

GENERAL SCIENCE

# Science Under Controversy

Behind the scenes at the UNESCO meeting scientific work appears to be criticized and viewed with skepticism. No scientists in basic education conference.

By WATSON DAVIS

From Mexico City

► SCIENCE is getting a big hand in public at the UNESCO conference in Mexico City, but behind the scenes some stiff punches are being landed by the administrators, the mass media enthusiasts and others a bit afraid of the scientists.

President Miguel Aleman of Mexico told the delegates: "The task before UNESCO is to promote science and to find ways and means whereby all nations shall share the benefits and collaborate in its development, under condition that culture preside over those benefits and that collaboration. For this, education is indispensable, both in the sense of instruction and in its higher meaning of moral guidance."

This keynoting by the Mexican president arises out of an extensive effort to put facts and knowledge at the service of a people still in a relatively primitive culture.

Dr. Julian Huxley, UNESCO director-general, and Dr. Joseph Needham, sciences chief, both leading British scientists, have set in motion projects that will both increase knowledge and spread knowledge of what is known.

There is a project to explore and bring under control one of the last big geographic unknowns, the Amazon River basin that touches on seven countries. This would be a practical demonstration whose way of doing could be applied elsewhere, affecting people, resources and trade with all the world. Yet in the U. S. delegation there is a feeling that this may be too much of an operation for UNESCO to undertake.

For a week, basic or fundamental education—the way of getting a minimum knowledge to all—has been a special conference topic. Yet no scientists have sat in on this great prospective undertaking, although science even to the most elementary class is surely basic.

UNESCO has in the past year given courage and financial support to 14 international science bodies, allowing them to do projects and make world plans. This is the first time a world govern-

mental body has done such an obvious, practical thing. Yet there may be criticism of this action.

The Paris office of UNESCO has acted as a clearing house for scientists who want to find out what is happening elsewhere or want to join in international projects. And a start has been made in establishing regional offices for science—in Brazil, China, India and Egypt. This liaison work seems to have drawn little criticism.

To war-devastated sections of the world, UNESCO scientists have sent apparatus and books. One effective operation was the purchase of small machine shops and tool sets from war surplus and the placing of them in universities and science centers that need them.

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GENETICS

## Some Hereditary Traits Passed on by Plasmagenes

► INHERITANCE of such characters as hair color and seed shape in animals and plants is not determined entirely by the invisible genes that are handed down strictly in or on the chromosomes in the cell nucleus, Prof. T. M. Sonneborn, Indiana University zoologist, declared

MEDICINE

## Subtilin Checks TB Germ

► EVIDENCE, believed conclusive, that subtilin, a new cousin of penicillin, inhibits the tuberculosis germ, has been reported by scientists in the University of California Medical School.

Dr. Hamilton H. Anderson, professor of pharmacology, and Sam C. Wong and Alvin S. Hambly, research associates, have completed studies of the antibiotic in different media.

Results indicate that the drug cannot be introduced into the body in sufficient amounts to kill the tuberculosis germ; but that concentrations can be obtained which will inhibit its growth.

in a lecture before the University of Missouri chapter of Sigma Xi, national science honor society. Some hereditary traits pass from one generation to another by means of what he calls plasmagenes, which are carried in the general protoplasm of the cell rather than in the highly specialized little nuclear rods and spheres.

Prof. Sonneborn first discovered plasmagenes in the lively microscopic animals of the group known as Paramecium, sometimes called "slipper animalcules" because of their shape. Most of the inherited characters in Paramecium are passed along from one generation to another in quite orthodox genetic fashion, in or on the chromosomes. But Prof. Sonneborn found that one exceedingly important character in some strains of the animal—its ability to produce a substance highly toxic to other strains—is transmitted entirely through something found only outside the nucleus and in the general body protoplasm. So he named these the plasmagenes.

One highly significant difference between plasmagenes and "regular" genes is that while the latter are rearranged and transmitted only in the process of sexual reproduction, in a manner predictable with mathematical exactness, plasmagenes do not depend on union of male and female elements for their realignments, and may be passed from parent to offspring without regard to Mendelian mathematics.

For the researches that led up to the discovery of the plasmagenes, Prof. Sonneborn was awarded the annual \$1,000 prize of the American Association for the Advancement of Science.

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Eventual use of subtilin in man is indicated by its low toxicity and marked inhibition of the tuberculosis germ, Dr. Anderson said.

While subtilin had been suggested previously as an agent against tuberculosis, experiments on its effectiveness had been previously inconclusive.

Dr. Hamilton did the research in collaboration with the Western Regional Research Laboratory, U. S. Department of Agriculture, Albany, Calif., and Dr. A. J. Salle, of the department of bacteriology on the Los Angeles campus of the University of California.

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