learning is a dangerous thing". "Why not leave things as they are. If someone has the talent and wants to learn, he will somehow be able to."

At one time the educated élite might have been able to justify that kind of reasoning, but now when the illiterate man is bombarded daily with signs and important instructions, literacy has become a matter of survival for everyone. Just imagine yourself, no matter where you live, trying to get through a day if you couldn't read even the simplest words and phrases, and you will get some sense of the frustrations that the modern-day illiterate has to live with.

Ever since it was founded, Unesco has been working in the field of literacy and it is encouraging to see that, finally, according to Unesco statistics, the percentage of illiterates in the world has begun to go down. What is most frustrating, however, is that the world's population is increasing so fast that, in spite of the percentage figures, in actuality, the total number of illiterates is increasing at the rate of several million a year.

On top of that, no one knows just how many people have had literacy training and are "officially" literate, but have forgotten all they knew because, once their training was over, they had no way to keep in practice. Unesco insists that literacy has to be "functional" or else it is just a pointless exercise; it may seem to be a glorious and magnanimous gesture to make as many people in a country literate as quickly as you can, but in effect, unless you make their new abilities part of their lives, you are being very unfair to them.

Put yourself in their place. What could be more discouraging than to learn the "magic" skills of reading and writing only to find out that it hasn't improved your life in any way? Naturally, you would forget it all in no time, and you would end up with a terrible sense of being cheated and made a fool of.

Literacy, Unesco has found, isn't simply a matter of education; it is a matter of large-scale social change. The newly literate individual should have a chance to make the written word part of his everyday life, whether in his job or even in reading a special "literacy" newspaper that is geared to his interests and his reading abilities until he can read a regular paper.

THE new functional literacy approach has to begin right from the kind of knowledge that people use. A man who makes his living at growing cotton is vitally concerned with information on new techniques of tilling the soil and getting as rich a harvest from his land as he can.

In his case, Unesco experts have developed a series of illustrated basic primers beginning with the word "cotton" in his language and leading him into more and more complicated aspects of his job. By the time he has mastered the information he needs to know for his work he has begun to learn to read. The same is just as true for people of other cultures and other languages who want to learn to run a tractor or build a house.

Unesco primers to teach children to learn to read and write are, naturally,

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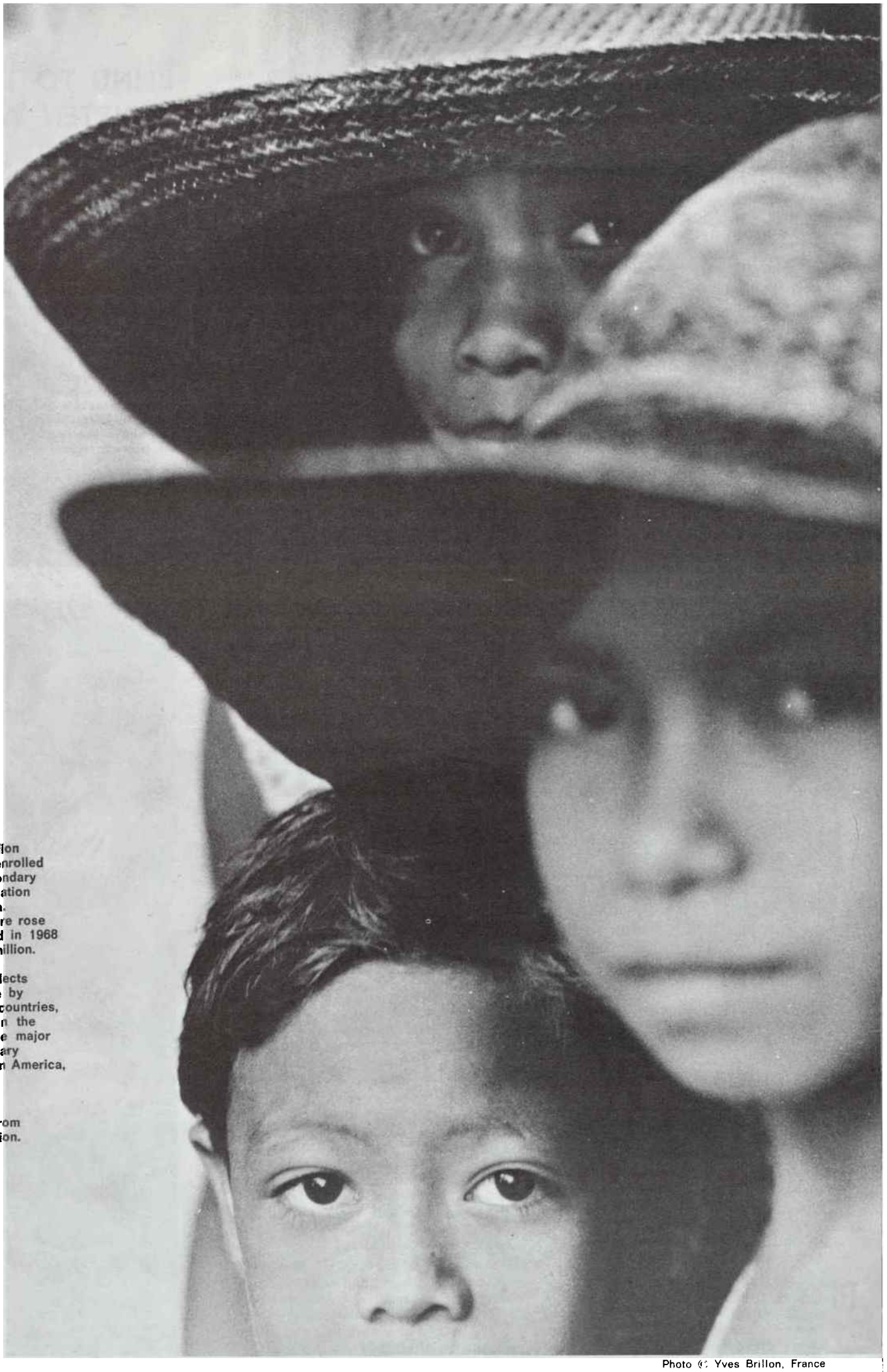

In 1956, 25 million students were enrolled in primary, secondary and higher education in Latin America. By 1965 the figure rose to 42 million and in 1968 it reached 51 million. This spectacular achievement reflects the efforts made by Latin American countries, particularly within the framework of the major project for primary education in Latin America, launched by Unesco in 1957. Right, Brazilian schoolchildren from the Amazon region.

not so technical, but even they must be carefully tailored to the world as each child knows it. "Dick and Jane Build a Snowman" or "The Adventures of a Squirrel" might be staple first readers for children in temperate zones where there are snowmen and squirrels, and where the names Dick and Jane are common, but they would be strange and almost useless to a child who grew up in tropical Asia or Africa.

It seems self-evident that any person will learn to read and write best in his native tongue; it is hard enough to master the reading and writing without having to tackle a new language at the same time. The difficulties arise when, as in several areas of Africa, the languages people speak have no written form; they have been preserved completely by word of mouth, as the languages of northern Europe once were.

In these cases, to teach the people a different language for reading and writing is to make their oral language disappear completely in almost no time. So that this won't happen, Unesco experts are now busy recording these precious traditions and putting six groups of African languages into a usable written form. One added advantage of this project is that these languages transcend mere political barriers, and when they can be written and understood, communication between states will be made much easier.

UNFORTUNATELY, the people whose native tongues these are have to wait on the average five years before their languages can be written down for them, and even longer before basic literacy primers can be developed. These language groups are far from being "primitive" and easy to reduce to an existing alphabet and grammatical structure.

For example, in Yoruba, which is a language of Nigeria, Ghana, Togo and Dahomey, there may be as many as 57 different tense forms, as opposed to a mere dozen or so in English and French, and the language is tonal, so that the same sounds pronounced with different tones have different meanings.

Yet another local language, Hausa, was already written down, but in two different ways. In Nigeria, which was administered by the British, it was done according to English phonetics, and in Niger, which was administered by the French, according to French phonetics. The result was one language that looked like two foreign tongues. Now Unesco experts are trying to devise a way of writing Hausa that will be taught and understood in both Niger and Nigeria.

The search for new literacy techniques, the setting up of pilot projects to test them and the work of putting new concepts of literacy into long-range plans for national development and productivity are fascinating and exciting in themselves, but at the centre of all this activity, the man who is learning to read and write has some definite demands and opinions of his own.

He is moving through time at a fantastic rate, from a social context before the written word to a highly literate modern realm; he knows better than anyone else just what a handicap his illiteracy is, but at the same time, he is an adult who got along in the world long before any government teacher or Unesco expert came to give him an education and he refuses to be patronized or talked down to.

For example, the illiterate who lives in supposedly developed western cities such as Chicago, Genoa or Birmingham (to name a few) is particularly shy about admitting his limitation. In his case, it takes carefully developed television programmes and advertising to give him the incentive to begin classes or, in some cases, to begin classes for the second or third time; here too, what some people learned as children and never had a chance to practice can become lost in the grey chasms of lethargy and aimlessness.

Although the reaction may vary from culture to culture, in many cases adults attending literacy classes are very sensitive to being treated like children. The thought of meeting in their own children's schoolrooms in the evenings may strike them as vaguely demeaning, and they are much more relaxed in a church or a meeting hall, in buildings that they have built themselves as literacy centres, or simply under the shade of a tree while the daylight lasts.

The kind of person who is chosen as the literacy teacher makes a very important difference, as well. Regular schoolteachers usually aren't as effective with adults as people who have been through a literacy programme themselves and are fired with enthusiasm to share their newfound knowledge with their peers.

Usually, teachers who are not too much younger than the students have a better effect, but as soon as you start making these distinctions, you are bound to find a nineteen-year-old, third-grade teacher who is more effective than all the forty-year-old new literates carefully chosen for a project.

You simply can't make neat, fixed rules where literacy teaching is concerned. Most often in the final analysis it is the personal element that makes the difference between success and failure, and, often, you take whoever you can get for the job until someone more effective or better qualified can be found.

After Unesco experts and local educators have studied what particular methods of teaching will be most effective for a particular country (most likely by trial and error in experimental projects), after they have developed

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BLIND TO THE WRITTEN WORD

This young Sudanese woman (right) is training to be a midwife, but since she cannot read she is taught by repetition and demonstration to identify certain drugs by sight and, with eyes blindfolded, by smell or taste. Soon, like many thousands of other Sudanese, she may no longer be blind to the written word thanks to an intensive literacy campaign carried out by the Sudan with Unesco aid. The campaign is part of Unesco's experimental world literacy programme launched in 1964, and linking literacy with agricultural and industrial development. It now has projects in operation in 13 countries of Africa, Asia and Latin America, and 53 other countries have asked to join the programme. Below, literacy class for Peruvian women on an island in Lake Titicaca, more than 12,500 feet above sea level in the Andes, one of the poorest regions in the world.

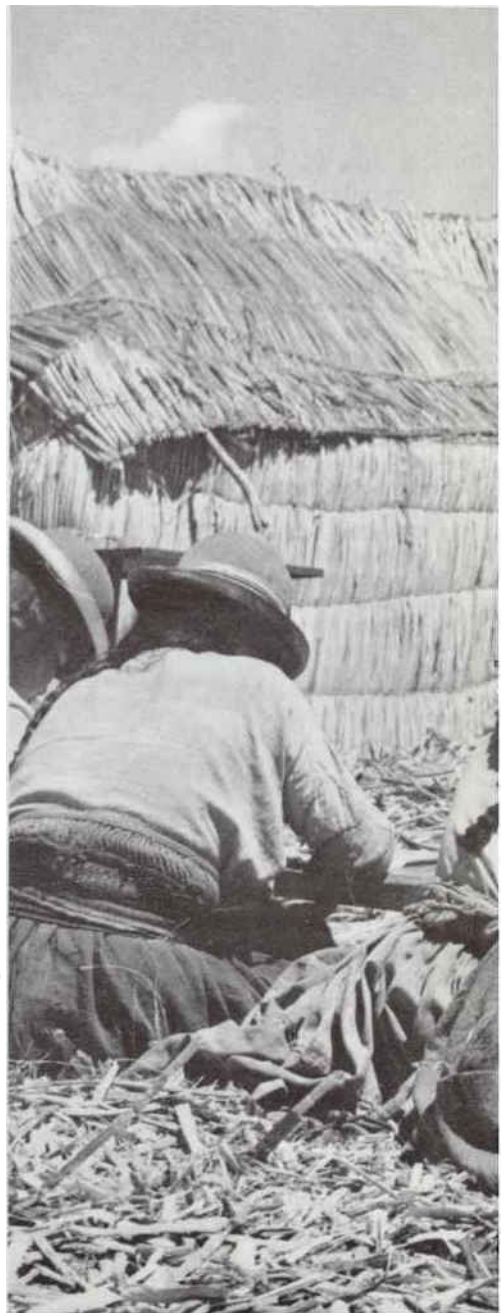

Photo Unesco - B. Herzog

Photo WHO - Eric Schwab

the materials necessary for teaching, after they have trained the nucleus of a teaching staff, and after all the unexpected snags have been ironed out (such as adjusting to local harvesting schedules in one place or compensating for long-standing social reactions that hadn't been foreseen in another) it is up to Unesco to slowly phase itself out and up to the government to take the project from there.

Where the government picks up wholeheartedly as Unesco leaves, the project should be firmly on its way. Often the initial decision to invest in adult literacy meant cutting back on something like defence spending or on more traditional formal education, and as governments and individuals change, so do their priorities.

Sad to say, where the government has lost interest, or where it can't afford to supply its share of the continuing costs, the project dies, and within a short space of time all the money and hours of work evaporate as if they had never been invested.

Just to put Unesco's work in perspective, however, many countries have used striking methods of their own in their blitz for literacy and, in these instances, it is up to Unesco, through its surveys, conferences and studies, to pass on the information to others.

To supply the crucial need for literacy teachers in Iran, for instance, soldiers who had considerable education were put into service as a peacetime Literacy Corps. Now a similar idea has been used with the national guard in Venezuela and the possibilities the idea suggests seem endless. Wouldn't it be a relief if all the armies of the world could be turned into educational forces full time?

One of the most encouraging signs both for Unesco and for the individual governments concerned is how many people want desperately to become literate, so much so that, in some cases, whatever projects might be devised simply can't keep up with them.

One Unesco expert assigned to Ethiopia noticed a gentleman in a first year literacy class writing busily and at a level far ahead of the rest. "D you think this man has had some training already?" he asked the local teacher. "If he can read as well as he can write, I think we've put him in the wrong class."

Sure enough, the man read back what he had written perfectly, but he insisted that he had never been to school. Had he done it on his own? Oh, no. He was the proud father of educated children, children who went to school everyday. Every night when they came home he would sit down with them and listen to their stories. They would show him what their teacher had taught them and that is how he knew about writing and numbers. If his children were going to grow up educated, wasn't it natural that he should be educated too? ■

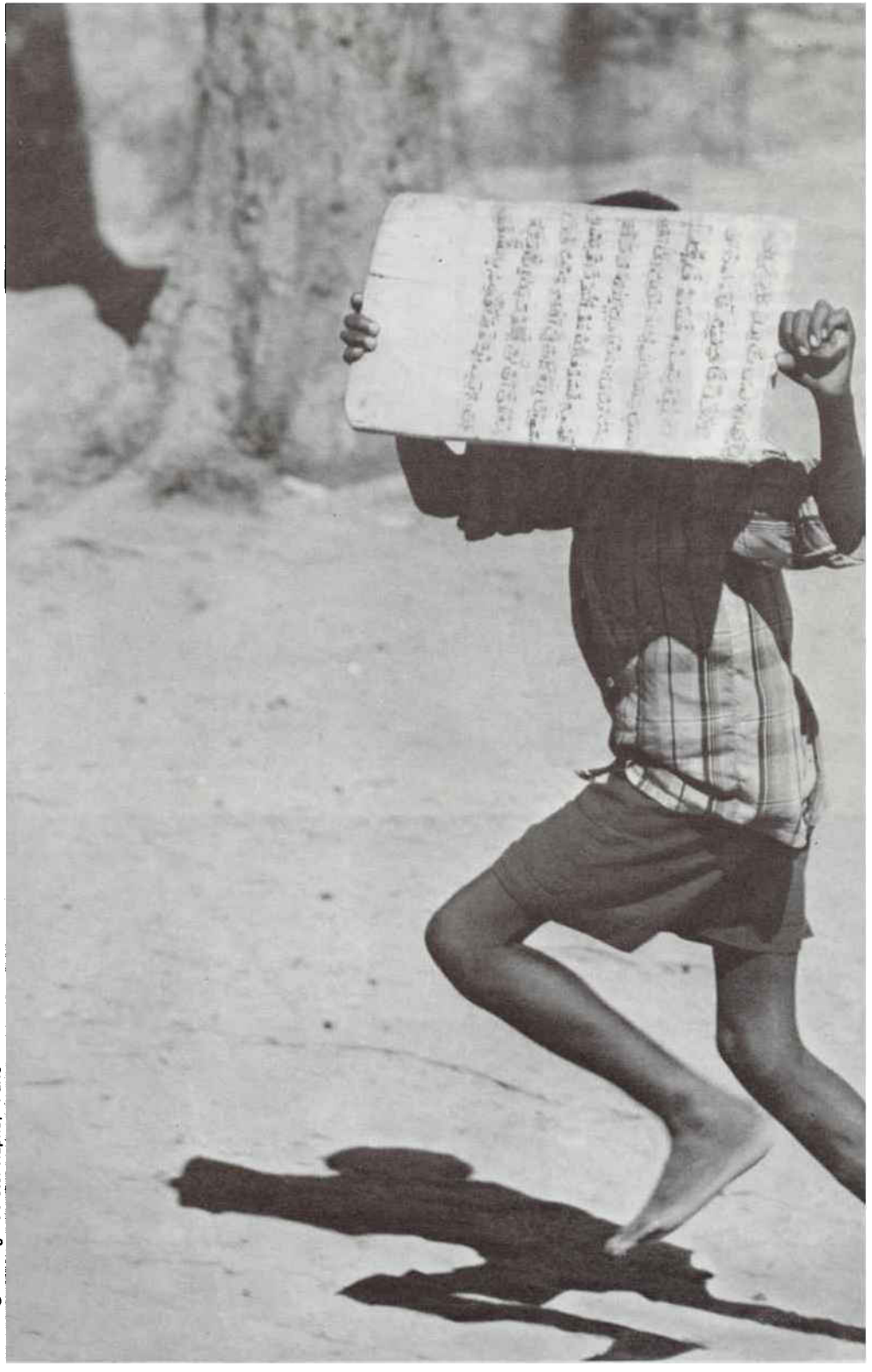

Photo © Georg Gerster-Rapho, Paris

A RACE BETWEEN EDUCATION AND CATASTROPHE

H.G. Wells wrote that the modern world is embarked on a race between education and catastrophe. And it is true that if we want to ensure lasting peace in the world, we have no time to lose to bring about a radical improvement in the standard of living of the economically poor countries of the world. Most governments have come to a new awareness of the key role that education plays in a nation's development. In this respect, the efforts undertaken by Unesco in the past 25 years have been of capital importance. The Director of the Institute of Education at the University of London, Dr Lionel Elvin, has aptly remarked that the most powerful single idea that has spread through the world in relation to education in the last 25 years is that it is a right. In 1970, International Education Year, reports from Unesco's member states revealed an unprecedented growth in the field of education. Between 1950 and 1965, the number of teachers in the world increased from 8 to 16 million. School enrolment increased by 80 per cent in India and 42 per cent in Iran. In the Arab countries enrolment increased from 8 1/2 million students in 1960 to 13 million in 1967. In Latin America, between 1960 and 1967, the number of pupils entering primary education increased by 12 million.

3 – EDUCATION

The growing mind

WHAT argument would convince a bank to give a long-term loan, without collateral, with no interest and based completely on speculation? Investment bankers are a very shrewd and practical lot and refuse to be taken in by promises of vast capital to be made or grand schemes for future development. On the whole they want their balance sheets to prove that their money is actually working and that it is working as profitably as it possibly can.

Unesco has found that one area in which they will give loans on exactly these terms is in the field of educational development. The real resources of a country are not its mineral deposits, nor its agricultural wealth, but rather, the people in it.

As gold must be refined, so these people must be educated. Although you cannot measure the profit immediately, sure enough, as the educational level of a country increases, so does its productivity . . . and that makes for a good investment on anyone's terms.

Hence, the knowledgeable businessmen of the World Bank have decided to make money available, through Unesco, to finance educational projects throughout the world. Again, the individual governments have to contribute as much as they can, and often large parts of their budgets are spent in the field of education, but it is usually in the developing countries which have least to spend that the need is greatest.

For the sake of argument, let us assume that a country has no formal educational system, (and the problem is never that straightforward in actuality); where would you begin in setting one up? Naturally, you would start with teachers, but where would you get them? The systems of education in developed countries are self-perpetuating in that teachers teach young people who in turn can become teachers.

In developing countries, you are forced to create teachers almost overnight out of people who really should be students. The difficulties of performing this conjuring trick are almost insurmountable, and here is where a great deal of planning and willingness to learn from others becomes absolutely crucial.

Not only does Unesco send experts to individual countries, but it has set up regional centres for educational planning where countries with similar cultures and interests can pool their individual findings, work out ground rules that will be useful to them all, and save each other a lot of valuable time in planning their separate educational strategies.

And by planning is meant not just starting high-powered teacher training courses, building schools and planning curricula and text-books; it also means taking into consideration such things as what kinds of teaching won't set up socio-cultural barriers that might keep students from coming back day after day, what techniques will make the deepest, most economical impact on them, and what training programmes will fit in best with the needs of the country as a whole.

ONCE again, this is an uncharted field where you must begin by setting up small, specific experiments; if they work, the government can apply them to larger and larger sections of the country depending on the national plans for future expansion.

Often, in the area of education, beside simply planning, experimenting and rejecting a project if it doesn't seem to work, you have to make the brave decision to keep doing what you are doing a little longer in the hope that it will finally catch on.

When you are dealing with teacher-training, for example, your first years

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Photo © Claude Vénézia, Paris

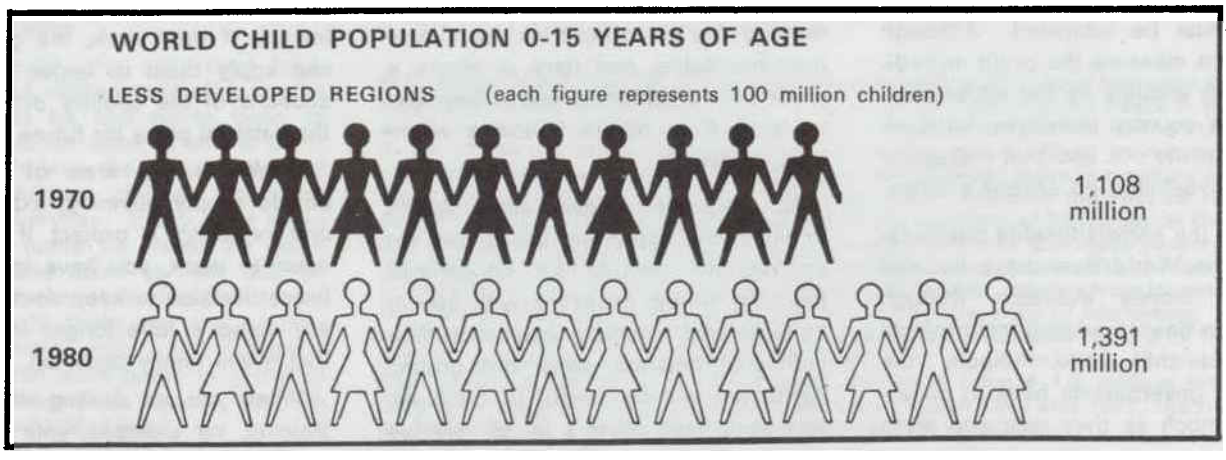

Table taken from "Unicef News", New York

TOPSY TURVY WORLD

The two children in the photo below look as if they are having the time of their lives— and they probably think they are. But you don't have to stand on your head to see what a topsy-turvy world we live in. It is in the regions of the world where the needs are greatest that the means are most lacking. In 1970 there were 1,100 million children under the age of 15 in the developing countries compared with only 312 million in the more developed countries (table, opposite). Children in the prosperous countries (photo left) will then represent only one-fifth of the world's children. They can expect to get an education while the vast majority of children (in the developing countries) will still lack teachers, schools and books. A major Unesco effort to promote education in the developing countries has been carried out in recent years in conjunction with the World Bank. Up to now World Bank loans and credits for improving education have totalled $440 million. Present plans foresee World Bank loans for education of a further $1,000 million during the next five years, between 1971-1976.

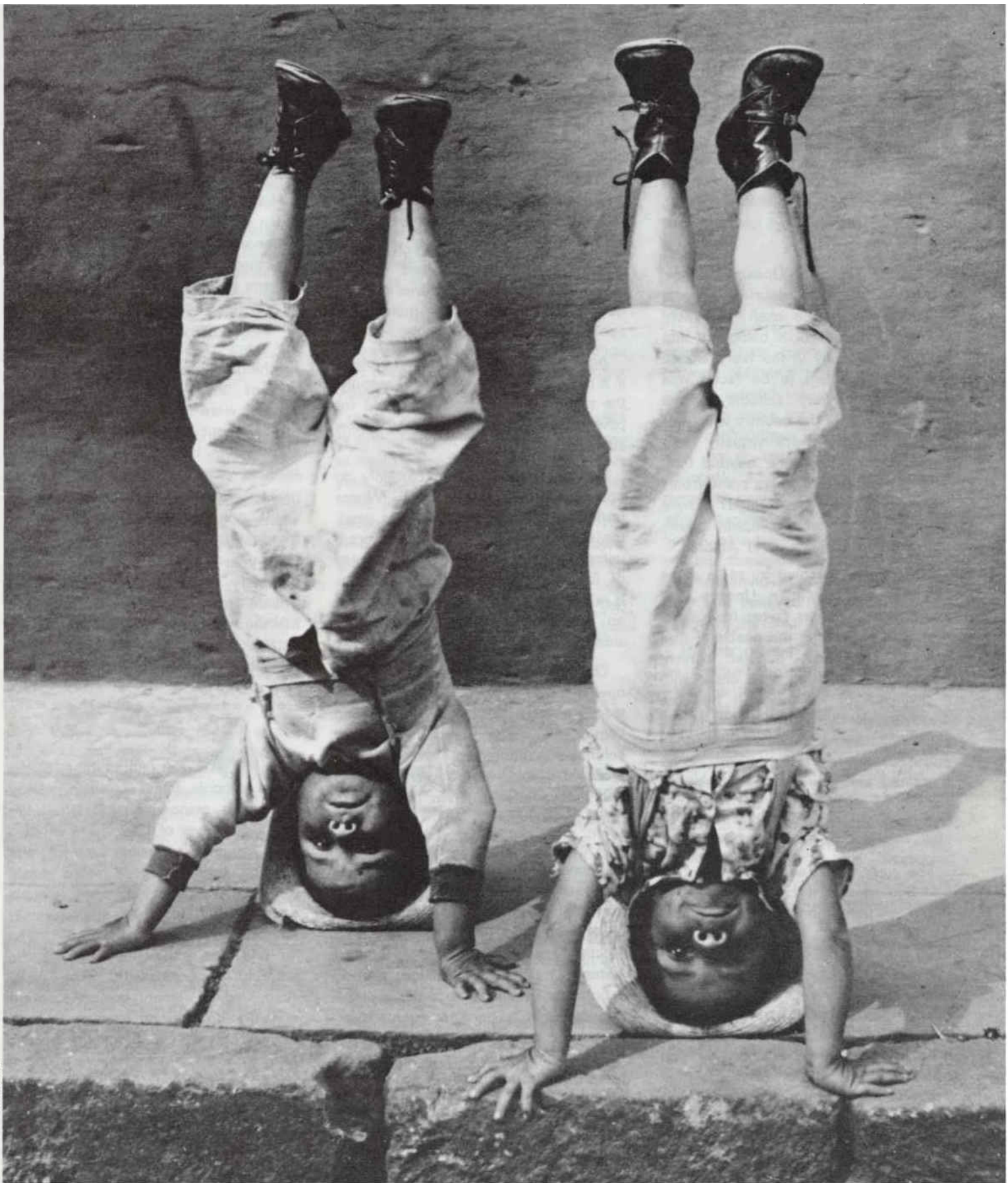

Photo ILO

of effort can seem very discouraging. If a small country needs two or three hundred teachers immediately, you set up a training centre for as many promising candidates as you can find, let us say one hundred and fifty. You hope to give them a fast education and teacher-training at the same time, but you may find that at the end of five years you have only been able to train five or six people whom you could really call competent.

In that case, all you can do is keep working with the group of people you began with until they are trained, trying every new and helpful method you can come across. In the meantime, there are yearly more and more children of school age still with no teachers and no schools.

ONE of Unesco's most venturesome and colourful projects that was started as a small experiment is now at the stage of being put into practice nationally in the Ivory Coast. The basic problem to be faced was setting up primary schools in the outlying areas of the country which for part of the year were virtually inaccessible, but it went far beyond that. Where would the teachers come from? How would they be trained? There weren't enough for the rapidly developing urban areas around Abidjan.

The idea of teaching by radio came first to mind because Unesco and many of its member states have used it very effectively in the past and it is one of the most popular current methods for covering wide areas with a minimum of teachers. It has the disadvantage that it doesn't make the same impact that visual teaching does and it always has to be backed up by a trained instructor in the classroom and so for a long time the notion of trying out television instead has been gathering momentum.

The Ivory Coast seemed the perfect situation to test it because with TV, the classroom monitors need almost no training in that they can take their cues from the televised instructor and the teacher-training element is largely eliminated.

When that decision had been agreed upon, a few other problems began to crop up. Number one: how do you operate a TV set in a village that doesn't have electricity? In some cases batteries seemed the best solution, but in others, in the desert lands of the north, solar power seemed better. So suddenly, some villages that had never had any electrical power were getting it, not by old-fashioned twentieth-century methods, but by technology which will not be used in even the most advanced countries for many years to come.

While all these strictly technical angles were being seen to, a curriculum of programmes and work materials was being prepared with the help of Unesco experts. Ultimately, one television teacher would be doing the work of many hundreds, and each lesson could be prepared with far greater care than any dozen regular teachers would have time for.

If all goes well, all first grade students in the Ivory Coast will be taught by television and each year a curriculum will be prepared for the next higher grade, so children starting now will probably receive their entire public schooling by television.

Again, since this is a Unesco project, if it can be made to work successfully, the techniques will be established for other countries which want to follow suit.

But Unesco's interests certainly do not stop with public school. Where traditional teaching methods are used, the quality of secondary school graduates directly influences the quality of future teaching in public schools. It is impossible to improve one part of an educational system without considering and improving the whole.

One of Unesco's projects which has now become history had to do with teaching science after the Second World War. The need for trained scientists amounted to a serious crisis in world development and the schools and labs needed to train them lay in ruins across Europe.

A group of brilliant and imaginative Unesco experts devised a source book for teaching science using the simplest possible equipment... a lemon rolled to squeeze out juice for conducting electricity; a fork, needle and glass of water to test surface tension; a cork, a bulb and five nails to make a primitive flashlight. There are even a ruler, protractor and set-square printed on the last page of the book which can be traced and reproduced by students in cardboard. Many of today's top-flight scientists made a beginning with these simple experiments.

Now, the book, reworked, brought up-to-date and translated into more than 20 languages, is more popular than ever as a text in developing countries where sophisticated labs are yet to be built. At least the aftermath of war in one instance had a beneficial effect on education, but it is the glaring exception when any single good thing comes of war.

More characteristically, war is the destroyer of schools and all permanent centres of learning and culture. It leaves the children who survive it starving, psychologically scarred and almost totally cut off from any chance to develop themselves into productive members of their society.

Hundreds of thousands of Palestinian refugees, spread across Jordan, Lebanon, Syria and Gaza, were suffering these torments when, in 1950, Unesco and the United Nations Relief and Works Agency undertook to set up some temporary kind of education for them. At first the schools and teaching methods were very makeshift, but as the years passed, proper schools were built and enrolment went up to about a quarter of a million students, in both primary school and in three years of high school.

Neither Unesco nor UNRWA realized what a gigantic project they were undertaking, and even now, it survives from year to year, depending on the voluntary gifts of governments and private organizations, and with the help of the educational systems already established where the refugees found themselves.

AS you can imagine, to run these schools involves some touchy diplomatic manoeuvering. After the Israeli-Arab war of 1967, many schools were again closed because of war damage, and refugees were again moved. Wherever they went, schools were pasted together again, sometimes in tents, sometimes in the open air, and even in the midst of chaos, the learning process was kept alive. Also, some local texbooks were considered in certain quarters to have highly charged ideological content, and so Unesco experts were called upon to develop "neutral" Arabic teaching materials.

As another result of the war in 1967, students in Gaza could not take their secondary school leaving examinations. Not only was their path to university effectively blocked, but they had no way to finalize the years of study they had already done.

In a very courageous series of diplomatic manœuvres, Unesco arranged to have the exams, set in Cairo, flown into the Gaza strip by way of Cyprus. The exams were then administered by Unesco people, flown back to Cyprus and on to Cairo to be marked. Finally, the grades were returned and the first year that this tactic was used, a thousand students were allowed to cross the Suez canal, under the supervision of the International Committee of the Red Cross, to continue their studies at the universities of Egypt.

Had there been no international organization such as Unesco in existence, there would have been no channel for all the complicated negotiations and these students would, in all likelihood, still be stalled with no diploma and no hope of getting one.

ANOTHER thorny problem that Unesco has been facing is figuring out just what a diploma is worth. Does a diploma earned at the University of Moscow mean the same as a *licence* earned at the Sorbonne, for example? The question seems purely academic unless you happen to be a student with a B.A. in one country trying to get your credentials translated into different terms before you can continue your studies abroad.

In this area, Unesco is still at the stage of collecting data and assembling position papers, but as part of its year-to-year programme, it publishes two very helpful books, called "Study Abroad" and "Vacation Study Abroad" to help make it easier for young people to broaden the range of their studies and move freely within the international world of learning.

Not only do these books list courses of study, but they also give all-important information about scholarships. It is thanks to one of these well-thumbed volumes that many an enterprising young person has been able, not only to study abroad, but to have most of his way paid for the experience as well.

As a further step toward international education, Unesco is studying the possibility of setting up an International University, at the request of the United Nations itself. Such a futuristic undertaking is still a dream which is yet to come true, but as a concrete step toward transcending political boundaries in the pursuit of learning, Unesco arranges for co-operation between established universities and technical schools and their newborn counterparts thousands of miles apart.

Sometimes, to create a flow of information into a country which might suddenly need a supply of trained technicians or educational leaders, for example, it gives its own scholarships for qualified people to study abroad. In other cases, it gives money to artists who have gained a certain reputation at home to go abroad to learn new techniques or, by osmosis, enrich the fabric of life from which they create.

In many cases, these scholarships go beyond basic training and involve renewing or enriching the knowledge that people, some of them no longer young, already have.

Aside from its interests in all stages of formal education, Unesco has come to realize that when you finally have your degree in your hand, no matter what level it may be, you are not necessarily "educated"... period. The fund of information about any subject grows by leaps and bounds, sometimes in a matter of months, so how can you say that even though you earned a diploma five years ago, you still know your subject?

EDUCATION, as Unesco has come to use the term, no longer refers to a period in one's youth spent outside society absorbing facts, but a continuous process which starts with being born and ends, ideally, with death. This new concept of "continuing education" sounds all very well on paper and Unesco's work in educational planning is being done with it in mind as an organizing principle; but when you ask specifically how far anyone has gone in applying it, you learn that only the barest beginnings have been made.

And "continuing education" simply can't be put off any longer. Every one of us has known someone who managed to achieve an education in this wider sense and we have to respect his brightness and modernity of thinking, but the way knowledge is exploding, the chances that people will be able to do the same thing for themselves in the future become slimmer and slimmer.

One thing everyone agrees upon is that present educational systems everywhere will have to become much more flexible and open-ended and that each individual is going to have to learn to admit when his education has stopped working for him and doesn't apply to the world as he finds it; in other words, the systems of learning will have to keep up with the exciting, fast-moving world they are concerned with and the individual will have to keep up with them.

IT took us several generations before man's schools caught up with Galileo's idea that the earth rotated around the sun; no one can afford to move that slowly any more. In all probability a thirty-year-old today was never taught about the DNA molecule, a crucial breakthrough in twentieth century science, so unless a whole generation is sent back to their books or somehow re-informed, they will find themselves at forty-five about as far behind in understanding as if they still believed the earth was the centre of the solar system.

The very heart of education should be change and regeneration both in what man knows and how he thinks; too often in the past it has been an instrument of stultification and dogma, and will continue to be until governments and each one of us realizes that, in spite of all the educational statistics and diplomas in the world, there can be no such thing as an "educated man", only a man "becoming educated".

A full system of education based on that understanding and taking in an entire population has yet to be achieved by any nation, developing or "developed", but that is the ultimate goal which Unesco holds up for itself and for all its member states. As a goal it is both an ideal and a necessity for the near future—our lives must be our education and our education must be our life. ■

The mind bright and strong

Photo © Georg Oddner - G. Bern, Paris

ON the fifteenth of May, 1968, yet another conference to plan the programme for the next two years was going on at Unesco headquarters, against the background of the great wnite womanly Henry Moore sculpture, the Miro tiles and the beautifully manicured lawns.

Perhaps the most unsettling thing about the place was an enigmatic Picasso, which gave the suggestion of a wild and embarrassing private laughter. Otherwise, all went as usual, but there was a new feeling in the air. These were the days of the famous "événements", the student strikes, in France.

There were rumours that the meetings would be picketed by youthful demonstrators, the city was on the verge of being paralysed by strikes and, as it turned out, a whole new segment of history was beginning—a chain reaction of demonstrations, confrontations, conflicts and uneasy ententes between angry young people and "establishments" throughout the world.

This wave of action went beyond individual countries and regimes, the youth of the world were speaking out—some against elements of their society, some against the protesters. And where violence could be avoided, they proved to be articulate indeed.

As people who worked at Unesco looked out from their offices while the turbulence swept past them, as they sat up all night at the public meetings or took part in street-corner debates, a great deal of soul-searching was going on. Unesco had had, right from the beginning, a department of youth, concerned with the rôle of young people in redeveloping a burned-out Europe.

On top of that, most of Unesco's activities had to do with young people, but with the exception of a few isolated individuals within the organization, the explosions came as a complete surprise. At least, Unesco people had the consolation that they were no more shocked than anyone else by the outbreaks throughout the world, but somewhere there lurked the suspicion that they should have been able to predict such a phenomenon.

Up to that point, Unesco's activities had dealt with young people who were, in the vernacular, very "straight". These were the young men and women who eagerly joined Unesco clubs in developing countries, who participated in its world-wide programme for physical fitness, and who promised to be the bright young leaders of tomorrow. Their social commitment was of a traditional sort which could find expression through conventional channels, but by the early 1960s, even their participation had become more and more perfunctory.

Because it was so closely tied in with governments and because it was part of a United Nations system which was no longer looked upon as a radical experiment in peace-keeping, Unesco was getting the image of being stuck with youth as part of its job, but not really involved with their problems and interests. It seemed the last place for young people to go with their opinions for change. With the General Conference of 1968, an all-out effort was begun to change that thinking.

There were some goverments which deeply opposed the idea of young people having a voice in an interna-

Throughout the world Unesco Clubs have proved to be one of the most effective means for promoting the ideas and ideals of Unesco amongst young people. Unesco clubs now number 1,500 in 50 countries. Young people in Japan (above) have formed over 400 such clubs, a total surpassed only by France which has nearly 450. In Spain, Friends of Unesco Clubs exist in several major cities. They arrange lectures, plays, concerts and exhibitions and provide a forum for discussions on local, national and international problems. Through Unesco Gift Coupons, people in many countries have participated directly in the work of Unesco, by providing school or scientific equipment, books and supplies to projects in Asia, Africa, the Middle East and Latin America. Donor groups buy Gift Coupons and mail them directly to the project of their choice, and in this way more than $2.5 million have gone to help literacy and adult education projects, schools, libraries and museums in developing countries.

tional organization. They had been willing to admit that young people should be educated but were not so happy when it became time for students to start expressing what they thought. Already, education was having its effect on the world community, whether the men and women in authority liked it or not.

Despite such opposition, Unesco was in the moral position of a teacher who with the highest motives stimulates his students, encouraging and rewarding their ability to think for themselves, and who suddenly finds that he is more deeply involved in their lives than he suspected. To cut off dialogue and deny their right to develop their opinions when things get dangerous, is a denial of all that he has done with them and of all that he stands for.

Unesco had always talked about and relied upon the idealism of young people and their capacity for change, but slowly the realization was beginning to dawn that young people now grow up faster than those of previous generations, and that there is in them, not only a strong moral sense, but also a scepticism and practicality which refuses to be put off or to be patronized.

To have any usefulness at all, Unesco could no longer work "for" youth like some cultivated, rich uncle. Young people can speak and work for themselves, and Unesco's new rôle is to make sure that they have a chance to do so; in many cases, this means acting as a mediator between society and its youth.

At first, the panic that youth managed to set up within established governments when they accused them of violence, corruption and a basis in hate, amounted to near hysteria. Youth was seen as a problem for society and a threat to its very existence. Now that the first waves of shock have passed, these same governments are in a position where they can see, without being unnecessarily threatened, that young people can tell them a lot and inject a little life and efficiency into their more shopworn institutions if they are given half a chance.

Once again, Unesco is in the position of suggesting to its one hundred

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and twenty-five government masters (with varying amounts of success) that youth must be listened to, and more important, that they must be able to participate in a real way in making policy and sharing genuine responsibility within the social structure.

There is perhaps no more degrading and infuriating position for a young person to find himself in than that of being a "token" youth, going through the motions of being on a commission or having an impressive-sounding job, when in reality he has no influence, and is just filling a post to make his society "look good".

Unesco and the entire United Nations system found out the dangers of putting young people in a "lets pretend" mock-up of a real institution at the World Youth Assembly, at United Nations headquarters in New York. As part of the twenty-fifth anniversary celebration in the summer of 1970, this was to be a United Nations Assembly of young people (some of whom turned out to be not so young) going through the ritual of peaceful negotiations.

Headlines about it splashed across the newspapers of the world. "World Youth Assembly: Parroting of Elders' Slogans in Familiar Disputes Obscures Agreement on War". "Youth Assembly Clashes Over Move to Oust Delegates". "UN Youth Drone on like Statesmen". "UN Youth Assembly Comes to Tumultuous Ending".

It finished in frustration and embarrassment for all. Most people came away with the disheartening suspicion that the "new generation" was going to keep making the same stupid mistakes as the last and that, from this sample at least, they had less tolerance and goodwill than their elders. What good suggestions might have been made by the delegates got lost in the dramatic press coverage, but then, since there were no plans for a concrete follow-up to the conference, they would have been wasted anyway.

One striking fact of modern society throughout the world is that there is almost no way in which an established government or institution can find out what its young people are really thinking. Any such attempt is bound to be hit-and-miss at best.

Often, when confronted with official surveys or questionings, young people, like everybody else, are forced into polemics. Or else, when a youth organization gathers a sampling of opinion, it is often one-sided and refers almost solely to specific local issues which are of little relevance outside a limited area

Thus Unesco, with the somewhat apprehensive but expectant approval of its member governments, is undertaking the job of finding out what young people are thinking, not just in this country or that, but beyond the arbitrary divisions of political units.

Maybe there is a world movement in thought toward pacifism, toward understanding, toward honesty and openness in young people, but until Unesco can build a storehouse of data about youth and get a valid flow of opinion between young people and all the world's establishments, nobody will know for sure. And even then, the pile of facts and attitudes will take some very wise and clear-headed interpretation.

MEANWHILE, Unesco's programme involves a lot of talking and listening but that is just what there hasn't been enough of up to now—young people hammering out their positions at youth conferences, young people in the Secretariat making themselves heard on matters of policy and administration, youth organizations working on studies for Unesco. Every aspect of Unesco's programme is somehow implicated, from education to ecology research, to the phenomenon of a self-sustaining "youth" culture.

The goal of the programme, however, is to get some action, and Unesco has made a modest beginning by having young people come to work in the Secretariat as summer interns, by recruiting and training others for more permanent jobs at headquarters and in the field, by strongly suggesting that each country include at least one young person on its commission to Unesco's General Conference. Naturally, the number of individuals involved is quite small, and some governments simply don't buy the idea at all, so there are fewer people involved than there should be.

On the other hand, some member states have decided to go one step further and take advantage of Unesco experts in approaching their own young people. Several countries, for example, have asked for help in arriving at national youth policies. If such policies function as they are meant to, they will involve youth directly with the government and give them a chance to contribute to the development of their society.

Only too often the talents of young people are wasted to their countries because what they studied has no relevance to their society. At the outset of their otherwise productive lives they find themselves without jobs. That bleak, soul-destroying reality is what is behind all the neat, precise statistics concerning "trained, unemployed youth" in many countries, both developing and developed. They are the "casualties" which come about from the lack of national or regional educational planning.

Even if you get a job after your training, often a lot of time has been wasted by following outmoded or irrelevant courses of study. Instead of leaving the planning of curricula, and university and school policy solely to grey-haired administrators, it has for many years been Unesco's contention that young people should have a say in what they study.

Again, in this instance, Unesco can make suggestions, point out the advantages to individual institutions and share the knowledge of what other young people have contributed toward planning their studies, but ultimately the decision rests with the particular university or high-school, and with the initiatives that students are willing to take on their own.

Up to now we have been referring to "youth" as being almost synonymous with "student", as indeed it is in the minds of most people; supposedly "youth" are the young people who are in a position to organize themselves and be viewed as the synthetic entity that is talked about in the press and in social analysis.

But what about the large number of students who shun any form of organized statement and keep their associations as open and flexible as possible? What about the young man with almost no schooling wandering the streets of a city, alone and without any hope of work? What about the secretaries, the young office and factory workers? How do you reach them and put them into your overall picture of youth?

Even more problematic, is reaching the millions of rural youth, who while they may be still in their early teens, have never known anything but work on one plot of land and are, for all intents and purposes, as aged as the land itself. These people, too, are "youth" although they wouldn't recognize themselves as part of their own generations; if Unesco could reach them, especially, and could act as a channel for them to express their needs in education and in their work, they might eventually come to share some of the pleasures of being young.

There are a few youth organizations concerned with young blue-collar workers and with whom Unesco can work, but otherwise, except for a few personal contacts, all these masses of young people are virtually out of the reach of Unesco's efforts.

There are, however, the radical young who want to be heard in an

international forum, the *ad hoc* groups who are straining to make their grievances and their angers heard. They are far beyond the governmental channels through which Unesco operates and, naturally, the prospect of an international radical conference makes member states very, very uneasy. They expect the delegates to rip the place apart, but probably the official fears are too extreme.

In reality, this could just be the chance radical spokesmen were all looking for to say what they had to say in perspective, and in the context of other young people who had difficulties of their own which might make any personal gripes look unbelievably small. Anyway, out of it all would come a very sharp-edged sense of what was genuinely unjust and unfair, and what, in the human state of civilized compromise, was intolerable.

NO matter for whom, the voiceless, disenfranchised youth of the world or the articulate, well-informed sceptics of society, Unesco could offer a latitude of expression they could get nowhere else in the world. It is admittedly not an easy task, nor a role that Unesco is totally relaxed in dealing with, but youth is becoming constantly a larger percentage of the world's population and a larger force to be reckoned with, so Unesco maybe can become its spokesman and, if necessary, its official support in a push for human and spiritual rights.

Maybe. Unesco can never become a fast-paced espouser of causes, but its ability to be of use to the young people of the world is yet to be tested. Perhaps its governmental responsibilities will prove too confining, perhaps they can be got round.

In the case of bringing exams to the refugees of the Gaza strip, the personal considerations won out; in this extreme instance, diplomacy and personal goodwill broke through all the red-tape and ugliness of war in favour of a handful of young people.

Hopefully, where youth in general is concerned, Unesco will have the same good results; in effect, it is doing a juggling act which up to now isn't fully appreciated either by governments (some of whom accuse Unesco of butting in) or by the young themselves.

A thankless task? Perhaps, but as one member of the Secretariat puts it, " if we don't try to put a word in for youth on an international scale, then show me somebody else in this messed-up world who will." ■

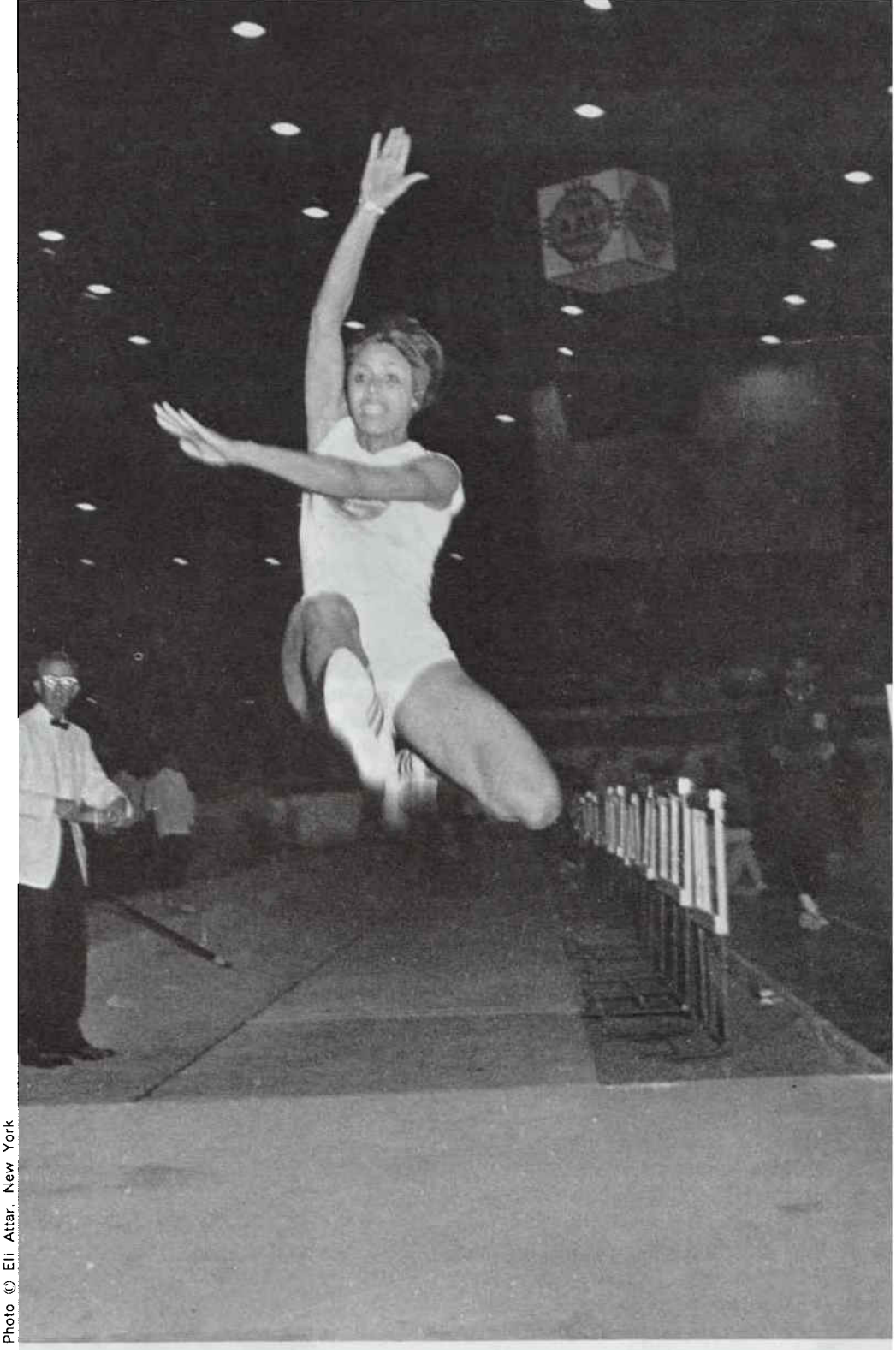

Photo © Eli Attar, New York

INTERNATIONAL AWARD FOR FAIR PLAY

The Pierre Coubertin International Fair Play Trophy is awarded by Unesco's Director-General each year to foster the spirit of fair play in sports. The trophy has been won, since 1964 when the prize was inaugurated, by an Italian bobsleigh champion, an American woman athlete (pictured above), a Yugoslav wrestler, a Spanish footballer, a Spanish basketball player and a Polish cyclist. Football teams from England, the Fed. Rep. of Germany, France and Japan, and the Swiss Juniors Golf Team have all been honoured as have a French football trainer, a Hungarian referee, a Swedish table tennis player, two American yachtsmen, a Polish skier and a Tunisian basketball veteran. Other prizes awarded by Unesco or under Unesco auspices include the Kalinga Prize for the popularization of science (awarded since 1952); the Unesco Science Prize (awarded since 1968) for outstanding contributions to technological development; Iran's Mohamed Reza Pahlavi Prize for the promotion of adult literacy (first awarded in 1967); the Nadezhda K. Krupskaya Prize, established by the U.S.S.R. in 1969 to help promote Unesco's literacy programme; and the Unesco Prize for Architecture (awarded since 1969 to the winner of an international competition for architecture students).

Photo John Zimmerman © Life Magazine, New York

5 - SCIENCE

The inquisitive mind

The happy faces of these youngsters working on a home teletype terminal connected to a central computer suggest that science is child's play to modern youth. Hundreds of thousands of young people throughout the world belong to leisure time science clubs and Unesco has encouraged the growth of these clubs. Unesco has done pioneer work in developing new approaches, materials, methods and techniques for teaching science through four major pilot projects in Latin America, Asia, Africa and the Arab States. Under these projects groups of key individuals were brought together for periods of one year to re-think the whole approach to teaching various scientific subjects—Physics in Sao Paulo (Brazil), Chemistry in Bangkok (Thailand), Biology in Cape Coast (Ghana), and Mathematics in Cairo (UAR). Unesco's Source Book for Science Teaching, first published in 1957, which describes many scientific experiments that can be carried out with easily available materials, has become a year in year out best seller that has appeared in 28 languages. The explosion of scientific knowledge has led Unesco to propose the establishment of a world pool of scientific information that will be instantly available to scientists everywhere. Known as the Unisist project, it involves working out methods of standardizing computer systems, linking existing information networks and setting up new information systems in countries now without them.

MODERN science is a universe of its own, expanding at a rate many times greater than population size or economic growth. Research and development has now become a huge enterprise, consuming over 50,000 million dollars world-wide annually and employing over two million scientists and engineers. These already astronomical figures are likely to double in the next five to ten years.

Countries rich in scientists and technologists are "developed" and their wealth grows as fast as these men's imaginations can create new ideas. Without scientists, no country can properly be said even to be "developing" in this twentieth century; so the world is divided, as some say, into "have-science" and "have-not-science" nations, the former getting richer and richer and the latter getting farther and farther behind.

No wonder then that policy-making has become so important in the effort to bring some order to this situation. The scientific establishment can no longer ignore the fact that science has been thrown into the arena of public debate.

Unesco has undertaken to interest developing countries in instituting policies for the organization of their own scientific enterprise and for the development of their own technological capability. This means seeking answers to questions such as: should a country rely on its own research and development, such as it is, or should it import technology? Should it train its researchers on the spot or should it send them abroad, with the risk that they may be destined to become part of the brain drain?

A country must first of all ask the most fundamental of questions: what resources are available for carrying out its own research and development? All these questions can be answered provided the country has policy-making organs to carry out the necessary fact-finding surveys and analyses and then take appropriate decisions.

By providing assistance in setting up such organs and sending consultants to advise them in critical decision-making, Unesco has helped countries of the Third World to decide what science, and how much of it, was good for them.

In the basic matter of training scientists, Unesco's work overlaps its general work in education and in each case the same ground-rules apply. As a matter of survival, science teaching must be as advanced and excellent as possible. Where a country must start from scratch, Unesco attempts to lay the groundwork; when science teaching is already under way, Unesco can supply the research and experts to improve it and bring it up to date.

Although at first thought, it would seem that you could graft a scientific habit of mind onto an individual from any culture, in actual fact, scientific of technical education only "takes" when it is treated as part of the whole personality.

As an extreme case in point, in many African countries, the only high school biology texts formerly available were those which described the flora and fauna of the European country where it was originally prepared; thus, many trained biologists might learn a great deal about English hedgerows, for instance, instead of

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about their own surroundings. The absurdity of the situation is apparent, but it took Unesco to finance the costly, and time-consuming project of creating a truly African course of study in biology.

Similarly, in the training of engineers, with the use of pilot projects in different parts of the world, an attempt has been made to train men whose skills will be precisely relevant to the needs of their own industries and their own societies; machines, buildings, modes of transportation vary, and so should the educational experiences that prepare men for planning, building and maintaining them.

Unesco is in the process of discovering what countries have common economic and physical conditions in an attempt to share the information that each one has arrived at by trial and error, and save its corresponding nation, which may be on the other side of the world, from going through the same slow process.

WHEN you finally do become a scientist or an engineer, the problem of keeping up with new developments is monumental. This is a field where things are happening so fast, that unless you do keep up, you not only are out of date in your information, but for all intents and purposes, you cease to be a member of your profession. A scientist in 1970 who is still using the knowledge he had in 1965 and nothing else might as well be an alchemist trying to change lead to gold by muttering a magic chant over it.

Till the 1950s an individual could stay abreast of his field if he read every article as it came out and spent all his waking time on his "permanent education". Today, however, in the natural sciences alone, close to three million articles are published in the world per year, not to mention the scientific books and pamphlets which seem to appear by the library-full. To take in even a tiny, specialized area of all this, the mind would simply burst, and the world would be full of "mad scientists" indeed.

Just as the computer has made possible all this humanly-impossible research and documentation, so only the computer can manage to keep pace with it. How much of this scientific output is repetition of the same experiments and what general trends emerge from the great bulk, only a computer can tell. Unesco can compile bibliographies of some of the works being published, but that is only an organized list of titles. The content of it all is what really matters.

How much more straightforward the problem would be if only all the computers of the world spoke the same language, and the information could be pooled and made available as soon as it was arrived at. If only consistent terms of reference, of measurement could be agreed upon, if only computer systems themselves could be standardized.

To this end, Unesco has undertaken to create **Unisist,** a World Science Information System. It is still in the planning stages, but it promises to revolutionize past thinking about the nature of scientific knowledge itself. No country or group of scientists will be obliged to become part of it but, hopefully, as its fund of information and analyses increases to vast proportions, no individual interested in scientific enquiry will be able to resist using it.

Of course, at first the new kind of sharing that **Unisist** requires, both of individual scientists and nations, will take some getting used to. Private discoveries will less and less be considered as private property for exploitation and gain, but as part of the world's storehouse for mutual benefit.

International co-operation of this kind, Unesco has proved, actually can work. Although the task of exploring space has been carried out by individual nations with their own budget and programmes, man has begun to explore his other great unfathomable frontier, the ocean, in a concerted international effort put together by Unesco.

For starters, they tackled the Indian Ocean for six years. Ships and scientists from 25 nations criss-crossed its waters taking samples, sounding the bottom in order to map its cold, black reaches, exploring its currents, recording its plant and animal life. The ships and equipment varied from sophisticated gadgets on floating labs, to bottles tossed over the sides of fishing boats... and the information poured in from all quarters.

It brought with it some interesting surprises; for one thing, scientists had long believed that there was a strong fast current racing northward along the east coast of Africa, which they named the Somali current, but it had never been charted nor its speed measured before this expedition. And indeed the current did exist, but what came as a bit of a shock was discovering that, unlike any other, it disappears for half the year; when the south-west monsoons are blowing, it sweeps northward almost twice as fast as the Gulf Stream, but when the monsoon ends and the prevailing wind direction reverses, it becomes a gentle southerly drift.

In effect, the scientists found that with the monsoon winds they had the use of a gigantic natural fan which switched on and off. Instead of having to theorize about what winds over the ocean's surface did to the current, for the first time they could actually measure their effect, as if the whole expanse of water were one vast laboratory.

ONE other thing they wanted to figure out was why the Indian Ocean doesn't seem to produce its fair share of fish compared to other oceans. The irony is that around it are the world's most densely populated countries where the need for fish protein is most desperate. Yet, for some reason not yet explained, the explorers discovered that there are layers of water in the Indian Ocean which have very little oxygen content and when they rise to the surface, the plant and animal life is suffocated.

They did find one great upwelling of water, however, which was teeming with sea life, but it takes the most modern trawling equipment to harvest its wealth. Here is the food, tantalizingly close, but out of the reach of those who need it and available only to nations rich enough to scoop it up for themselves.

To whom does the wealth of the oceans really belong, the mineral deposits on its floor and its other untapped resources? No satisfactory agreement has yet been reached, but as further exploration goes on in the Mediterranean, the South Atlantic and the Western Pacific, and as oceanographic ships stumble upon great stockpiles of mineral wealth just out

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INTERNATIONAL FLEETS EXPLORING THE OCEANS

A physiographic diagram of the Indian Ocean based on soundings made by the fleet of 40 research vessels of the 25-nation Indian Ocean Expedition (1959-1965), co-sponsored by Unesco and the International Council of Scientific Unions. Working through an Intergovernmental Oceanographic Commission which it set up in 1960, Unesco is co-ordinating oceanographic research for which the participating nations contribute $15 million annually to explore one of the last unknown frontiers on our planet—the world's oceans that cover three quarters of its surface. In 1963, 14 ships from 8 countries studied the effect of changes in ocean currents on fish yields in the tropical zone of the Atlantic; in 1964, 8 ships from 6 countries explored the Gulf of Guinea; in 1965, 36 ships from 6 countries began a study of the Kuroshio Current, the western Pacific's equivalent of the Gulf Stream, again to see how its variations affected weather and fisheries.

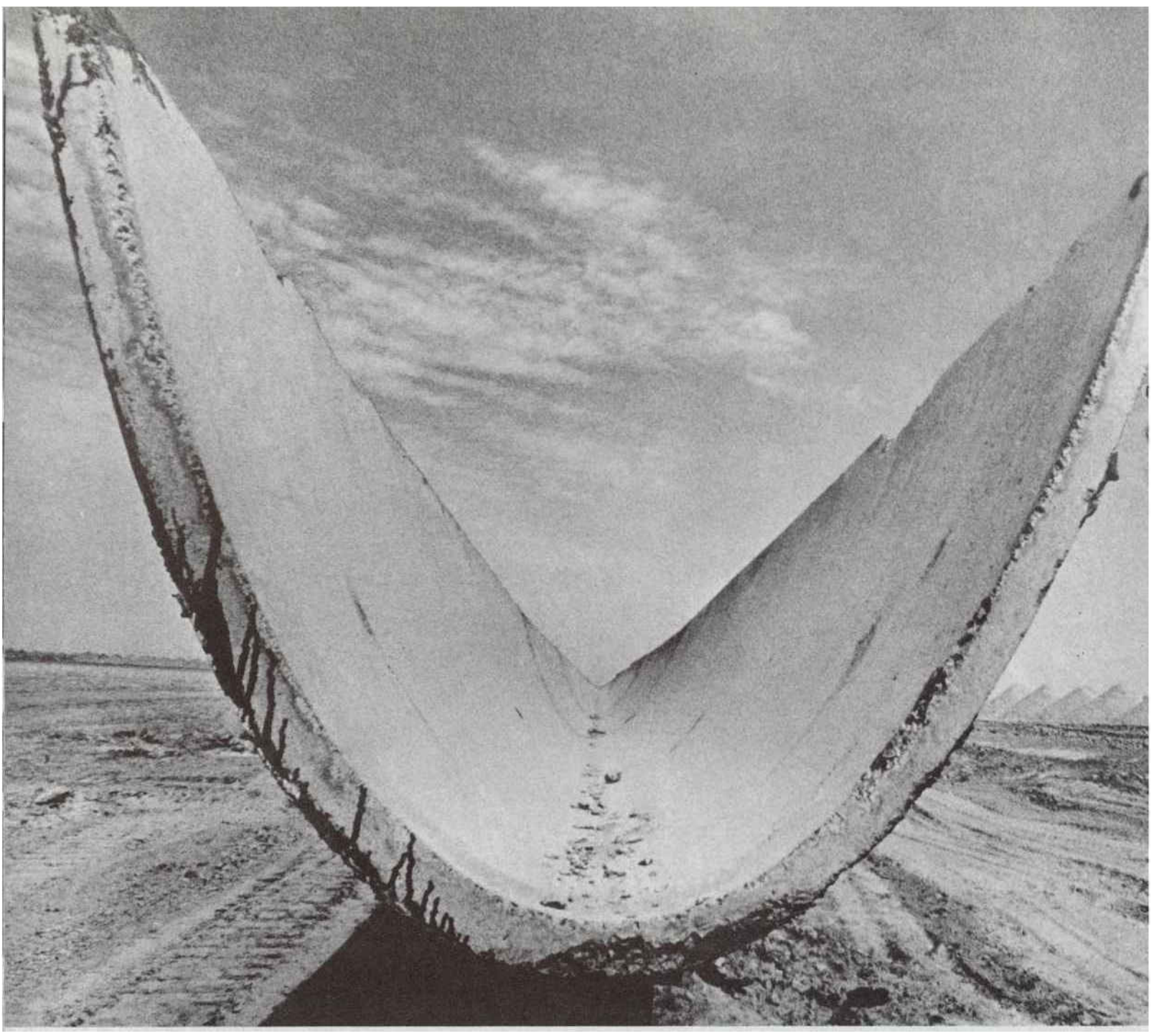


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Photo © APN

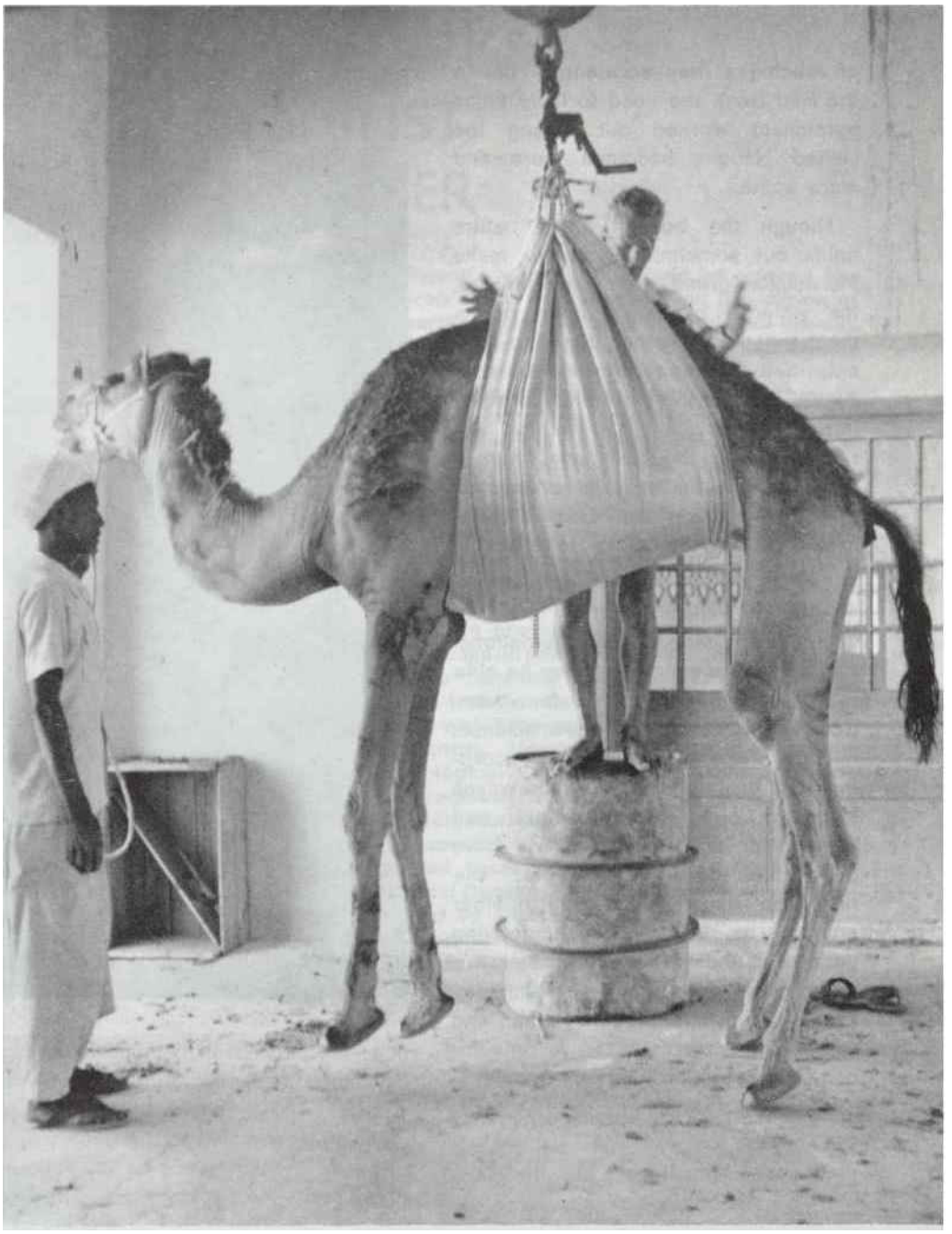

Photo © Schmidt-Nielsen

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THE ARID LANDS
A CHALLENGE TO MAN

In 1948, Unesco launched an international programme of research into the world's arid zones, which cover a third of its land surface. Thousands of scientists from some 40 countries collaborated in studies ranging from underground water research, climatology, solar and wind energy to plant, human and animal ecology. The International Hydrological Decade, launched by Unesco in 1965, is an extension to this programme. Photo above shows experiment carried out in Algeria with Unesco aid in 1954 on how camels can survive for long spells in the desert without water. Here camel's weight is checked after beast was deprived of water for eight days. Left, research being carried out on hydroponics—growing crops without any soil. Here an American pomologist (fruit-tree specialist) tends rows of apple sprigs growing in sand fed with nutrient solutions. In the past 25 years Unesco has sponsored research projects on plant physiology and has also studied the special arid land problem of saline soils and saline underground water in relation to irrigation, and in 1962 it organized a study symposium in Tashkent on this question in collaboration with the Academies of Science of the USSR and Uzbekistan. Above left, section of a vast concrete irrigation canal under construction in Soviet Central Asia.

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of reach (as they accidentally did in the Red Sea), the need to have some agreement worked out among the United Nations becomes more and more acute.

Though the bounty which nature holds out sometimes tends to make individuals greedy and self-seeking, the violence of nature often brings them together, whether they like it or not, in a common effort to survive. As the crust of the earth shudders and jars in violent quakes, as wailing hurricanes sweep the landscape clean, it seems to be flaunting its prodigious might in the face of man's puny efforts. Like children we cling together in helpless panic.

Although such natural disasters cannot be avoided, with international co-operation we may someday be able to predict and prepare for them. Seismology, a relatively new science, has gone a long way toward recording and describing the shock waves of earthquakes after the fact, and through Unesco, these findings have been made generally available; the next step will be to put it all together and try to discover the underlying patterns of the eruptions in the earth's crust. That done, man may someday be able to predict precisely when and where one is going to hit in time for people to save themselves.

As an interim measure, the new branch of seismic research called earthquake engineering is given to studying designs and methods of construction for buildings that will be earthquake proof. Hopefully, one day if you live in an earthquake area you will be warned to evacuate your home for a few hours and when the shocks are over you will come back to a building still intact, perhaps with a picture or two off the wall and a few dishes broken if you haven't had time to pack them; what is now certain disaster may in future be just a routine inconvenience.

Research in any branch of science has become so complex that now no single country can afford all the projects that present themselves nor supply the broad range of specialists necessary. In nuclear research, for example, the price of equipment and trained people is astronomical, and Unesco long ago saw the need for international co-operation. The Secretariat thus became instrumental in forming the European Organization for Nuclear Research, better known as CERN, whose scope, with Unesco backing, has grown to the point that it is now in the process of building the world's largest particle accelerator

Although projects in the life sciences may seem less monumental, in effect they are also unbelievably expensive. The task of studying the embryology of mammals by growing a mouse in a test-tube takes a new blending of biology, chemistry, fluid mechanics for the artificial placenta, electronic sophistication, etc.

Brain research, cell research—both demand the wealth of a Croesus, literally hundreds of researchers and the painstaking accumulation of minutiae—identifying a chemical substance, perfecting a complicated technique, subtly modifying someone else's theory. These are indeed tasks for the world. The goals of modern science may seem earth-shattering, but if we are to come close to understanding and recreating the processes that gave us our own life, we must act as one life and one scientific mind. ■

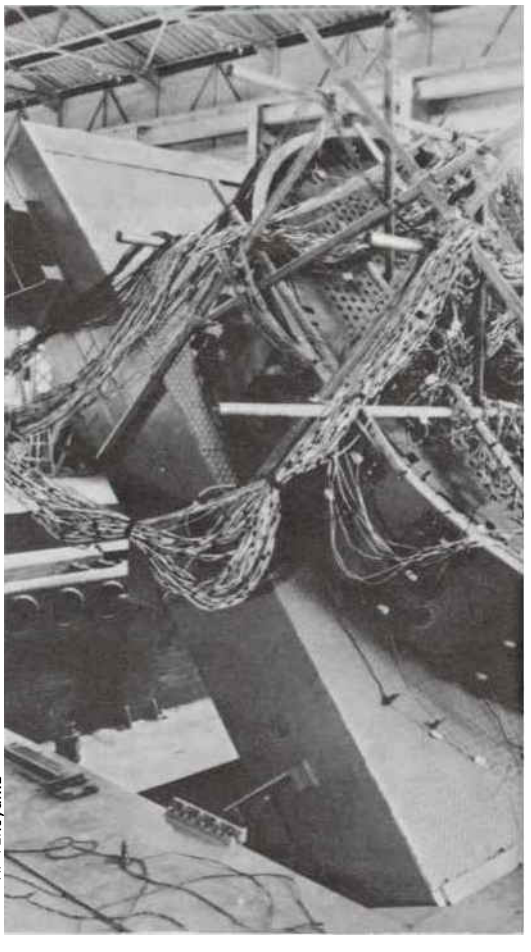

Photo K. Takeyama

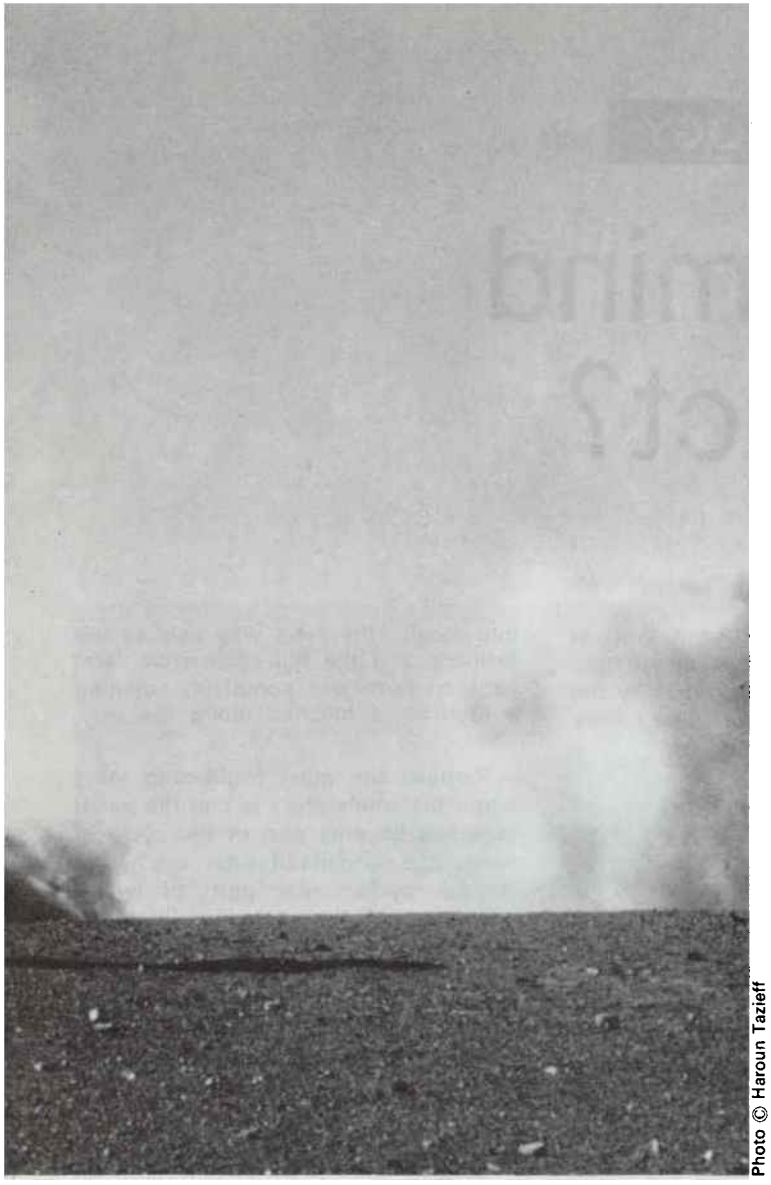

Photo © Haroun Tazieff

BULWARKS AGAINST DISASTER

Over the years, Unesco's work in the field of science has included a broad programme on the study and prevention of natural disasters—earthquakes, tsunamis (seismic sea waves), floods and volcanic eruptions. Unesco has an international roster of natural disaster specialists who can be called upon to rush to a disaster-stricken area to study an earthquake or other calamity. Photo left shows world famous volcanologist Haroun Tazieff studying the Irazu eruption in Costa Rica, during a Unesco emergency mission in 1964. Up to 1970, over 20 Unesco missions had made on-the-spot studies of earthquake-hit areas, including Skoplje (Yugoslavia), Ancash (Peru) and Dasht-e Bayaz (Iran). Japan is one of the world's most experienced countries in earthquake engineering, and that is why Unesco, in collaboration with the U.N. Special Fund, set up the International Institute of Seismology and Earthquake Engineering in Tokyo, to provide courses for non-Japanese trainees from earthquake-prone countries. Photo, below left, shows the unique " shaking table " or vibration-causing machine located at the Japanese Government Building Research Institute in Tokyo and which is regularly used by students from the International Institute. Unesco also helped to set up the International Seismological Centre in Edinburgh, Scotland, which collects and processes data from a world-wide network of more than 600 observatories. Flood prediction and prevention are two other aspects of Unesco's efforts for protection against disasters, and these are linked with the Unesco-sponsored Hydrological Decade. In this connexion, the mathematical model set up by Unesco (with the aid of a computer) for the development of the Mekong River delta has been used incidentally for the prediction of floods in Cambodia. Below, boatman on the Mekong.

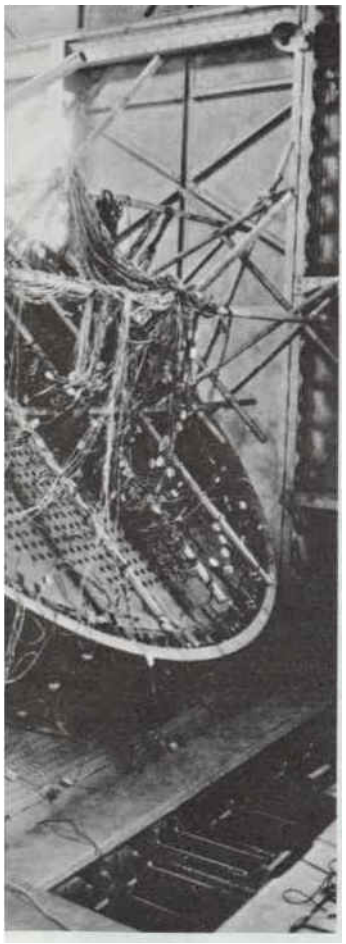

Photo © Raymond Cauchetier

The mind extinct?

HURTLING through a death-dealing and hostile environment, we are all clinging to the surface of a great ball of rock which we call earth. By a series of coincidences not yet explained, about three thousand million years ago a thin and fragile layer began to develop around this ball; as energy poured into it from the sun, the conditions necessary for life and the elaborate processes for sustaining it were set into motion. Oxygen and water were created and they in turn made it possible for plants to survive. Then animal life first appeared, and as the masterpiece of its evolution came man. One system of life was transmuted to support the next and all worked in an exquisite balance.

This thin miraculously organized layer, the biosphere, seemed cosy and inexhaustible until man in all his cleverness found that he had pushed its resources. No one even now knows just what happens to it when you set off an atomic explosion in it, or when you shoot a rocket vehicle through it and out into space. No one knows when its supplies of resources to sustain life, its water and its oxygen, will run out and the planet will slowly die.

What became increasingly obvious to scientists, long before the discussion of ecology became popular, was that man was pushing his luck, draining and wasting precious resources in a mindless, suicidal way. What is particularly obvious to scientists, also, is that no one country can save the biosphere by itself. Some are worse polluters, greater exploiters and disrupters of nature than others, but all suffer the consequences.

From Unesco's work in oceanography, it is clear that the ocean itself is in danger of becoming a sewer. Just to dump a bit of waste into its depths seems literally like a drop in a bucket, but who knows where that bit of pollution may be carried by the currents and what effect it may have on the freshness of the sea.

Just drop ever so small an amount of copper into a pond and see what happens to the fish in it, or even worse, add an infinitesimal bit of organic mercury and, although the fish and the algae they feed on may survive, they will concentrate it in their bodies to such an extent that they will poison anyone who eats them.

On land, to irrigate a large arid area may seem like a great step forward for one particular area, but what is it going to do to the weather in a neighbouring country? It seems that for any easy "progress" within the systems of the biosphere, somewhere else a price must be paid.

DDT and other chlorinated hydrocarbons have become part of the twentieth century way of life, eliminating the insects that carry malaria and typhus, killing pests that ruin crops, and even preserving manufactured textiles against moths. It is small wonder then that traces of DDT have been found as far afield as in the penguins of Antarctica, to whom it was carried in plants and fish. It takes no great sleuth to suspect that the mysterious disappearance of whole colonies of sea birds fits into the same pattern of evidence.

And the pesticides set up, with man's help, a little eco-system of their own. In one extraordinary case, farm chickens that had never been allowed out into the field showed traces of DDT. Where could it possibly have come from? What had happened was like some ghoulish nursery rhyme: the farmers sprayed the farmland with chemicals; wind and rain washed it into the sea; sea plants picked it up; fish ate the plants; fishermen caught the fish; the fish was made into meal; the meal was sold to the farmers, and the full cycle from farm back to farm was complete, polluting everything it touched along the way.

Perhaps the most frightening thing about the whole story is that the pesticide has become part of the cycle of winds and condensed water, the hydrological cycle. As part of water droplets, pollution can literally range anywhere over the globe, and deposit its deadly self thousands of miles from where it was taken up. So far the hydrological cycle is a life-giving one, but it must be carefully studied and maintained or we will all be in dire trouble.

Unesco has set aside ten years for the study of hydrology throughout the world. Just how much available water is there? Where is it? The way it is being used, how long will the supply last? By melting some of the polar ice caps how much could the supply be increased without raising the ocean level?

THERE are several untapped reservoirs in the world, such as the upper basin of the Rio Paraguay in the Mato Grosso of South America; the area is called the Pantanal, from the Portugese word meaning "marshland", and in all it is almost the size of France. In a joint project undertaken by Unesco and the government of Brazil, it is being explored and its fresh water wealth measured and opened for development, not only for Brazil but ultimately for Bolivia and Paraguay as well.

Just one more way of telling a highly industrialized, developed country from a developing one is the amount of water each person in it consumes.

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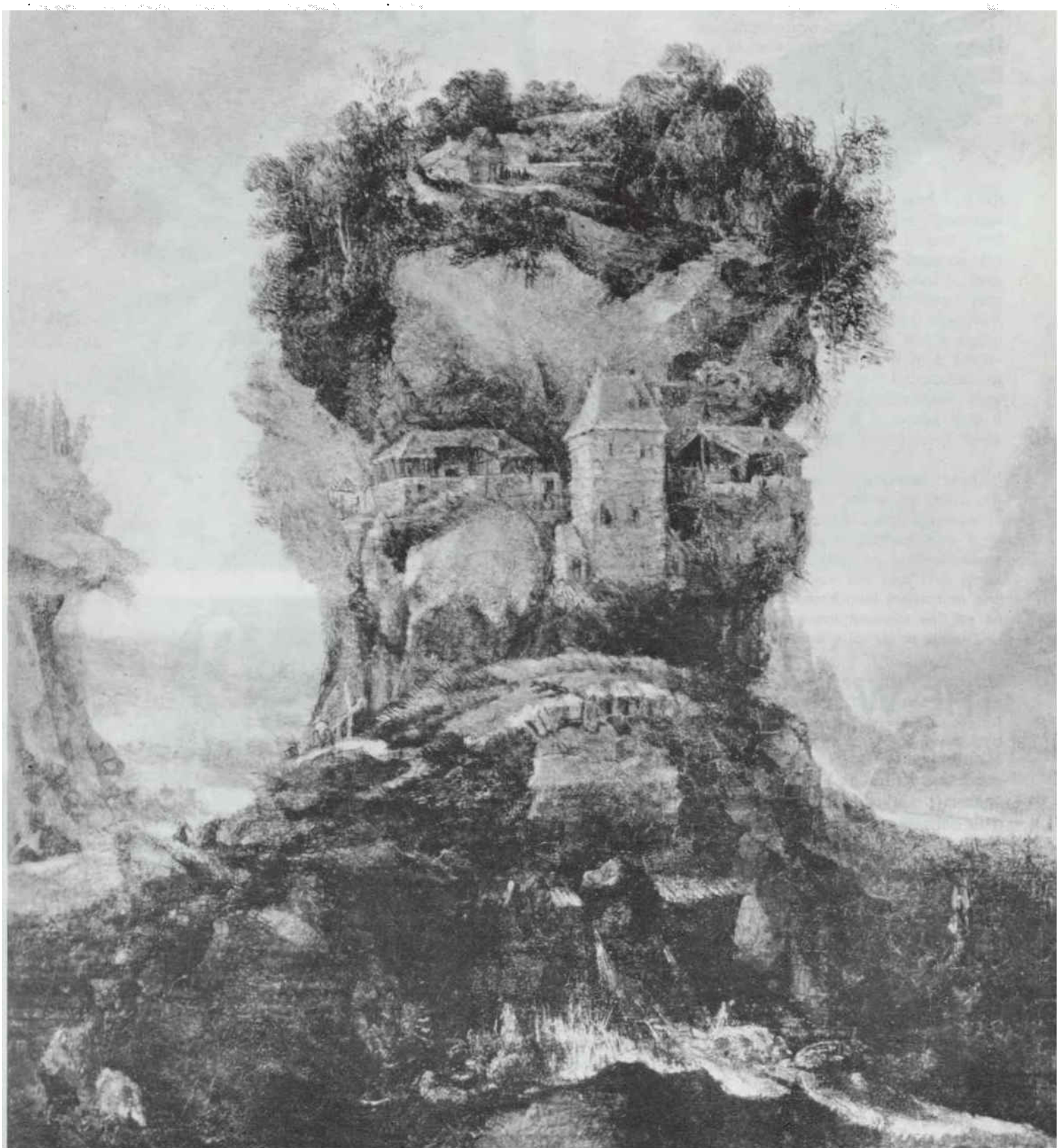
"Tête Paysage" (Landscape Head) by the Flemish 17th century painter Joost de Momper.



THE WANTON ARROW

Wantonly used for target practice by an unknown vandal in Austria, this stork had to forage for food for its young with an arrow through its breast before it could be captured and the arrow removed by veterinary surgeons. The conservation of the world's wild life and natural resources has always been one of Unesco's major preoccupations. In this field it has collaborated closely with the International Union for the Conservation of Nature and Natural Resources and the Food and Agriculture Organization. In 1957 a Unesco mission was sent to the Galapagos Islands to see how this unique zoological site could be preserved. As a result the Charles Darwin Foundation was established and a biological research station, built with Unesco's aid, was inaugurated in 1964. In Africa, a Unesco mission headed by Sir Julian Huxley made an on-the-spot investigation in 1960, of the conservation of wild life and natural resources in Central and East Africa. A Unesco Regional Centre for Science and Technology, set up in Nairobi, Kenya, is now helping several African governments solve their conservation problems.

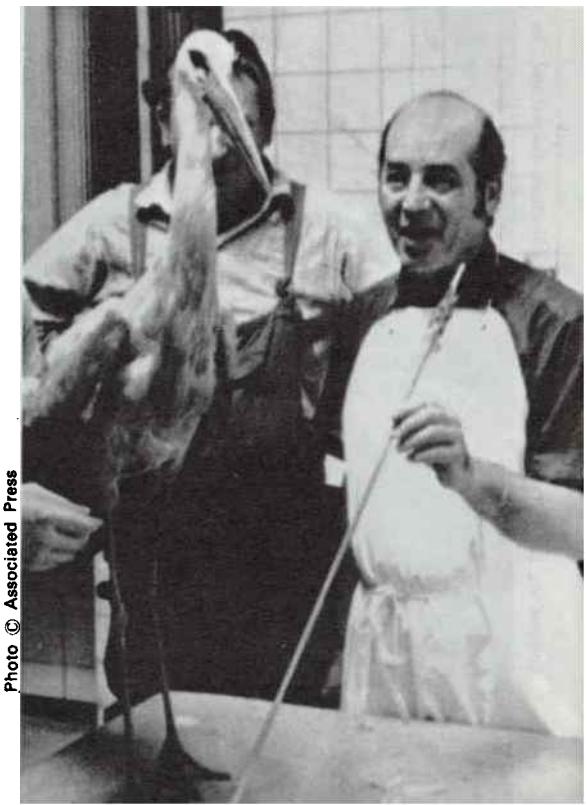


Photo © Associated Press

Photos © Gamma

For the rich countries, the old phrase "spending money like water" should be changed to "spending water like money." They have been using it as if the supplies were never going to run out.

With all of the earth's riches, men have to learn to become students and husbandmen of nature, not its heartless master. From satellites, we can look down on the surface of the earth and see areas of despoiled vegetation, areas where the soil has become salty and in which nothing can grow. Also, great weather patterns become clear to the cameras and, in short, the biosphere is spread out to be examined. It is now Unesco's job to stimulate this examination, to act as a centre to help countries plan for preserving the resources with which they have been blessed.

ANOTHER aim is to find out what the "danger signs" are when man has exceeded his limitations and threatens to upset the balance for everyone, just as miners used to take canaries with them when they went down the pits. When the bird was overcome by gas it was the man's signal to save himself. Now when a particular species becomes threatened or great natural changes take place, they may be warnings of a similar kind if only we knew how to interpret them.

Perhaps Unesco's greatest contribution to ecology is still many years off; it will be in establishing agreements between nations to protect them from polluting one another. Governments will have to face the fact that some system of international inspection and control of the environment will be an absolute necessity for us to survive.

But all the agreements in the world will be useless if the basic problem is not faced squarely. The cause of all the earth's pollution is man, and with the population of the world due to double well before the year 2000, no matter how many clever solutions science can come up with, pollution will be a fact of life. We will be like rabbits trapped in a cage with only a limited supply of food, living in our own filth, proliferating at a crazy rate and frenzied in our fight for enough water and food to keep alive.

The picture is not a pretty one, but unless population growth is stopped, it is inevitable. It is easy enough to talk about industrial pollution, chemical poisoning and the waste of

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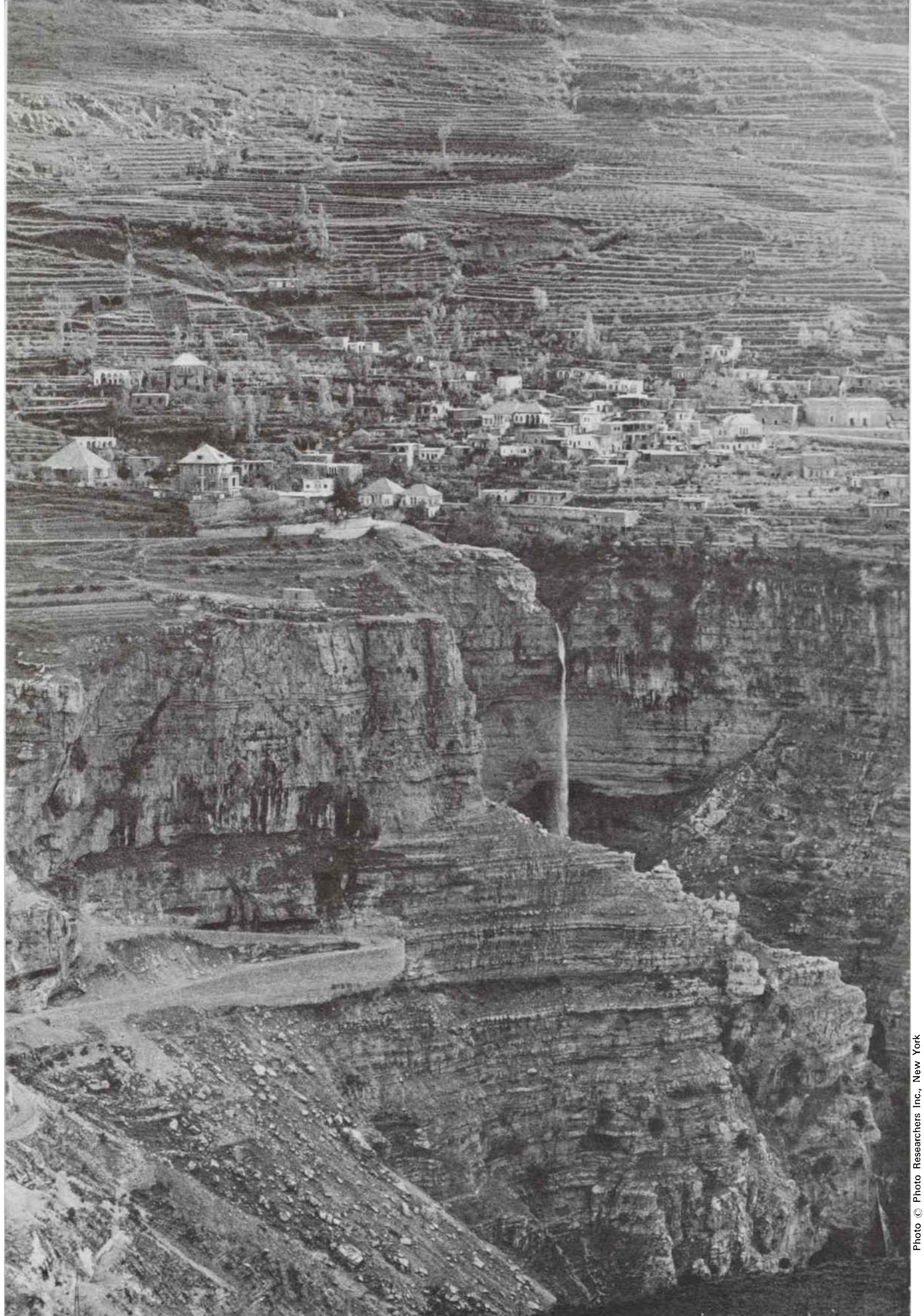

resources all that we can blame on someone else, but in the case of the population "bomb" we have no one to blame but ourselves. And no one can solve the problem but individuals who have enough concern for their fellows to have a limited number of children

In all of Unesco's work with ecology the concept comes up again and again that more must be supplied to man by his environment than a ration of food and a little runway of earth; he isn't just a rabbit. His life must have quality as well. He must have room to move, a vista, colour, stimulation and affection in his world, otherwise he is alive only as an animal and not as the being "man".

In spite of the work of the world's scientists, in spite of Unesco, if we continue to pollute our planet and overrun it as we are now doing, we and our children will someday meet grey morning after grey morning wishing that we had never been born. ■

Mighty forests of cedars once covered about half a million hectares of the Lebanon. The Phœnicians and succeeding civilizations stripped the forests to make galleys for their navies until only four small groves of cedars remained. Under the Lebanese government's "Green Plan", a vast programme of reforestation has been undertaken. Along the Lebanon range young cedar and pine trees are being planted in terraces carved from the rocky hillsides, like those (left) above the limestone cliffs of the valley of the Abou Ali river. Unesco has played a key role in alerting world opinion to the importance of conserving natural resources. In September 1968, Unesco, in co-operation with the UN, FAO, WHO, the International Biological Programme and the International Union for the Conservation of Nature and Natural Resources, convened the first world conference on the rational use and conservation of the natural resources of the biosphere. As a result Unesco has been mapping out a long-term international programme on "Man and the Biosphere" to deal with the scientific, technical, educational and instutitional problems of the rational use of natural resources and the improvement of the environment.

'IN THE MINDS OF MEN'

"In the Minds of Men" is the title of a book commemorating the 25th anniversary of Unesco. The book contains a study on Unesco by the Director-General, René Maheu, as well as 14 essays by distinguished figures in the world of education, culture and science, who have been closely associated with Unesco's work. We present below brief extracts from some of these texts.

TOWARDS AN AGE OF DIALOGUE

Attempts at international communication often fail. People have been known to come away from them frustrated, and even in a cynical mood. And when these endeavours don't fail, they still require, usually, more energy and patience than communication within the confines of a single country. Why, then, does the ideal of international intellectual communication, for all the resistance and hostility it generates, also exercise the extraordinary appeal that it does?

Obviously, it represents to many men a hope for peace. Or course, successful international communication is not a guarantee of peace. The nations of western Europe communicated freely and openly with one another for many years during which they also fought suicidal wars. Nevertheless, if the experience of the past is a guide, among the contributing causes of war are national stereotypes, the de-personalization of people on the other side of the border, the misinterpretation of their intentions and even their simplest statements, and the incapacity to comprehend that reasonable men can see the world very differently when they look at it against the background of an historical experience different from one's own. Peace cannot be won by better communication alone, but surely such communication can reduce the influence of factors which have made the road to war an easier one for people to take.

CHARLES FRANKEL
Professor of Philosophy, Columbia University, New York

THE UNITY AND PLURALITY OF ASIA

Asia is big, embracing at the start of Unesco over one billion people who today have grown to two billion. Asia is a plurality, containing peoples and nations bound by socialist, market and mixed economy ideologies, and adhering to the great historic religions of Buddhism, Hinduism, Islam and Christianity. Asia is a unity in its cultural values and in its fight against poverty and destitution. Unesco has had to come to terms with these three basic characteristics of Asia—its bigness, its plurality and its unity.

MALCOLM S. ADISESHIAH
Former Deputy Director-General of Unesco

DIRECT PARTICIPATION

Unesco is not an academy of learning, nor a scientific laboratory, nor a forum for theories and speculation. It is an organization for action, for co-operation and international aid in science, education and culture, and it has drawn up and launched a clearly-defined global programme to which its member countries have freely given their consent. The member states did not create Unesco merely to remain as onlookers, but to participate directly in this action.

ATILIO DELL'ORO MAINI
President of the Unesco General Conference (1970)

THE EDUCATION EXPLOSION

The "education explosion" of the last 25 years is now to be matched by the requirements of quality, and educational systems everywhere need renewal and transformation; the new vistas opened up by the emerging concept of lifelong education point to radical changes in all societies, innovating from their own conditions and realities toward the paths chosen by themselves. In this process of development in the 1970s, the catalytic role of Unesco in bringing about innovations and its promotional role for regional and international co-operation could provide new dimensions.

PREM KIRPAL
President of the Unesco Executive Board

EDUCATION, A RIGHT FOR ALL

Though not a world Ministry of Education, Unesco has been able persistently to emphasise the concept of "Non-discrimination" in education, an idea that has an unassailable moral force behind it... It has ceaselessly insisted that whatever rights are realizable must be realized as much for people with dark skins as with light, as much for girls and women as for boys and men, as much for persons of one religion as for persons of another.

LIONEL ELVIN
Director of the Institute of Education, University of London, and former head of the Unesco Dept of Education

THE SEED OF INTERNATIONALISM

We are convinced that a world, where literacy is becoming universal, culture more internationalized and science not a privilege of a number of universities in a few countries, must become a more peaceful world. Obviously, the main instrument for creating those conditions is education. First, educational facilities must be established where there are none, and, second,

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The mind creating

REMEMBER the days when "culture" was a luxury reserved for the rich and leisured to dabble with? Remember when some cultures were considered "primitive" and the standards of "real" culture were set in the capitals of Europe for the "natives" in the rest of the world to imitate? In many parts of the world these days are still with us; the old-fashioned definitions die hard.

In the nineteenth century you could consider yourself part of the cultural scene if you knew nothing about Oriental or African history and literature, but not any more. Whistler borrowed techniques from Japanese wood-block prints and Picasso was given a new sense of mass and line by African carvings, and through them western man started to have his eyes opened to what he was missing at first hand.

But not many of the original works were available until Unesco undertook to do its own kind of pioneering and open something far more important than the trade routes between East and West, the routes of understanding in literature and the arts.

For literature, a platoon of translators were set to work putting representative novels, poems and stories into French and English from Arabic, Burmese, Sinhalese, Chinese, Korean, Indonesian, Iranian, Hebrew, Japanese, Urdu, Thai, Viet-Namese, the non-Russian languages of the U.S.S.R., and Indian languages including Sanskrit, Hindi, Bengali and Tamil. Also, with Unesco support, Buddhist texts written in Pali have been translated into English, along with a rare collection of "The Sacred Books of the East" from Sanskrit, Pali and Chinese.

But the flow didn't go in just one direction. Dickens was translated into Burmese, Plutarch came out in Chinese, Sophocles and Molière came out in Indian languages, Nietzsche was translated into Persian, Descartes, Rousseau and Voltaire into Arabic, Shakespeare was translated into Thai and Voltaire appeared in Viet-Namese, to mention just a few.

Yet a classic novel about thirteenth century Japan, or a Shakespearean history of sixteenth century England can tell only so much about the Japanese or the English sensibility of the twentieth century. The process, to be complete, had to include works by contemporary writers as well.

Choosing classic works for translation is easy enough, but choosing a handful out of the hundreds of living writers to be translated, and investing money in publications which would probably not be a commercial success, required much discussion and debate by committees of some of the world's most knowledgeable scholars.

In 1960, Unesco supported the publication of an anthology of poetry which included many works by the Greek poet George Seferis. He was almost entirely unknown outside his own country, and in 1963 he won the Nobel Prize for Literature. Accidental good luck on Unesco's part? It was more than that because in 1956 Unesco had commissioned the first English translation of the Japanese novel "Snow Country" by Yasunari Kawabata, the 1968 winner of the Nobel Prize.

Whatever the translation, classic or modern, Unesco will have it listed in a tome the size of a large telephone book with the formidable Latin title *Index Translationum.* If you want to read something from another country or another culture, it will list current works available in your own tongue.

Language differences may be the most immediate barriers when it comes to sharing a cultural heritage, but there are other unexpected complications in understanding. Music, which you might assume would be as universal a voice as a smile, has its own vocabulary. In this case, no dictionary will begin to explain the differences in meaning.

The only way a western ear can begin to "hear" oriental music is by repeatedly being exposed to what may at first seem like a jumble of ugly squawks and wails. An "eastern" ear has to sort through the undifferentiated roaring of a Beethoven symphony. It takes time, but eventually one can recognize the beauty and greatness of the other.

While western music is generally available in the east, until Unesco prepared an anthology of oriental music (Japanese, Tibetan, Indian, Iranian, etc.) westerners had little chance of ever hearing it. When these records proved so successful Unesco did the same thing for African music to popularize its characteristic rhythms and sounds.

THE only art form that needs little or no translation is that of painting. When one particularly great artist sees the world in a new way, the vision of the whole world changes. In wealthy countries, brilliantly produced art books and richly-stocked museums are accessible to everyone, but in developing countries, access to the world of paintings is very limited.

So Unesco established its "museum without walls" which consists of several travelling exhibits of reproductions and two huge compendiums of the world's best colour prints. Even in countries where a wide range of glossy books is available, it would hardly be profitable for a publisher to do whole volumes on the Persian miniatures in the Imperial Library, Ethiopian illustrated manuscripts and the Byzantine mosaics and frescoes of Cyprus, so once again Unesco seeks to make them available by subsidizing their publication.

All these projects have concerned culture on the broadest possible scale, but one of the things that makes world culture so fascinating is its wonderful variety and, in many cases, the eccentricities of certain regions and sensibilities.

A country without its own particular cultural flavour is like a person without a face. Like any expression of personality, it comes with a growing self-possession, and without encourage-

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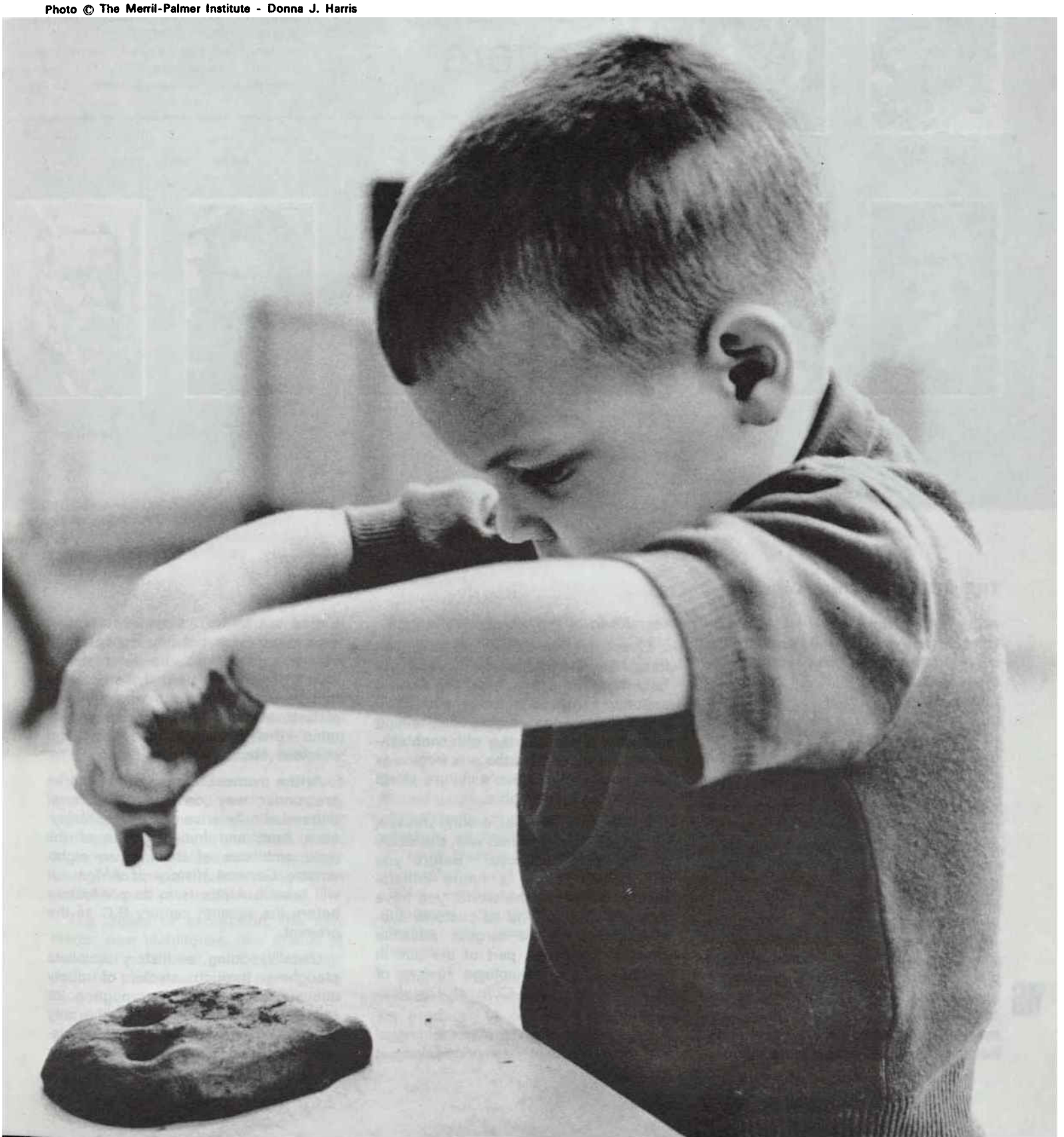
Appreciation of the arts and artistic creativity should begin in childhood. Unesco has brought creative artists and educators together to see how this can be accomplished, and has helped the creation of international societies and organizations which aim to foster art education in schools and an appreciation of art in the community. During the past 25 years Unesco has published a large number of books on art: large-format art albums, paperbacks, catalogues of colour reproductions of paintings, specialized studies and popular books on art. Unesco collections of records, produced in collaboration with the International Music Council, have brought Western, Asian and African music to a wider audience. In co-operation with the International Theatre Institute, Unesco has promoted theatre research and the use of new teaching methods in dramatic art. In co-operation with the International Association of Art, Unesco is organizing, to commemorate its 25th anniversary in November 1971, an international poster contest for young artists on the theme "A World Fit to Live in ". In 1972 Unesco will hold a symposium for young people to express their views on problems that face the artist of today and to discuss the future of the arts throughout the world.



GEORGE SEFERIS (born 1900)

YASUNARI KAWABATA (born 1899)

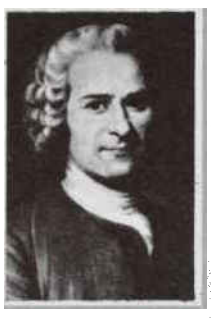
Literary masterpieces across frontiers

More than 400 translations of great works of literature already published and a further 70 in preparation, this is the present record of achievement under Unesco's translation programme which was started in 1948. The aim of the programme is to foster mutual understanding between nations by making translations of classics and contemporary writings available throughout the world. Each year Unesco commissions dozens of new translations from literatures that are, unjustly, little known outside their own language areas. Since the western world is largely ignorant of the great literatures of Asia and Africa, many of these translations are into French and English. The great writers of the western world are in turn translated into the many languages of Asia and Africa.

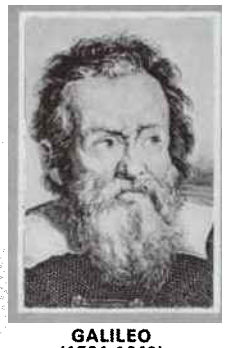
AL-GHAZALI (1058-1111)

CERVANTES (1547-1616)

All Unesco photos except: Seferis (© Keystone, Paris); Tolstoy (Tolstoy Museum, Yasnaya Polyana, USSR); Tagore (© Rabindra-Sadana, India); Tulsi Das (© Visvanath Prasad, Misre, India); Monteiro Lobato (© Larousse, Paris)

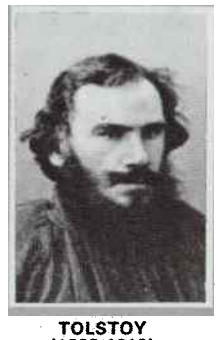


J.J. ROUSSEAU (1712-1778)



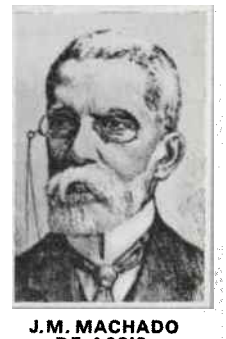
GALILEO (1564-1642)

JOSÉ MARTÍ (1853-1895)



TOLSTOY (1828-1910)

LEIBNITZ (1646-1716)



J.M. MACHADO DE ASSIS (1839-1908)

THE MIND CREATING *(Continued)*

ment, it is irretrievably lost. When Unesco was first formed, one of its major tasks was in convincing countries, shattered by war, not to neglect their cultural heritage in rebuilding themselves. Most governments want to put off spending money on culture until everything else is taken care of, and of course, that never happens.

Why do particular countries have tremendous explosions of creative energy at particular times, when communities of artists burn with a particular luminosity and intensity? What were the forces that created the works of Renaissance Florence? What factors produced the masterpieces of the T'ang dynasty in China? Where did the glories of Aztec expression spring from? To hope to recreate the the conditions for such creativity one must study culture, not as some fancy pastime on a pedestal, but as an integral part of the life of a civilization.

Over the centuries, science has itself been a part of culture. A beautifully designed automobile is as much a cultural expression as a Pharaoh's chariot. As soon as you start talking in these terms, all the old snobbishness connected with the arts begins to disappear and a nation's culture starts to become manageable.

It is no accident that, around Unesco, culture is closely linked with the study of the social sciences. Before you can begin plotting a future cultural policy for part of the world, you have to study its past and its customs systematically, in the largest possible context. This was part of the aim in writing a huge six-volume *History of the Scientific and Cultural Development of Mankind.*

The title itself gives some inkling of just how mammoth an undertaking it turned out to be. Most important, it was meant to avoid any national and personal prejudices, so international teams of scholars pooled their talents and tried to take in the whole human picture, at the same time keeping in mind their specific theories and opinions about their own fields.

At the moment, more specific works are under way on specific cultural units—Latin American, Oceanic, Malaysian, Arab and Indian. One of the most ambitious of them is an eight-volume *General History of Africa.* It will take in Africa from its pre-history before the seventh century B.C. to the present.

Usually, doing a history involves ploughing through stacks of dusty documents and wading through a lot of dry facts, but in this case, the only way to get some of the necessary historical and social material is to listen

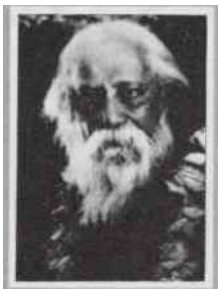
Works have been translated from more than sixty literatures, corresponding to some forty Asian and twenty European languages, as well as from the non-Slav literatures of the Soviet Union and some African literatures. Some of these translations are intended for a wide general public and have been published in paperback editions with large printings. In addition, the programme foresees the production of introductory handbooks to the literatures of the major Asian cultures written by outstanding scholars. As our photos show, the writers selected for translation constitute an international hall of literary fame. Works by the first two, George Seferis and Yasunari Kawabata, were selected for translation by Unesco before either of them had received the coveted Nobel prize for literature.

DANTE
(1265-1321)

TARASS
SHEVCHENKO
(1814-1861)

SHAKESPEARE
(1564-1616)

DOMINGO
SARMIENTO
(1811-1888)

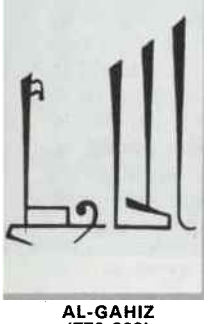


RABINDRANATH
TAGORE
(1861-1941)

RUBÉN DARÍO
(1867-1916)

LAO-TZU
(3rd cent. B.C. ?)

UNAMUNO
(1864-1936)



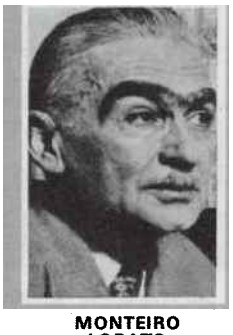
AL-GAHIZ
(776-868)

TULSI DAS
(1532-1623)

MANUEL DE
JESÚS GALVÁN
(1834-1910)

MELIH
CEVDET ANDAY
(born 1915)

HENRY THOREAU
(1817-1862)



MONTEIRO
LOBATO
(1883-1948)

to and record the wealth of stories and yarns that have been handed down over the years by word of mouth. This is history coming directly out of a living tradition and even if the small details may have been distorted by time and vivid imaginations, the spirit of the past is still immediately tangible.

The focus of all Unesco's activities is still firmly in the present, in repeating the need for nations to keep their heritage alive and, in practical terms, to concern themselves with it seriously enough to invest money in it, as an essential part of a national future.

The means of expression, the new media, new techniques, new stimuli at the artist's disposal, in theatre, music and the plastic arts has never been broader nor the world around him more challenging: his rôle as a life-giver for society cannot be questioned; yet, "culture" as we know it may be in for a great revolution which Unesco is just now on the brink of exploring.

Already, it has become difficult to tell from his works out of which society a particular sculptor may have come or what background has shaped an individual painter; there is now a so-called international style in architecture and in design. In some areas mutual appreciation has created a kind of uniformity of style and imagination which is, ironically, just the other side of what Unesco has been trying to accomplish... and in many ways this slavish sameness is worse than the ignorance of other cultures that Unesco has been trying to break through.

With all the plans for satellite communications, to what extent will we all be products of one world-wide television culture? Or, are these just the perennial fears of those who are stunned by the speed of man's development and who always raise a last minute cry about losing their individuality?

At this point no one can say for sure what the new technology's effect both on culture and society will be, but it is clear, that now is the time to encourage national identities with all their wonderful variety and eccentricity while they still exist.

As up to now no one protected certain beautiful and rare species of wild-life, so even now too few people in positions of authority are concerned with the culture of their regions. Some of Unesco's studies may really be about the last expressions of national and regional customs as we know them; if not preserved by far-sighted planning and support, they, like the leopard for example, will probably become extinct. ■

The mind preserved

EACH of us owns something that we think is priceless and irreplaceable. Maybe it is worth a lot of money; maybe it isn't worth anything. It might be somebody's picture, a collection of records, a ring... but whatever it is, it is something that has become a part of you. What if someone, in a fit of anger or jealousy, destroyed it right in front of your eyes? What would be your reaction? Fury? Helplessness? A feeling akin to being smashed in the stomach?

Bombs fall and destroy the city of Dresden murdering thousands and incidentally flattening a jewel among cities. In the name of progress, ancient Egyptian temples which have survived for aeons of time are to be wiped off the face of the earth overnight. What feeling does that arouse? The same awful sense of loss?

Probably not. For most of us it seems a pity that they should be destroyed, but since it doesn't hit us personally, we can't get all that excited about it.

Unesco thinks differently. These great glories of civilization belong to everyone; their destruction is a direct loss for each of us and it is up to us to adamantly defend them. It seems ironic that the heights of man's achievements should have to be preserved against his wars, his callousness and his violence, but what we have now of the past is merely the leavings.

As early as 1954, Unesco prepared a treaty on the preservation of monuments during armed conflicts which has been signed by less than half of its member states. Not a very good showing—but some countries were afraid that their enemies would use sites protected by the treaty as bunkers to operate from, and at which nobody could shoot back. The argument is as old as the history of warfare: if something is a strategic target, no matter what it is or how valuable it might be in itself, it must be destroyed.

Often, the best that anyone can do is to shore up a site against advancing disaster, take pictures to record what it looks like in case the sand-bagging and other preparations don't work and, if you have time, move the most valuable parts of it somewhere else for safe-keeping.

These are some of the precautions that Unesco experts have taken with the ruins of Angkor Wat, in Cambodia. They are part of the remains of an extremely rich civilization which flourished in the twelfth century and then was mysteriously deserted in the fifteenth. The jungle took them over and only in this century have archaeologists discovered how vast the ruined city must have been. By good fortune its fantastic carvings and eerie pillared corridors of stone have been preserved almost intact, and the story of its unknown period lies waiting to be explored both by tourists and the experts who can piece together the clues that Angkor holds.

It is now perilously close to the Viet-Nam conflict... close enough to be considered in it. The Secretary-General of the United Nations and the Director-General of Unesco have made a public appeal to save it, but, short of having it and miles around it put off limits, the most that can be expected is that, after the fighting, it will somehow have been protected enough to survive. Otherwise, man will be left with only a series of photos to remind him of its beauties and fascinations.

Sometimes, it is man's practical concerns rather than his ferocities that menace great works of art; it may seem a pity, but there is no other way of going about some building projects than by destroying everything in your wake.

When a new, higher Aswan Dam was being planned to back up the Nile and provide badly-needed hydro-electric power, it was clear that the great Egyptian temples at Abu Simbel were going to be flooded in the process; but they were carved into the stone face of a cliff, and there seemed nothing that could be done to save them.

Then, in a dramatic move, it was suggested that if enough countries would co-operate with Unesco and help to underwrite the enormous cost, the temples could be literally sawn out of the rock in huge chunks and moved piece by piece to higher ground. About fifty countries volunteered to give support through Unesco and the process was begun as the dam was being built.

From the beginning, it was a race against the rising waters; but now after five years of the actual work and millions of dollars later, the temples are well above the newly-created lake, and are more durable than ever. In the moving, preservatives were added to the stone itself and they were given added strength by the most advanced modern techniques of engineering.

ABU Simbel received a great deal of publicity as the glamorous centre of attraction in what was in reality a much larger project; the full rescue operation took in the whole area of Nubia where the monuments were going to be submerged.

It took five years for 70 expeditions from various countries to catalogue and photograph all the monuments, inscriptions and rock carvings that were going to be lost from sight beneath the waters; then, all the free-standing temples were cut up and removed; frescoes of the Christian period were safely stored and whatever was most precious was saved wherever possible.

Throughout, experts kept a wary eye on the island of Philae which was located between the old and new dams. Since the Nile had first been dammed up at the beginning of this century the temple to the goddess Isis, its colonnade and a Roman temple called Trajan's "Kiosk" on the island had spent a large part of the year underwater and had survived.

That is, they survived with the exception of the many - coloured Egyptian frescoes in the temple which were still intact in the nineteenth century, after 2,000 years, but were destroyed by the flood

Photo © Solvay, Paris

The preservation of the world's cultural heritage has been one of the major tasks Unesco set itself in the field of culture. The world campaign to save Abu Simbel and other monuments of Nubia, launched in 1960, has now been brought to a successful conclusion except for the rescue of the temples on the island of Philae (see page 63), but Unesco's action has ranged all over the globe. The International Council of Museums which Unesco helped to found in 1946, has become the recognized organization for museum authorities and technicians throughout the world. In 1954, Unesco drew up an international treaty to protect works of art and historical buildings during armed conflicts. In 1959, it set up an international centre in Rome for the study of the preservation and restoration of monuments and works of art. Here a wooden statue is given an injection against a malady that would have reduced it to powder.

waters. With the decision to use the basin between the dams as a reservoir for generating electricity, the island is permanently underwater; the lake level now changes up to nineteen feet daily and the sandstone is being quickly scrubbed away.

To save this "pearl of Egypt" a dam has to be built around the temples and, using techniques similar to the ones needed for Abu Simbel, they will be carried away in about 20,000 pieces and reassembled on the firm, pinkish granite of Agilkia, a deserted island downstream.

What is frustrating about this project is that, seventy years ago, when the first dam was built, there was a movement of historians to try to save the temples but the government simply couldn't afford the project. Had there been an organization at that time such as Unesco perhaps it could have mustered the necessary international support and not only would we still have the murals, now lost, but the whole rescue could have been done for a small fraction of what it is costing today.

There are many treasures, like those of Nubia, that are on the brink of being destroyed and whose time for rescue must come soon or never. Fortunately, there is a new impetus for present-day governments to keep them from crumbling. If they will put out the necessary capital for the work, they aren't just wasting their money on "art", they are investing in the highly profitable venture of "cultural tourism", attracting visitors, foreign currency and a multi-billion dollar industry of hotels and all the services of travel. Many of us can conceive of getting on a plane and in a matter of a few hours, actually visiting the temples of Isis and Abu Simbel. At least it is a possibility.

In that case, what about a visit to the temples of Borobudur near Jogjakarta, a moonlit stroll through the site of ancient Carthage or an exploration of the "Andean" and "Maya" routes in Latin America?

Borobudur is a massive Buddhist shrine built twelve hundred years ago in Java. It consists of four square terraces which you walk around to reach the summit; all along the way there are hundreds of bas-reliefs denoting various levels of spiritual understanding.

You walk past these on a long pilgrimage to the upper terrace, getting farther and farther away from concerns of the world so

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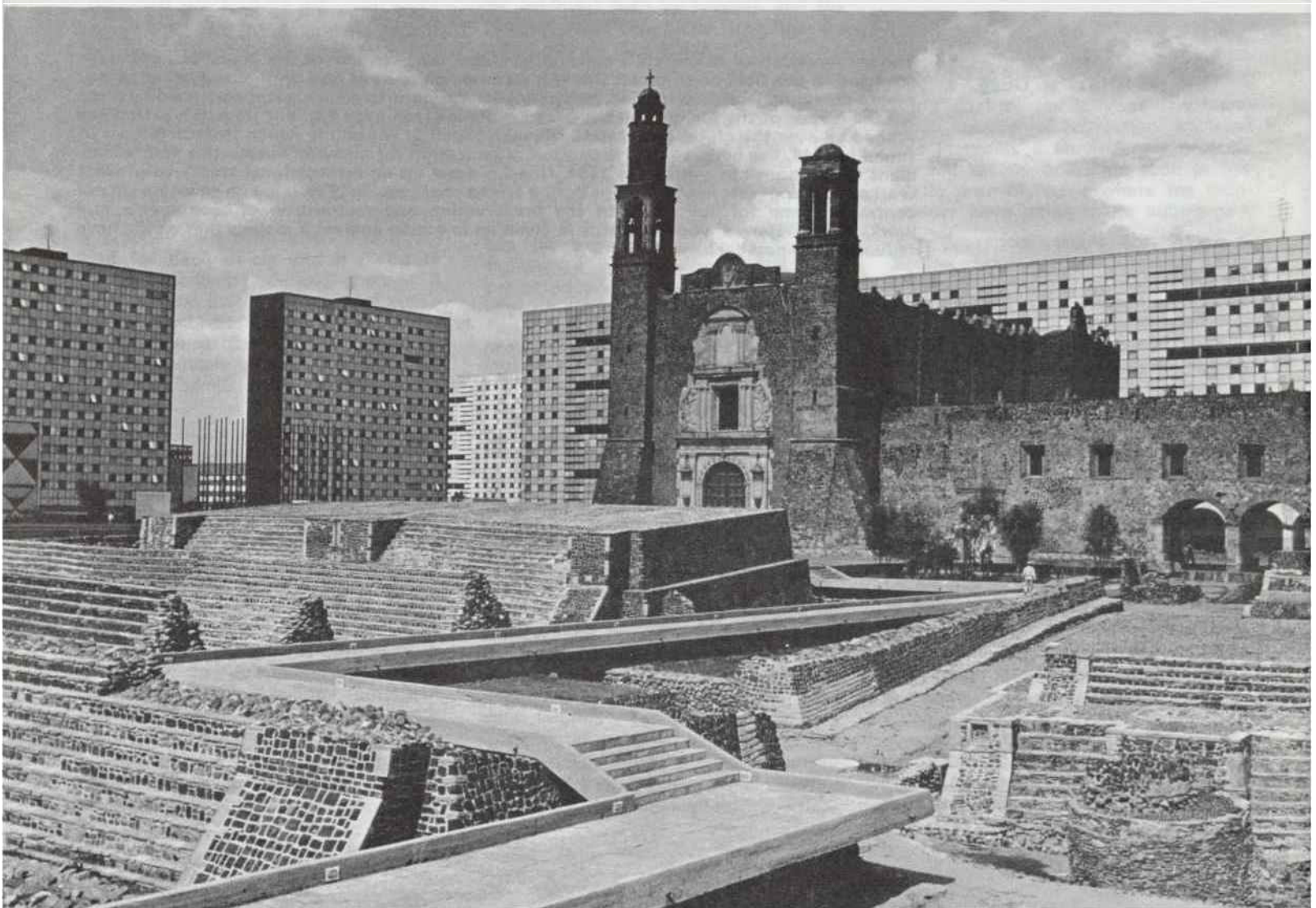
Photo Unesco-Marc Riboud



PRESERVING OUR HERITAGE OF THE PAST

Photo © R. Guillemot - Connaissance des Arts

Unesco has organized many hundreds of scientific missions to all parts of the world for the conservation and preservation of sites and monuments and the cultural treasures of its member nations. In 1954 it launched an international campaign to alert the public and governments to the need to safeguard monuments and works of art. In Africa, Asia and the Middle East, it has arranged special training courses for technicians: at Jos, Nigeria, for African museum specialists, at the Latin American centre for the conservation of cultural property near Mexico City, and in Baghdad, for specialists from Arab member countries. Unesco has mobilized international aid for the restoration of such famous monuments as Borobudur, in central Java (opposite, above, a statue of Buddha on a terrace at Borobudur) and the ruins of Mohenjo Daro in Pakistan. In 1966 it launched an appeal for international aid to save Venice, and is now helping to draw up and carry out a plan for the preservation and restoration of the city. Above, angels surmounting the pediment of the Santa Maria della Salute church in Venice. Opposite left, a "square of three cultures" (Aztec remains, a 16th century church and modern apartment blocks) in Mexico City.

Photo Unesco

In 1953, Unesco sent conservation missions to Syria and the Lebanon which outlined plans for the preservation of important monuments, including the ruins of Palmyra, crusaders' castles, including the famous Krak des Chevaliers (above), and the ruins of Baalbek. A major aspect of their studies was the problem faced by historical monuments in a modern city, in the case of the Lebanon, the old quarters of Tyre, Sidon and Tripoli. Unesco's many conservation missions to Asia have included several to Nepal to plan the preservation of monuments in Katmandu and other cities. Brightly painted carvings (right) depict the Hindu god Siva and his wife, Parvati, at a temple in Katmandu.

THE MIND PRESERVED *(Continued from page 49)*

that you are prepared for the silent top which looks out in every direction over breathtaking mountain ranges.

Here in the centre, there are many *stupas* or onion-shaped domes through whose openings you catch glimpses of hundreds of seated Buddhas; the tallest one in the centre contains a sealed globe which is the representation of the highest spiritual truth of which man is capable, the imponderable Nirvana.

This spectacular edifice was built entirely without mortar over a huge mound of earth. Over the centuries, water has seeped through the cracks and eroded the foundations beneath. As a result, the whole structure now leans crazily every which way and if the walls supporting the lowest terrace crumble, it will all crash down in a massive landslide of statuary and wall carvings.

The Indonesian government has rescued as many of the statues as possible, but with Unesco support it will be able to save the temple itself. This operation will involve dismantling it all, stone by stone, placing it firmly on carefully concealed reinforced concrete foundations and putting in channels for the rain-water to escape.

In the process, the carvings will be cleaned of the lichen and mineral deposits that are eating at them, and will be covered with preservatives against any further ravages of weather and time.

The threat to the site of ancient Carthage is of another kind. It is threatened by the growth of the modern city that surrounds it, and unless it is explored and part of it restored with the advice of experts from Unesco it will no doubt be swallowed up by a sea of asphalt and concrete. The kind of project Unesco is undertaking with the governments of Latin America is essentially one of reclaiming their Incan and Mayan heritage from the jungle and making them available as a resource for tourism.

The list of exotic names of places throughout the world to which Unesco is sending missions is very long indeed, but its involvement doesn't stop by any means with what to a western ear sounds rare and esoteric. In 1966, when floods washed through the cities of northern Italy, many of the famous works of art that we think of as being safe and well-preserved were damaged and, in some cases, totally destroyed.

Florence was particularly hard hit, and Unesco launched an international campaign of emergency help. Money poured in from individuals and governments the world over who recognized the enormity of the loss. The work of restoration, cleaning, rebuilding and putting the city back together took several years and is just now being completed.

From it, Unesco experts have learned a lot about not only restoring and preserving works of art, but about the way museums and libraries should be set up so that such a large scale disaster won't occur again; then it has applied these new techniques to the museums and libraries it is helping to establish in its member states throughout the world.

Precious documents were destroyed in the archives of Florence which could have been saved if the vaults they were in had been waterproof;

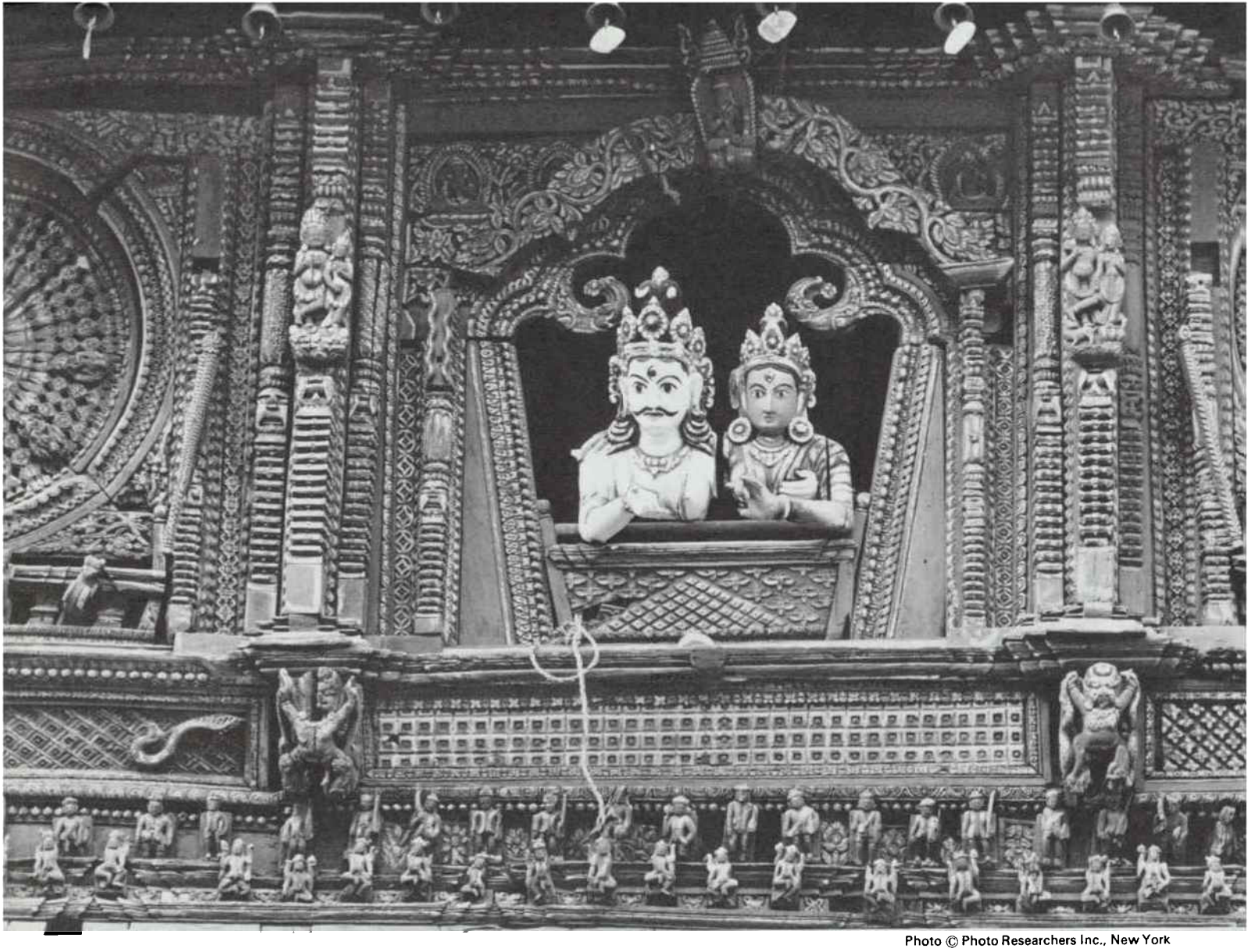


Photo © Photo Researchers Inc., New York

even if they had been catalogued and microfilmed, at least their contents wouldn't have been lost. With modern preservative techniques, frescoes buried in mud needn't have been totally ruined. Of course it is easy to say these things after the fact, but Florence has become a giant pilot project for Unesco which will supply the information needed to prevent the same losses elswhere.

Another victim of the 1966 floods was Venice, the jewel of the Adriatic, but, it being a city built on a lagoon, changes in water level there are not such a catastrophe. However, its cultural difficulties are more serious and far-reaching than any others that Unesco has worked with. There, not only the cultural heritage of the city must be preserved, but the life of the city itself is at stake.

The salt waters are taking a heavy toll of the magnificent palaces lining the canals. The foundations are being rotted away, and whole sections of brick and plaster are collapsing into the waters, often threatening to sink passing gondolas as they do so.

The city is being more and more exposed to the buffeting of the waves, so people are simply not bothering to repair the damage as it occurs. Many of the buildings are being deserted and residents are moving to the mainland in droves. In effect, the city is being left like a faded prima donna to memories and decay.

The task of saving Venice is more than cultural, keeping its works of art intact, protecting it from the sea, restoring the damage already done; although the entire city is an artistic shrine, it must be considered socially, economically and geographically as well.

In this case, a large part of the momentum for saving the city must be generated from within. The glories that were created by a wealthy sea-trading empire have to be preserved by making the modern Venice economically sound. Improved transportation, perhaps an undersea subway line connecting with the mainland, might open it up as a more practical place to live.

And of course, tourism has to be developed in such a way that people will not just come over for the day to look at St. Mark's, breathe in the atmosphere, and return to the mainland at night. Once they are in Venice they must be attracted enough to stay over and spend their money there.

This project is a kind of culmination of all that Unesco has been practising and preaching through the years. All these ornate, impractical palaces, the expensive preoccupation with lavish decor, the fascination with paintings and sculptures worth kings' ransoms ... all this "crazy" spending of money in the past is the only reason that the city is not being abandoned to the sweep of the sea today.

What Unesco has been dinning into the ears of modern governments really has the ring of truth; aside from all the practical greatness of any society now flourishing, probably the only thing that will convince future generations to save its remains will be the impractical, illogical, foolish outpourings of its artists and artisans. If any of us are to be remembered, it is our cultural life above all that must flourish and be preserved. ■

Sharing the mind

ONE of the gruesome, but otherwise untested facts to come out of brainwashing in prison camps is that without any chance to communicate the mind collapses in rubble and despair. In psychological experiments, people whose hands, eyes and ears are bound and who cannot move are soon disoriented and desperate for any kind of stimulation... a change of temperature or even an itch.

The mind simply cannot stand to be in isolation; it needs its place in the real world of sights, sounds, feelings and discomforts. In fact it is inconceivable to think of society today without communications and, in a similar vein, to think of communications without realizing their potential impact on society.

Since education, science and culture are all different ways of getting what is going on inside one man's mind into the minds of others, in the course of its work, Unesco found itself deeply concerned with the concept of communication itself. A teacher has to sell ideas to his students, to make them live, or he is wasting his time; there are simply too many different stimuli competing for their attention for him to risk boring them. We have all learned to tune out the colourful advertizing, the noise and the high-pressure salesmanship that bombards us every day; the trouble is that in the process, we might miss thoughts and experiences of real value.

In highly mechanized societies, old-fashioned means of communication, such as books are taken for granted and a lot of people just won't take the time to sit down and read one when they can do dozens of "more exciting" things. Automated presses keep turning them out by the millions and some people do keep reading, but the idea that a book might be an adventure and that it takes real effort to produce is almost entirely gone.

In the developing countries, however, there must be newspapers, a book-publishing industry and a public library system to make reading materials available to everybody or national literacy is impossible. So Unesco has sought to strengthen national publishing ventures through aid in the form of equipment and advisers to train the journalists, printers and librarians who can put the printed word in motion.

Yet can the development of mass media of communication stop even there? Just because a developing country isn't wealthy, can it afford *not* to have radio and television facilities?

This is the last third of the twentieth century, the century of revolution in communication, but perhaps all the advances are only for the rich. A lot of the time, so-called "developed" countries use television, in particular, as if it were a toy to be fooled with, a luxury that the poor of the world couldn't possibly need. Unesco, however, sees it as an absolutely crucial tool, which every developing country is going to need if it hopes to catch up.

The educational possibilities for TV are just now being explored with "Sesame Street" for pre-schoolers in the United States, Unesco's own project in the Ivory Coast for primary schools and Britain's "Open University." The real value of the medium, together with radio and films, is finally coming through.

But it is coming through very, very fast, and as a support for one of the biggest challenges of the next decades—mass media for lifelong education. Either developing countries have modern communications and the trained film-makers and radio and television technicians to operate them in the near future or they will be so far behind that they will never recover.

Unesco sees clearly the two sides to the great boom in modern communications. On one hand, it can open undreamt-of possibilities for mutual understanding, or it can be a Pandora's Box of tricks for setting up bad feelings between countries.

For example, when an author writes a book or a script he copyrights it for his own country and for a few other countries who have worked out mutual agreements, so that every time it is printed or performed, he gets some payment for the hours of work, the training and the investment of himself and his talent that he has put into it; in effect, his ideas are his own and he gets credit for them.

However, outside of the countries that have agreements with his, his work is fair game. It can be reproduced, changed unmercifully, and exploited as if he had never written it, and there is nothing he can do to protect himself.

UNESCO has drafted an international copyright agreement which could cut through all the endless political complications that now exist and put an end to all the mistrust and skulduggery that is involved in selling books from one country to another.

This "Universal Copyright Convention," which covers not only literary material, but scientific and artistic works as well, so far has only sixty signatures, (not very impressive for an organization of 125 states), but at least among those who have signed, international feelings are considerably smoother and maybe in the course of time other nations will see the wisdom of dealing fairly as well.

But copyright is not the only obstacle to making books available in the developing world. There is also the problem of converting currencies

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Photo © Lennart Olson-Bern, Paris

These Indian schoolboys are studying in the shade of one of the massive masonry astronomical instruments at the Jantar Mantar Observatory, New Delhi, built by the astronomer-king Maharajah Jai Singh II in 1710. They may soon be learning with the help of a Unesco-aided educational satellite broadcasting system which India is planning to introduce on an experimental basis in 1972. Unesco has a direct stake in the use of space communications for education, science and culture, and has promoted studies into the possibilities of education via satellite relays. It has sent missions to the Ivory Coast, Brazil and India to help plan such communications systems. For Unesco, communication by every possible means is the key to the achievement of its aims and ideas, and from the outset it has sought to promote the free flow of information and ideas. An agreement on the importation of educational, scientific and cultural materials, adopted by Unesco's General Conference in 1950, has been instrumental in reducing tariff and trade obstacles to the free flow of information. Unesco sponsored the Universal Copyright Convention, adopted in 1952, which helped to fill gaps in existing copyright agreements. A recent conference at Unesco's H.Q., studied how the copyright protection offered by the Universal Convention could be extended to cover the rights of reproduction, public performance and broadcasting, in ways which would be of special benefit to the developing countries.

to enable "soft currency" countries to purchase not only books, but also films, school supplies or scientific equipment from "hard currency" areas.

To get round this huge frustration, Unesco has invented a system of "international money orders," known as Unesco Coupons, which universities, schools, research institutions and individuals in developing countries can buy in their own currencies and send to a publisher or supplier to pay for the books or equipment they need.

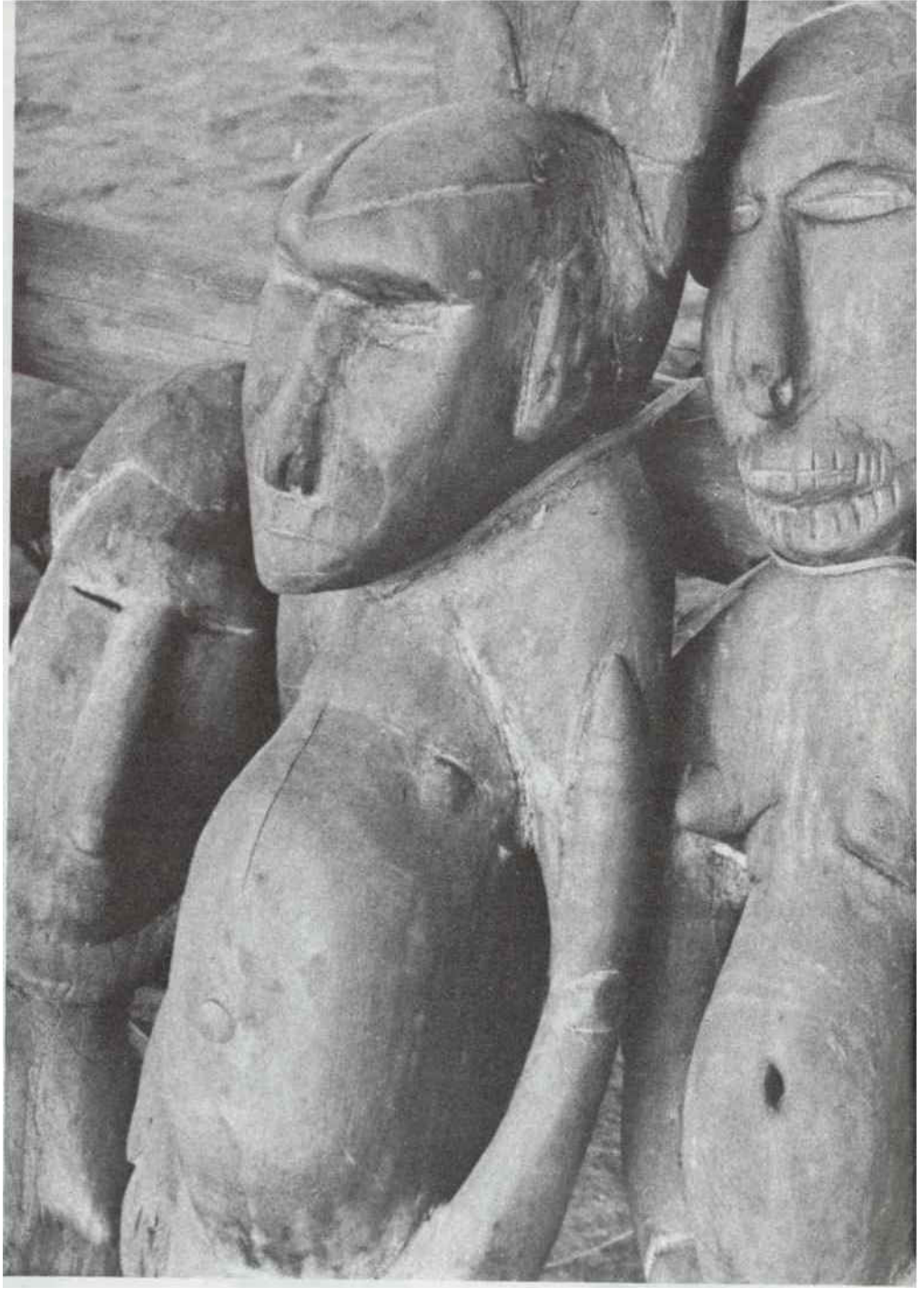
To keep the flow of books, works of art and scientific equipment going throughout the world, Unesco has written up agreements so that they can all get through customs duty free; but the idea that you have to move something across a border in order to share it is quickly disappearing now that satellite communications can put you somewhere thousands of miles away in a fraction of a second.

At the moment, when a television programme, a tape-recording or a record are concerned, you can be sure of the range of the transmitter, and you can come to a fairly satisfactory decision about the right to play it, but in the near future a song sung once or a drama acted once will potentially have the whole world as a simultaneous audience, through satellite transmission.

By the early 1970s, there will be communal receivers working throughout the world that will relay programmes into your home, and that will leave some control as to what you see, but by the early 1980s, individual television sets will pick up programmes direct from the satellites themselves.

Just how much right do particular governments have to say that they don't want their citizens seeing particular programmes or hearing criticisms of their work from the other side of the world? The whole system could disintegrate to the level of a gigantic and expensive propaganda mill, or it could be a thrilling, mind-expanding step toward putting the world back together again. Unesco is faced with negotiating an agreement that will maintain the right to privacy for specific cultures and ideologies and at the same time preserve the right of all individuals to be fairly, impartially informed.

It is a good thing that the satellites won't be in commercial operation for several years because a project so loaded with political dynamite and demanding such a complete change of thinking on the part of everyone in the world is going to take every minute of negotiation that Unesco can possibly afford to give it. ■



The introduction of new educational techniques in the Ivory Coast, the mobilization of world opinion to save the monuments of Venice or Borobodur, the opening of an institute of technology in Bombay — these are visible, concrete achievements of Unesco in recent years. But perhaps less evident is the profound revolution in attitudes towards Education, towards Science and towards Culture that Unesco has helped to spark in its member states. It is this new awareness of the right to education for all, in the broadest sense of the term, and its overriding place in economic and social development that is one of the outstanding achievements of Unesco's work over the past twenty-five years. Photo, above, in a sense symbolizes the Unesco ideal—the child symbolizing a better world of tomorrow through better education and modern science without rejecting the great cultural values of the past (symbolized by the statues) which enrich life and give it a quality worth preserving.

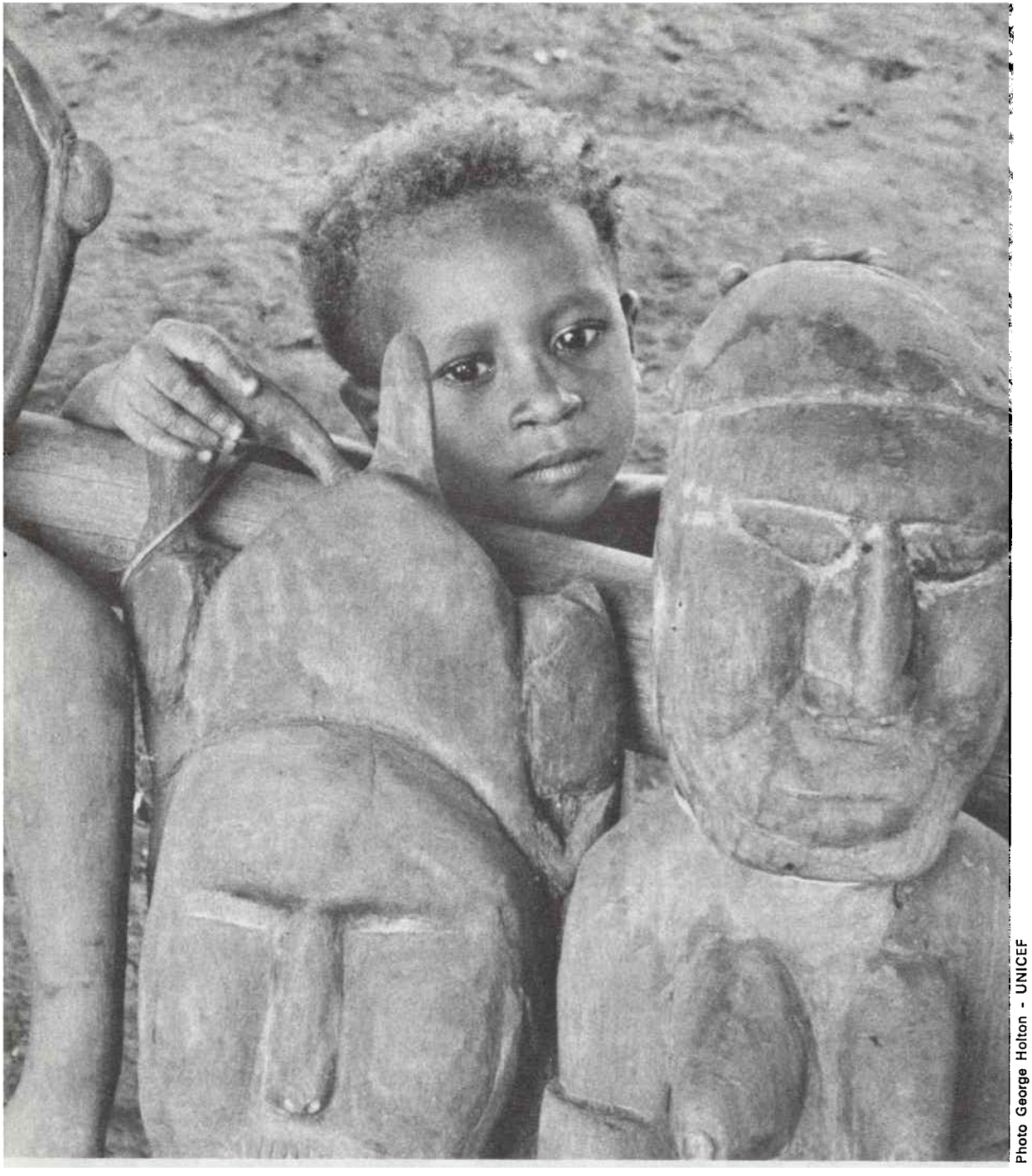


Photo George Holton - UNICEF

10 - PRINCIPLES

The mind Reflects

SHELTERED between two wings of the Unesco Secretariat is a small Japanese garden. Water flows from a monolithic rock, glistening over an ancient Japanese character for "peace" cut deeply into it. Around stepping stones, it falls over a series of waterfalls, each with a different sound, now a miniature cataract growling, now a gentle trickle. It finds peace in a shallow pond, where copper-coloured carp hide under overhanging branches, under a bridge, or beneath a floating island of dark red lily pads.

Here, the seasons change from the glories of pink and white spring blossoms, to summer irises among the reeds, to the stark outlines of new-fallen snow on black branches. Only the miniature mountains of rock seem unchanging and untouched.

Here in the silence and tranquillity is the perfect setting for reflection. The business of the Secretariat goes on all around just a few feet away, but here details and appointments fade and you can begin to put it all into perspective.

Just as this place apart refreshes anyone who is willing to give it a few minutes of his time, so in Unesco itself, there is a place apart, a place for theorizing, for self-evaluation, and, most of all, for contemplating the world as it should be.

This is among the group of Unesco philosophers whose job is to range the spectrum of its activities and say "Here we have a responsibility",

CONTINUED NEXT PAGE

"There an agreement must be reached among our member nations." Here many of the ideas and concepts are born which become an active part of Unesco's work.

But often some of the most important things that Unesco can contribute to the world are the thoughts themselves. At the beginning of its life, the United Nations drafted a Universal Declaration of Human Rights which talks about the right of any individual to develop and fulfil himself, to express himself and to live with dignity and pride of bearing.

OFFICIALLY, its member states accepted all this optimistic sentiment, but in reality in the last twenty years since the declaration was signed, its concepts have been ignored, flaunted, violated and abused in more ways than those who wrote it could ever have believed. It makes very painful reading indeed, in the light of the oppression, the racial and social discrimination, and the degradation of the human spirit that go on every day.

It was signed as a gentleman's agreement between nations, based on national honour to be carried out—in many cases not the most unshakeable foundation when power politics and social expediency are concerned. So, in effect, the signatures are all that the U.N. has.

The thoughts remain as sound as when they were put down (at least, where most of the world is concerned), but the U.N. and its agencies have no authority whatsoever to question, let alone interfere in, the way that countries treat individuals or groups within their own boundaries. The thoughts of human rights have to speak totally for themselves... where they be can heard.

Recently, Unesco has been looking at the Declaration again, in the light of modern social science, to see just how Universal it really is. How could it be expanded and re-thought to take in more of the world, without losing its central force?

You would think that no one would have trouble accepting the concept of human rights, at least in principle, but in point of fact, political quibbles aside, there are some fundamental philosophical and emotional disagreements with the whole idea.

If you are a Buddhist, for example, certain attitudes about the individual may be at variance with the single idea expressed in the Declaration; concern about self-worth and individuality is a form of pride; the ideal is to submerge an individual life into the greater scheme of things with humility and without complaint. One life, even if it is your own, or many lives, don't merit so much fuss.

In some Asian philosophies, the concept that all persons are equal is in itself strange, for according to such thinking there is a hierarchy among men, and you must accept whatever those above you in rank (a ruler, a father or an employer) might suggest without question.

Where things get really complicated is deciding what is universally a right for women. Legally, in some countries, the idea of woman as an inferior and a chattel is a old as the civilization itself, and the whole structure of life has been based on that premise ; the women themselves would perhaps be more shocked than the men by any attempt to upset the traditional state of affairs.

Still, even within the framework of social male supremacy, every woman has private, personal dominion over what goes on in her mind and Unesco stays firmly with the opinion stated in the Declaration that every man, woman and child has an equal right to be educated regardless of whatever other inequalities might be imposed on him ; the right to have a trained mind is absolutely basic and upon that all other concepts of human rights can be built.

In one area of human rights Unesco has been able to take a very forceful stand, and that is in the realm of racial prejudice. Racists have always supported their arguments with biological, sociological and historical pseudo-evidence. Unesco was in a position to call on world-famous anthropologists, biologists and geneticists to find out what is true in the racist's case and what is a distortion of the facts.

To their opinions were added those of ethnographers, sociologists, historians and lawyers and the whole published in a *Statement on Race and Racial Prejudice,* condemning it as a threat to international peace and a crime against humanity. One country famous for its policy of Apartheid withdrew from Unesco but the other members remained resolute and, in principle, supported the scientists' findings.

"In principle" is a useful little diplomatic phrase that leaves the way open for unlimited hedging. In principle, all the member states of Unesco are committed to peace as well, but since the Second World War there have been 100 armed conflicts which Unesco took pains to list in the November 1970, issue of the "Unesco Courier".

Translated into a dozen languages, the brutal facts were there for the world to see, but the arms build-up continues and countries continue to spend over 200,000 million dollars a year (as much as the yearly income of the poorer half of the world's population put together) on ever more sophisticated murder-weapons.

In principle, all that money could be spent for education, development and all the positive causes that man could dream of, but in reality, it is squandered on man's meaningless war games, on threatening his fellows and paranoiacally protecting himself.

The thoughts of peace that Unesco is aiming for seem far, far away, bogged down in the old patterns of narrowness of mind, selfishness and hate. If you are Unesco or any part of the United Nations system, by now you have learned not to expect miracles and you have learned how to persevere.

But this is in no way to be mistaken for pessimism or giving up. The successes that Unesco has had, in what it has attempted, speak for themselves, but they are the first thing you forget when progress is slow and new hosts of problems and difficulties come up.

Within the Secretariat and out in the field, there are people with the rare and wonderful ability to work intensely on a project and, through all the details, the human mistakes, the paper work and the unexpected setbacks, to keep in view at all times the ultimate goals for which they and the organization are aiming. This kind of mentality, to work quietly without drawing attention to yourself and without illusions as to how much you can really accomplish, is the backbone of Unesco and of its staff. Not very glamorous perhaps, but the best that any experienced citizen of the world can do.

EDUCATION. Science. Culture. Thoughts of peace. A huge experiment with the minds of men. People of former centuries would have scoffed at the idea of Unesco as foolhardy and unreal... some still do. Its progress is measured in the momentary flash of light and understanding across a man's face as he reads a page, a catch in the breath as a young woman rounds a corner and catches sight of a temple bathed in sun, a smile after hours of poring over a page when the equation works and the whole solution spreads itself out simple and clear... those moments of clarity and relief when things finally come right. You can't count smiles, thoughts and breakthroughs, but to see even one is to know that more are happening and more will happen.

Unesco's work is just starting; twenty-five years isn't long in the human scheme. Will we all one day be educated? Will our planet one day be a beautiful, fresh place for us all? Will we all be open to the beauties and glories of the human imagination ? That all sounds a bit too close to Eden, highly impossible in the light of what we know of man, but like schemes for going to the moon, curing diseases, and finding someone to love, it is a beautiful, beautiful thought. ■

education at all levels must be permeated with the seed of internationalism. For while education in itself is a *sine qua non*, it must also bear the hallmark of internationalism, spread the basic idea of the necessity of internationalism. There is but one world for all of us. To make us all really understand what that entails is the task of education. And it is here that all the activities of Unesco must converge to become action.

ALVA MYRDAL
Sweden's Minister of Disarmament and former Director of Unesco's Dept. of Social Sciences

YESTERDAY'S ABSURDITY —TODAY'S REALITY

The achievement of political independence by former colonies has not solved the problems of their economic, intellectual, scientific and technical independence. The scientific and technical potential of a country depends on the number of trained scientists it possesses and the overall quality of its scientific infrastructures and institutions which enable it to define and resolve problems of theoretical and applied science. Twenty-five or thirty years ago, the idea of a science policy and the planning of science seemed absurd to many politicians as well as to scientists themselves. Today, many young, newly independent states are trying to create a network of scientific institutes, to set up organizations responsible for the overall control of scientific matters and to allocate a regular share of their budgets to the training of scientists and to research.

VICTOR A. KOVDA
former Director of the Unesco Department of Natural Sciences

ENCROACHMENTS ON PRIVATE LIFE

Today, as never before, a code for science and technology needs to be drawn up, defining their ultimate ethical aims and laying down the principles governing their use exclusively in the service of man, with the aim of promoting, materially and spiritually, the harmonious development of mankind.

International law should protect the individual against the effects of new techniques or certain forms of advertising and propaganda which, if misused, may encroach upon his private life or threaten his intellectual and moral independence. It should also protect him against the increasingly serious threat of total pollution of his environment resulting from mass industrialization.

HANNA SABA
former Assistant Director-General of Unesco for International Standards and Legal Affairs

IDEALS AND REALITIES

All Unesco's activities deriving from its three inseparable functions (intellectual, ethical and operational) are contributing to Africa's development. They are promoting a movement of moral and intellectual solidarity which is the wellspring of international co-operation for development. Thus African development is benefitting equally from the "Unesco ideal", the "Unesco reality", the "Unesco thinking," and the "Unesco action".

WILLIAM ETEKI-MBOUMOUA
President of the Unesco General Conference (1968)

CULTURE, THE INDIVISIBLE

Culture today should aim for greater depth and scope. The age of the Encyclopaedists, as we well know, is unhappily long past, and the future of science and culture lies with specialists who are increasingly cramped and confined within their own particular spheres of interest. For years past the disastrous effects of the divorce between the "two cultures"—scientific and literary—has been abundantly obvious. Culture, which has been shrinking from the cold, must once again venture into the world outside or it may disappear. Similarly, society, education and science must become permeated by culture or the results will be equally catastrophic. Culture is an indivisible whole and the cutting of those links that bound it not only with science, but also with nature is one of the great tragedies of today.

JEAN D'ORMESSON
Assistant Secretary-General of the International Council for Philosophy and Humanistic Studies

THE UNITED NATIONS FAMILY

UN
United Nations
Headquarters: New York

UNRWA
United Nations Relief and Works Agency for Palestine Refugees in the Near East

UNICEF
United Nations Children's Fund

UNHCR
Office of United Nations High Commissioner for Refugees

UNDP
United Nations Development Programme

UNCTAD
United Nations Conference on Trade and Development

Trade and Development Board

UNIDO
United Nations Industrial Development Organization

UNESCO
United Nations Educational, Scientific and Cultural Organization
Headquarters: Paris

WHO
World Health Organization
Headquarters: Geneva

FAO
Food and Agriculture Organization of the United Nations
Headquarters: Rome

ILO
International Labour Organization
Headquarters: Geneva

International Court of Justice
Headquarters: The Hague

WMO
World Meteorological Organization
Headquarters: Geneva

IAEA
International Atomic Energy Agency
Headquarters: Vienna

ITU
International Telecommunication Union
Headquarters: Geneva

UPU
Universal Postal Union
Headquarters: Berne

ICAO
International Civil Aviation Organization
Headquarters: Montreal

IMCO
Inter-Governmental Maritime Consultative Organization
Headquarters: London

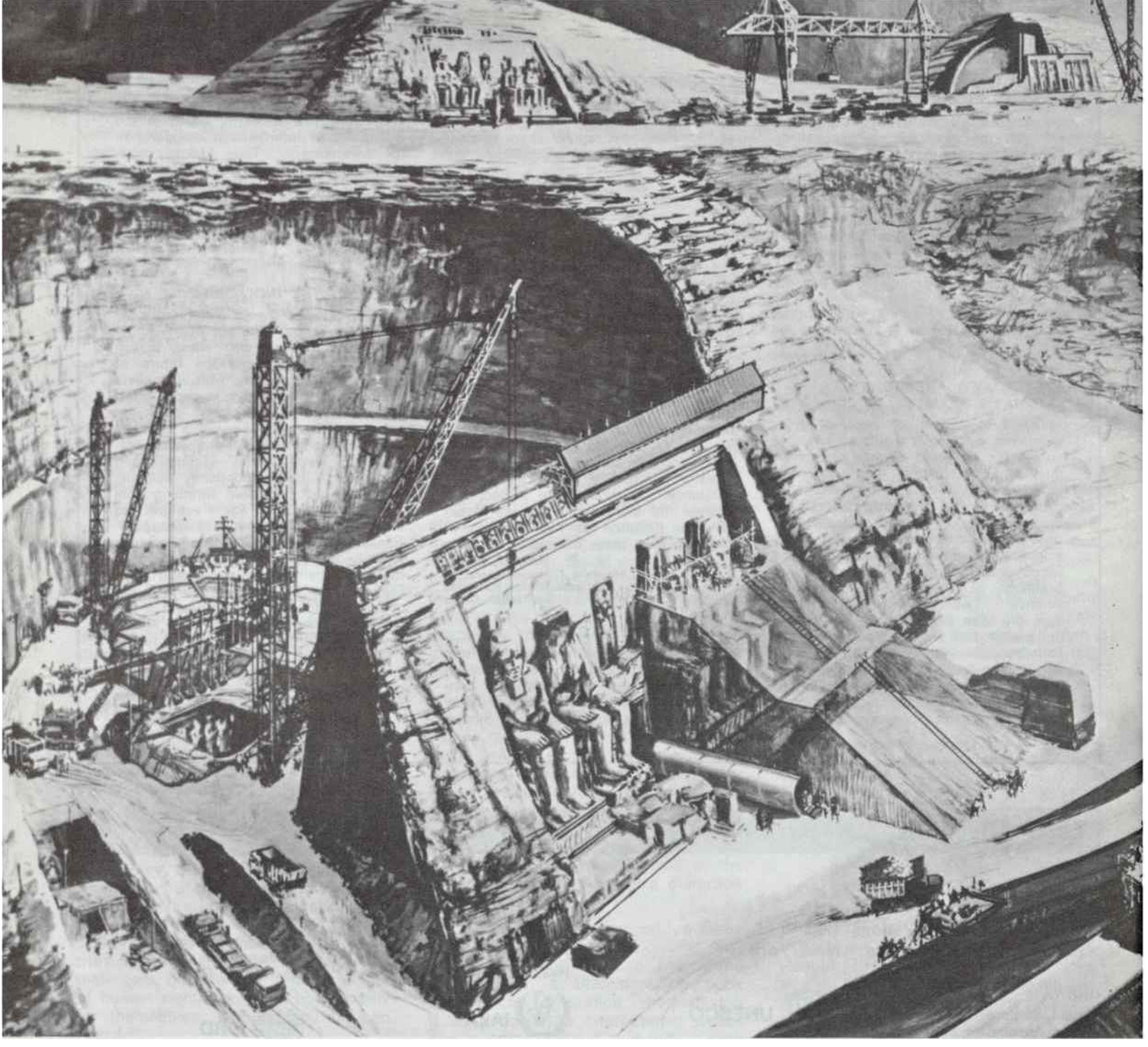
IMF
International Monetary Fund
Headquarters: Washington D.C.

IBRD
International Bank for Reconstruction and Development
Headquarters: Washington D.C.

IDA
International Development Association
Headquarters: Washington D.C.

IFC
International Financial Corporation
Headquarters: Washington D.C.

GATT
General Agreement on Tariffs and Trade
Headquarters: Geneva



NUBIA

Victory of international solidarity

by Abdel Moneim El Sawi

ABDEL MONEIM EL SAWI *held the post of Under Secretary to the Egyptian Ministry of Culture for 12 years, during which time he was directly concerned with the international campaign to save the monuments of Nubia. He was deputy chairman of the joint venture to displace the temples of Abu Simbel, and supervised the project until the end of 1969. Mr. El Sawi is editor of the Arabic edition of the "Unesco Courier" and is chairman of the Unesco National Publications Centre in Cairo, which is responsible for the publication of Arabic editions of a number of Unesco periodicals. An Arab man of letters, he has published a number of books in Arabic.*

Drawing by Gunter Radtke-Hochtief

The rescue of the Abu Simbel temples from the waters of the Nile was not only one of the greatest engineering feats of the modern era, it was also one of the finest examples of selfless, disinterested, international cooperation of all time. Left, one artist's conception of the salvage operations before they were actually undertaken. A temporary cofferdam, in foreground, holds back the rising waters as the Great Temple of Rameses is excavated and prepared for dismantling. The smaller Queen Nefertari Temple, right of photo, awaits the builders' attentions. A specially constructed road runs along the cofferdam and up to the new site where the two temples were finally to be installed in artificial hillocks, 200 feet above their original site. To excavate the temples from the hillside, 300,000 tons of rock had first to be removed. The temples were then cut up into blocks weighing up to 30 tons each and with a total weight for the two temples of 15,000 tons. Work began in 1964 with the construction of the cofferdam and the two temples were ceremonially inaugurated on their new site on September 22, 1968.

THE international campaign to save the monuments and explore the archaeological sites of Nubia is one of the great achievements of Unesco in its quarter of a century of existence. Eleven temples once threatened by the rising waters of the Aswan High Dam have been removed and re-erected on new sites, and four others dismantled and presented to the U.S.A., Spain, The Netherlands and Italy in recompense for the help they gave in the rescue operation of the Abu Simbel temples.

All that remains is to dismantle the temples of Philae and to reconstruct them on the island of Agilkia, beyond the reach of the Nile.

The tourist in Nubia today who stands admiringly before the temples now resurrected in the cultural "oases" at Abu Simbel, Amada, Wadi Es Sebua and Kalabsha may little realize the gigantic efforts that went into this international achievement.

Nubia lies between the Aswan Dam in Egypt and the Dal cataract in the Sudan—over 500 kilometres of rugged country flanking the course of the Nile, remote from urban civilization, with an austere climate and accessible only by boat.

As work started on the construction of the High Dam, a vast exodus from Nubian villages and hamlets began. Soon the entire area was denuded of life. Fruit and vegetable plantations withered and then the waters rising behind the dam wall slowly but inexorably swallowed up roads, palm trees, houses, telegraph and telephone lines.

Finally there were no communications, no crops, no food, no security or guard posts, in fact virtually nothing except the Nile waters and the desert sands. It was in this austere setting that an unprecedented cultural rescue operation began.

During the Nubia monuments campaign, from 1960 until 1968, perhaps the most difficult years were those when the local population was evacuated. When this emigration was

CONTINUED NEXT PAGE

completed in 1963, Nubia looked so dead and empty that it seemed impossible that men had ever lived there. Nevertheless, the new "inhabitants" of Nubia—specialists, technicians and workers from Egypt, Sudan and many other countries—accepted the challenge of scorching sun and arduous living conditions as they set about the operation launched in response to Unesco's international appeal of March 8, 1960

TODAY, as I recall the achievements of this compaign, I would like to pay tribute to the men and women who embarked on this historic endeavour: scientists, engineers, artists, technicians and workers from all parts of the world.

Nubia was transformed during the excavation seasons into a unique international arena. During the long summer months when the Nile water-level dropped beyond the Aswan Dam as the sluices were opened to drain away the flood water, excavation teams searching for monuments and other remains were scattered throughout Nubia.

Living on Nile boats and in white tents, they worked from dawn till forenoon, then resumed work from the afternoon till late in the evening. Throughout each season, lights glowed on both banks of the Nile as the scientists busied themselves with their studies and, when they could, organized social life and entertainments.

In these camps one could hear English, French, Czech, Spanish, Polish, German and Russian spoken, as well as Arabic and many other languages.

An international spirit prevailed everywhere in Nubia. This "Nubian spirit", as it came to be known, overcame all differences and unified everyone within a framework of co-operation and friendship. The same spirit prevailed among those at work salvaging the temples.

The archaeological teams were carrying out excavation work during several months each year, before returning home with their finds. During these months the teams removing the temples were also at work so that the whole area bustled with activity.

It should be recalled that the operation of dismantling and re-siting the two temples at Abu Simbel went on without interruption for nearly five years (from 1963 to 1968) despite great material difficulties. For the teams engaged on this project the operation was a life and death race against the rising waters of the Nile.

Yet the contract covering the joint venture at Abu Simbel, signed in November 1963, did not permit the erection of any installations prior to the start of the operation. We could not have risked spending millions of dollars on construction work until the attitude of the International Nubian Campaign towards this special project had become quite clear.

Thus, we had to mobilize every avallable means, however simple. Two Nile boats were built and in these we carried all the archaeologists, engineers and technicians to their work sites. At first we also carried food supplies by boat. But refrigeration facilities were so inadequate that we had to send fresh vegetables, only to see them spoiled by the scorching heat. Finally we had to depend on canned vegetables and make up any dietary deficiencies with vitamins.

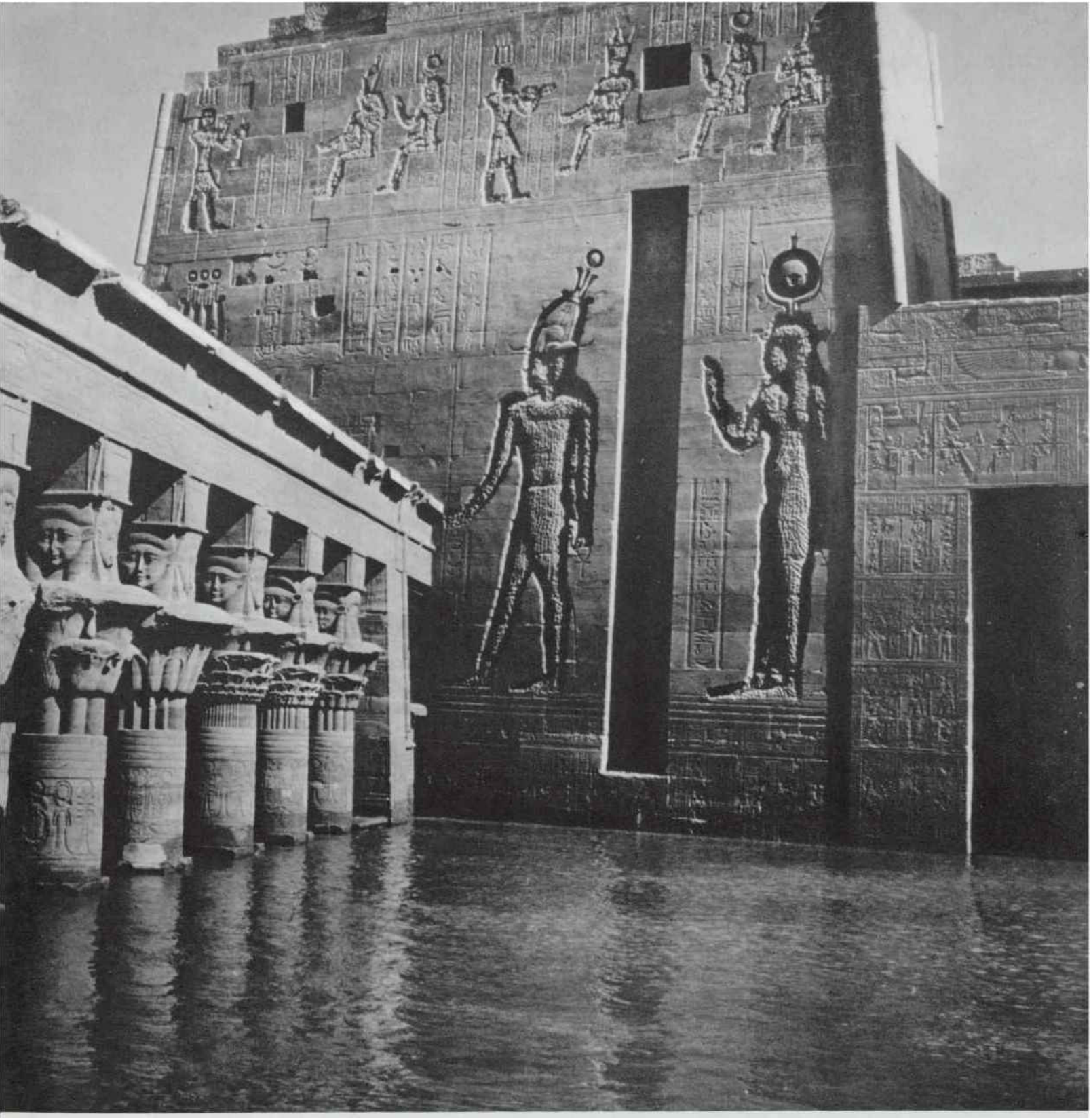
Another major problem was the lack of pure water. This we overcame by installing equipment for the stringent filtration of water from the Nile. Bread, too, was in short supply, and at first we supplied Abu Simbel with bread by air until another bakery could be built.

But gradually we completed the construction of the village of Rameses II at Abu Simbel, today the loveliest community in the area of the lake of the High Dam. It now comprises hotels and rest-houses; and it has electricity and pure water, a swimming pool, tennis courts, a hospital, a mosque, a telegraph and post-office a wireless station, paved roads and a police post. Beautiful gardens have been planted in which grow fruit trees and vegetables, and now that an airport has been built, Abu Simbel has a direct air link with Aswan.

Through the Nubian campaign, Unesco has been able to achieve more than one of its important goals. Firstly, in undertaking to save the ancient cultural heritage of Nubia, it has linked the past to the present. Secondly, it has linked the world with one idea, bringing nations and peoples closer and binding them together with this strong and unique tie. Finally, Unesco has proved that differences between nations could be eliminated if only the world as a whole were to co-operate in constructive work, instead of squandering its energies and resources on disputes and wars based only on narrow self-interest. ■

Photo © Max-Pol Fouchet

5 MILLION DOLLARS NEEDED TO SAVE PHILAE MONUMENTS



Unesco has launched an international appeal to save the great temples on the island of Philae in Egypt. $1 million is needed by July 1, 1972, to start the rescue operation and $5 million by 1976. The monuments of Philae—its temples, colonnades and carvings—stand on an island submerged by the Nile for most of the year. They will be irreparably lost unless they are quickly dismantled and rebuilt on the nearby island of Agilkia. The action to save Philae will crown a remarkable achievement in cultural co-operation and will be the last phase of the international campaign launched by Unesco to save the monuments of Nubia from oblivion beneath the waters of the Aswan High Dam. The cost of "operation Philae", from dismantling to reconstruction, will total $13,700,000, one-third of which will be provided by the UAR. By June 1971, in response to Unesco's appeal, nearly $1,600,000 had been pledged by 17 countries—Belgium, Cambodia, Cuba, Cyprus, France, Fed. Rep. of Germany, Ghana, India, Italy, Japan, Kuwait, Lebanon, Malta, Netherlands, Spain, Sudan and the United Kingdom—and about one-third of these contributions had been received. So that this international cultural rescue operation can be successfully completed, Unesco's Director-General, Mr. René Maheu, has renewed his appeal of November 1968 to governments, institutions, foundations and individuals to contribute to its final stage. Above, part of the great temple of the goddess Isis on the island of Philae. On left is the colonnade of the "mammisi", or "birth house" of Horus, son of Isis. The image of the goddess Hathor, sustainer of life and mother of the world, is carved on the capital of each column. Photograph was taken when the Nile waters were at their lowest level. But the temples and their remarkable sculptures, over 2,000 years old, are not likely to resist much longer their immersion for nearly nine months of the year in the waters of the Nile. There is no time to lose...

SOME FACTS AND FIGURES ABOUT UNESCO

▶ In 1957, when Unesco launched its major project for primary education in Latin America, the continent had 216,000 primary schools. Ten years later there were 300,000 schools and the proportion of insufficiently qualified teachers had fallen from 53 to 37 per cent. Some 1,500 teacher-training colleges were set up during this period.

▶ More than 40,000 primary teachers were enrolled, between 1961 and 1970, in teacher training colleges aided by Unesco and receiving financial support from the United Nations Development Fund (UNDP). Over 16,000 engineers and technicians graduated from 50 colleges and technical institutes receiving Unesco and UNDP aid. Between 1960 and 1970, no less than 167 development projects in education, science and culture, costing $658 millions, were launched by Unesco, UNDP and the governments of the countries concerned.

▶ Unesco very nearly came into existence without an "S" in its name. It was first conceived as Uneco—the United Nations Educational and Cultural Organization. The person who actively and successfully promoted the "S" was the distinguished U.S. poet Archibald MacLeish. The first Director-General, Julian Huxley, was a scientist.

▶ Nearly 900 primary schools, secondary schools and teacher training colleges in over 60 countries now participate in Unesco's Associated Schools Project for education in international understanding. It seeks to develop international co-operation and to promote knowledge of world affairs, of different cultures and ways of life, and of human rights.

▶ During the first United Nations Development Decade, 1960-1970, the number of radio transmitters rose by 25% in Latin America and doubled in Asia and Europe. The number of receivers increased even more. Newspaper circulation almost doubled in Asia, while the number of countries with television transmitters quadrupled in Africa, doubled in Asia and tripled in Latin America.

▶ During the 1960s, Unesco's aid to Asian development amounted to around $80 million. The aid from all U.N. sources, including Unesco, to Asian Education, Science and Culture, amounted to $300 million. Assistance from all sources, governmental and non-governmental, public and private, multilateral and bilateral, amounted to $150 million per year towards the end of the 1960s.

▶ Between 1948 and 1968 over 20,000 people benefited from Unesco fellowships and travel awards: about 11,000 received fellowships and study grants (17% went to women). Over 800 travel grants were awarded to individuals (553 to youth leaders, 150 to workers, 27 to worker education leaders, 99 to leaders of women's organizations and 35 to teachers and students in adult education). An additional 923 awards went to groups of workers. About 11,000 persons benefited from these group awards.

▶ Twenty per cent of Unesco fellowships and study grants were awarded to Africa, 9% to Arab States, 27% to Asia and Oceania, 16% to Europe and Northern America and 28% to Latin America and the Caribbean, in the fields of: education (43%), natural sciences, engineering and technology (31%), social sciences, human sciences and culture (14%) and communication (12%).

▶ A major survey of the cultures of Latin America is now almost complete after five years of research and international studies. This Unesco survey, to be published this year, covers literature, art, theatre, architecture, music and town-planning and their interaction on today's rapidly changing society.

▶ The Centre for Higher Studies in Journalism at the University of Quito, Ecuador, set up with Unesco aid in 1959, now plays a major role in the training of journalists and other mass media specialists in Latin America.

▶ Unesco has compiled a catalogue of over 22,000 works of art and has made an inventory of about 600 palaces and churches to be preserved and restored as part of the campaign for safeguarding Venice.

▶ Unesco has been carrying out a monumental survey of education throughout the world. To date, four volumes with an average of 1,500 pages each have been published covering primary, secondary and higher education in Unesco's member states.

▶ More than three out of every five of the 1,072 million people in 18 Unesco Member States in Asia are under 25 years of age. An estimated 164 million were enrolled in 1967 in schools at all levels, compared with 111 million in 1960, and school enrolment is increasing at the rate of nearly seven million a year.

▶ Since 1965, Unesco has given 24 countries technical aid in school construction. These schools provide places for about 100,000 students in primary schools, secondary schools, higher education institutes and primary teacher-training colleges.

▶ A Latin American Faculty of Social Sciences was established in Santiago, Chile, in 1958, with Unesco aid. The Faculty is now an important continental centre for research and the training of sociologists, and has expanded to cover the political sciences and public administration.

▶ Unesco has contributed to the preservation of famous sites and monuments throughout the world. Among them are: the Parthenon, Greece; the sites and monuments of Cappadocia and the Izmir region, Turkey; the Ajanta caves, India; the historic sites of Persepolis and Pasargardae, Iran; the ruins of Palmyra and the Krak des Chevaliers, Syria; the sites of Ctesiphon and Nineveh, Iraq; the ruins of Baalbek, Lebanon; the colossal statues of Easter Island, Chile; the Maya temple at Bonampak, Mexico; and the Abomey Royal Palaces, Dahomey. The first Unesco conservation mission sent to safeguard monuments in danger went to Peru, after the earthquake of 1950 which largely destroyed the historic city of Cuzco.

▶ A regional Mass Communication Institute for English-speaking African countries has been set up with Unesco's aid in Nairobi, Kenya. Its aim is to stimulate the growth of information media in Africa. For French-speaking countries Unesco has helped to create a Mass Communication Institute at Dakar, Senegal, for the training and education of mass communication staff. In West Africa, too, an Information Institute has been set up at the University of Lagos, Nigeria, to train specialists in audio-visual techniques.

▶ Sales of Unesco Coupons, first launched 21 years ago to help institutions and persons in "soft" currency countries to buy educational and scientific materials from "hard" currency countries, passed the $100 million mark at the end of 1970. Asia leads in sales of coupons (60 per cent of total), followed by Africa (25 per cent) and Latin America (15 per cent).

▶ Unesco has aided the creation of a number of institutes of African studies such as the Federal Linguistic and Cultural Centre in the Cameroon, the institutes of human sciences in Chad, Gabon and Mali, the institutes of African studies in the University of Ghana, the University of East Africa, the University of Ibadan and the University of Addis Ababa.

▶ In August 1970, an unprecedented Unesco conference brought the representatives of 88 nations to Venice to debate the problems of cultural policies in the modern world. Nearly half the delegations were led by Ministers of Culture.

Letters to the Editor

THE 'MAGIC' OF MODERN CHEMISTRY

Sir,

As a reader for five years, I have generally enjoyed your articles, but I feel that the choice of those in the June 1971 issue on the "Magic of Modern Chemistry" was not up to your usual standard.

Broadly speaking, we have to accept the increasing use of synthetic materials. Combined with natural fibres they create extremely useful "alloys". But used alone, synthetic fibres are not conducive to bodily comfort, or comfort of any kind. The stretch or spandex fibres you mention have met with little success and are now of minor industrial importance.

This also applies to polyurethane foam. Plenty of worthwhile products are made from it, but we should avoid using such porous resin materials to excess. One need hardly recall the recent fire that ravaged a French dance hall, killing over 100 young people when synthetic foam furnishings flared up with terrifying speed and gave off cyanogen gas.

As to the wider picture of the global population explosion, with 7,000 million inhabitants predicted for the year 2000, I fear the world will experience some catastrophic famines before that time.

To calculate that the world (thanks to the so-called "green revolution"), can feed a population of 7,000 million strikes me as a cold and matter-of-fact approach to the problem, bearing in mind that this figure is merely the take-off point for a rise to a population of 15,000 million.

We should remember that the miracles of this same "green revolution" cannot be wrought unless sufficient energy is produced (even to provide no more than water for irrigation), and neither atomic nor any other form of energy will be producing this amount of power by the time it is needed.

N.E. Borlaug, Nobel prizewinner and "father" of the "green revolution", is by no means convinced about the "magic" of chemistry, and has warned against the dangers of an exploding population. With equal honesty, scientists who created the petroleum-based synthetic proteins affirmed that their discovery, though useful, can have no radical effect unless the population explosion is checked. And ocean farming can provide only a useful (though perhaps vital) new food resource that will be needed long before the world has 7,000 million inhabitants.

Worshippers of modern chemistry would be well advised to display more wisdom and caution in regard to many modern problems. Among those I would list: the social consequences of developments in medical science (will longevity and good health become a privilege of the rich?); conservation and production of fresh, pure water (here water economy and energy costs will be determining factors); the recovery of arid lands (there are few parts of the world where marginal lands can be recovered—as has been done in Israel, for instance) and in trying to achieve such results in the savannah or tropical forest regions, we run the risk of creating deserts rather than new food resources; finally, the formidable problems created by DDT.

Jean Pilisi
Paris, France

CHEMICAL 'FALL-OUT'

Sir,

Having witnessed how the forest lining the Danish Lillebelt strait recently turned black like charcoal and all the leaves curled up—overnight—due to the occasional airing of the ammonia tanks of a passing ship, it is disquieting to see an industrial consultant open up your June issue using such a sentence as, "And yet, there are many who decry chemistry as the cause of undesirable qualities of modern life." This blindfolded technocrat evidently has less sense of ecology than any country housewife.

With pollution increasing over 20 per cent per year since 1960, mainly due to the marvels of the high-energy-demanding and highly-polluting petrochemical and plastic resin industries, with *all* fish dying out in virtually hundreds of lakes is southern Norway due to acid rain, and the number of reindeer on Hardangervidda suddenly dropping from 14,000 to 5,000 (DDT and dieldrin etc. drifting with winds concentrate unusually fast in reindeer moss and lichens), we have indeed realized that the marvels of nature mean more to human survival than the prestige of the chemical industry.

Chemists have made our present precarious position possible. Unless they are now mobilized, under the strict supervision of ecologists, to save the biosphere they shall be more cursed than blessed.

Ulf Christensen
Gloria Newton
Oslo, Norway

PERILS OF SYNTHETIC SHOES

Sir,

In your June 1971 issue on the revolution wrought by modern chemistry, on page 7 a photo shows sheets of shoes being produced from a material that "duplicates leather's 'breathability', and has more than a million pores per square inch."

It makes my blood boil that "experts" should be so ignorant about hygiene of the feet. As a shoemaker I am in direct contact with my customers who are coming more and more to realize how unhealthy it is to wear such shoes, that cause excessive perspiration, athlete's foot, bad circulation of the blood and fallen arches.

I am not against synthetic products which have satisfied innumerable needs. But where the feet are concerned, I say No! Indeed I am surprised that the World Health Organization, which is well aware of these dangers for the feet, has taken no action, particularly with regard to children who need healthy shoes while they are growing up.

If these children are to be the future "pedestrians of the moon" they will still need their feet, so we should see to it that they are shod in leather, a noble material and healthy for the feet.

Michel Suignet
Saint-Mandé, France

TALKING POINT

Sir,

The facts in your excellent magazine are used in my weekly sessions with colleagues and students and become often a starting point for lively discussions and deductions. Here are three recent deductions summarized:

Your issue on "Man and Violence" (August-September 1970):

Violence by men, caused through overcrowding or isolation can be instantly redressed by forming small social and study groups where indivdualized but mutual communication is possible.

The article by Boris Nikitin "Latent Talent..." (February 1971):

The experiments by the Swedish neurobiologist Holger Hiden which prove that "Neurons deprived of physical nourishment and stimulation cannot produce albumin . . . and finally cause atrophy of the brain" must be extended from childhood all the way to senior citizenhood, where senility could be prevented. Social activities are not sufficient. Challenging intellectual and emotional stimulation plus the right (not refined) food must be provided.

Your issue on "The Public and Modern Art" (March 1971):

The Toronto research revealed "what is commonplace on TV in the way of violence and other distortions of life, is not . . . equally acceptable . . . for painting (by the average public)." The reason could be that TV violence is often moving toward a redeeming finale, while the static, permanent depiction of violence in art becomes unbearable.

Dr Herbert Rona
Salt Lake City, U.S.A.

THE MODERNISED MUSEUM : 'STREAMLINED DINOSAUR' ?

Sir,

As an "insider" in the Museum World, I found Duncan Cameron's article "Museums for Moderns" (your October 1970 issue) euphoric reading.

Mr. Cameron's article deserves the highest praise for its very detailed picture of present trends in the world of museums. Its sole defect was that since the author wrote of many facets of museology in the imperfect tense, he may have given the impression to the uninitiated that the facts he related belonged to the past.

But is there really a country in the world where things are just as the writer describes them? I don't know of a single one, certainly not in Europe. A few spectacular achievements, well

CONTINUED NEXT PAGE

known to the public, because heralded with a fanfare of trumpets, tend to make us forget that a large number of museums (including some of international standing) continue to exist in conditions unworthy of our time.

Through lack of funds and lack of personnel they are unable to fulfil the role the public has the right to expect of them. The art treasures they display (though often they cannot do so, since some rooms are closed owing to lack of staff) hide the penury behind the façade.

We can only hope that what Mr. Cameron describes in the present tense will become a reality in a not too distant future.

George van Deuren
Antwerp, Belgium

Duncan Cameron replies :

I must admit that when I speak of museum practices as they have been, of new trends and developments and perhaps even a "new look" in museum operations, I am being more than an optimist. It is certainly true in Canada and the United States that a great many museums, including some of the most important ones, continue to operate in the same mode as they have for at least the past 100 years.

Further, I am aware from observation in North America that "modernization" of many museums means nothing more than the addition of a little streamlining, a few bits of chrome, the intrusion of some audio-visual "toys" and a high pressure public relations campaign—the addition of these to the same tired old museum philosophy.

Several commentators on our museums and art galleries have asked the question in recent years "Are we really dinosaurs?" In general the reaction to this question has been to cry "No!", and produce (at great expense) streamlined dinosaurs.

It would not be fair of course to say that the need for the reform of the museum as an institution in society has gone unrecognized in North America. The streamlining as described above has been one reaction but another has been the tendency to employ, in senior museum posts, non-museum personnel. It is becoming rather popular to appoint bright young corporation executives as museum directors and to bring in publicity specialists as directors of museum education and extension. The assumption here is not just that the museum profession is incapable of reforming itself but further, that within the museum profession the necessary expertise and progressive thinking cannot be found. Neither streamlined dinosaurs nor eager amateurs are an answer.

It was implicit in my article that I believe a fundamental re-organization of museums is necessary; that the involvement of the museum's publics in decision-making must become a reality. But the abandonment of traditional museums' functions, as in some of our newer science centres and exhibition centres, is to bring an end to process and to concentrate only on product. Quite clearly it is only a matter of time until the absence of process will create a shortage if not an absence of product.

In contrast, some reactionary institutions have chosen to ignore the potential for a new role for the museum in society and have limited their efforts solely to traditional museum functions and museum scholarship without regard for public service. How long the public will accept the redistribution of tax dollars to institutions following this course of action remains to be seen.

We must find the balance between democratization and public service on the one hand, and the moral obligations of preservation and research for future generations on the other.

Recalling my error in applying the imperfect tense, I can only suggest that we live in a most imperfect world wherein our museums and art galleries have far more to contribute than most of us have ever dreamed.

TEACHING AIDS FOR THE DEAF

Sir,

After publishing a most interesting article about teaching aids for blind school-children in your May 1971 issue, I hope you will also find space to tell us something about the problems of teaching deaf school-children.

During International Education Year, 1970, the Municipality of Barcelona built one of the world's most modern schools equipped with all the latest pedagogical and electro-acoustic aids for the education of deaf children. I think that this achievement deserves a mention.

J. Perello
Medical Director
Centro Municipal Fonoaudiologico
Barcelona, Spain

17TH CHILD IN THE FAMILY

Sir,

I read the "Unesco Courier" with great interest, and was surprised to find an obvious error in the February 1971 issue, in the article by Boris Nikitin on latent talent in children, which lists a number of famous men who were 17th children in their families. I am sure that there is at least one error: Heine, for example (like Goethe), was a first-born child and was certainly not one of a family of 17 children, and I doubt very much whether the others mentioned were each the 17th child in the family.

Geneviève Bianquis
Dijon, France

Our reader is correct. Due to the transposition of a full stop and a comma, the passage in question stated: "Out of 73 world-famous geniuses and talented persons, only four were first-born children. Milton, Leonardo da Vinci, Heine, Anton Rubinstein, Benjamin Franklin and Mendeleyev were each the 17th child in the family..." It should have read: "... only four were first-born children, Milton, Leonardo da Vinci, Heine, Anton Rubinstein. Benjamin Franklin and Mendeleyev were each the 17th child..." — Editor.

DISARMING SMILE...

Sir,

As outbreaks of violence become a daily fact of life, the question arises: how can we tame and control man's aggressiveness? Thus, the survey of scientific research on the problems of aggressivity presented in your August-September, 1970, issue gave this number particular significance.

Clearly, man can be extremely aggressive, perhaps even "a very dangerous beast". But it is also true that man is the only creature capable of laughter. Laughter can be of great service; it can neutralize aggressive impulses, and we should surely make the most of this fact.

The noted Austrian zoologist Konrad Lorenz has described, in "On Aggression", how an aggressive attitude can be transformed into part of the ritual of social politeness. He points out that, in its original form, the human laugh was a sign of appeasement and a form of greeting. "I believe", writes Lorenz, "that we should take humour more seriously; it can be a precious ally."

And therein lies a remedy that is within reach of us all, one that should have a place in every family medicine chest as an antidote to the fever of aggressiveness.

Perhaps the "Unesco Courier" could one day devote an issue to the very serious subject of humour.

Sonja Kipfer
Zollikofen, Switzerland

THE CHILD—ONLY AN UNFINISHED ADULT ?

Sir,

The article "Latent talent—the anagram that parents can solve", by Boris Nikitin, in the February 1971 issue of the "Unesco Courier", contained a number of interesting and generally undisputed findings of educational research. But there were other points I would like to query.

"In almost all occupations", says Mr. Nikitin, "mental and creative activity has a tendency to grow, and to grow at an accelerated pace. Consequently, development of creative faculties and intellect is a paramount task in education."

But is the basic concern of education only to mould the child as early as possible to the needs of his future occupation?

Again the author says, "In our family experiment . . . we wanted to fill the child's world with all the things that make up our 'adult' world—real objects, tools, materials, instruments and books."

Why are adults so anxious to project their own world onto their children? Surely, children have their own interests (e.g. purposeless games) which they should be allowed to enjoy. Why do we grown-ups want to force on our children our own world—the world of utility, the world of cold, technical rationalism of the engineer?

Ingo Knanp
engineer
Wettingen, Switzerland

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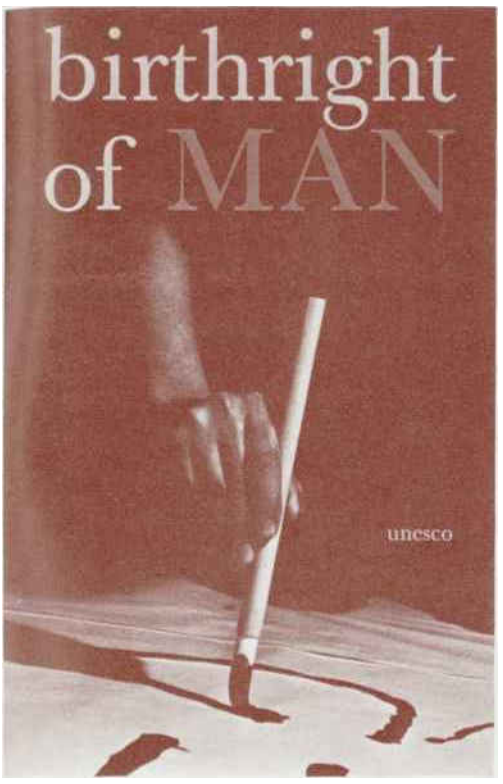

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