United Nations Research Laboratories

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ALMOST EVERY ADVANCE in science and technology increases the interdependence of men. No nation covers a sufficient variety of geologic structures and includes enough differences in climatic conditions to enable its citizens to secure from within its own boundaries adequate supplies of all the diversified raw materials essential to efficient, comfortable existence in an "age of science." The geologic history of the earth has been such as to make our planet far more favorable for occupation by human beings who arrange for the free flow of goods and services, material resources and finished products, information and ideas, the world around than for habitation by men who insist upon erecting barriers along boundary lines drawn on maps. Details of interdependence will change from time to time, but interdependence itself will continue to be inescapable as far into the future as we can see.

Men of science have long recognized this fact, either consciously or unconsciously, and have attempted to govern themselves accordingly. International organizations of scientists have been established in almost every field of investigation. During the last half-century, hundreds of international gatherings of scientists have been held. The value of free exchange of ideas and the wisdom of coordinated activity have been abundantly demonstrated. Only the politicians and the ignorant insist upon the maintenance of secrecy concerning the results of basic research or the establishment of a party line to direct and confine the minds of men.

It is therefore entirely in keeping with the best trends in recent intellectual developments that certain agencies of the United Nations should be giving careful consideration to the question of establishing research laboratories under world-wide international auspices. The idea was first formally proposed by the French delegation at the meetings of the Economic and Social Council of the United Nations in October, 1946. After extended debate the Council adopted a resolution "inviting" the Secretary-General to consult Unesco and the other specialized agencies concerned and to submit a general report on the problem of establishing United Nations Research Laboratories. That report, with its supporting documents, is embodied in the publication now under review.[1] With it is included a statement of the action taken by the Economic and Social Council in August, 1948, requesting the Secretary-General to form "a small committee of experts in the basic sciences (exact, natural and social) to examine, in consultation with the specialized agencies, the question" and consider appropriate procedures that might be taken in the next few years.

The "committee of experts," on which the United States was represented by Harlow Shapley, past president of the American Association for the Advancement of Science, and Rensis Likert, of the University of Michigan, met in Paris last August and had before it almost a hundred specific proposals. Its formal report has not yet been issued. According to *Nature*, December 31, 1949,

> . . . it is understood that in appraising these proposals the Committee laid considerable emphasis on the value of each project to humanity, from a scientific and a practical point of view, on the appropriateness of the project for research at an international level, on the resources available, the probable cost, the risk of duplication and on whether the project is in an underdeveloped field greatly in need of stimulation. Three projects were selected by the Committee as of first importance: an International Computation Centre, an Institute for Neurophysiology, and an Institute of the Human Sciences. The first and last of these were recommended for immediate establishment by the National Research Council of the United States Committee on Unesco.

The whole project is therefore one concerning which all American scientists should become thoroughly informed. Present plans call for a conference of fifty or sixty scientists during the summer of 1951 for further examination of plans and procedures. The Committee on Unesco of the U. S. National Research Council, now under the chairmanship of Maurice Visscher of the University of Minnesota, who recently succeeded Bart Bok in that position, is rightly urging that there be careful consideration and widespread discussion of the proposals in order that the United States repre-

[1] *The Question of Establishing United Nations Research Laboratories.* Lake Success, N. Y.: Department of Social Affairs, Unesco; New York City: Columbia Univ. Press, 1949. 290 pp. $2.00.

sentatives may have clear guidance at that assembly. The report now under review is the basic document for preparatory study.

Typical of many governmental and United Nations documents, the greater part of this publication consists of "annexes." Here one finds the correspondence between Trygve Lie, Secretary-General of UN, and the executives of such specialized agencies as the Food and Agriculture Organization, the International Labor Organization, Unesco, and the World Health Organization. Unesco's report runs to 74 pages and embodies the appraisals and proposals submitted by many national delegations or commissions, as well as the conclusions and recommendations of the Unesco secretariat. It is a document of extraordinary interest and great importance. Careful attention is given to the criteria that should be used in determining the fields in which international effort is desirable. Such principles as the "ripeness of problems," remoteness from the main research centers of the regions where scientific problems must be studied, transcendence of national boundaries, and the necessity for pooling results internationally, are ably presented.

Another annex contains the replies from the International Council of Scientific Unions and from its constituent organizations, the international unions in the fields of astronomy, geodesy and geophysics, chemistry, radio science, physics, geography, and biology. There is also a record of correspondence and consultation with a large number of other scientific organizations and individual scientists. Finally, there are five special papers submitted by individuals, each of whom presents some excellent ideas concerning research projects that might be undertaken as an international enterprise.

The majority of those consulted were in hearty agreement with the general principle of establishing United Nations research laboratories and presented numerous arguments in its favor. There were, however, some negative arguments. At the time of discussion of the initial proposal made by the French delegation to the Economic and Social Council, the delegations from the USSR and the Ukraine expressed their full approval of international scientific cooperation but favored the "strengthening of national research laboratories and concluded that international scientific cooperation could best be achieved through this means and through the improvement of international exchange of research findings." A similar point of view was later expressed by certain of the American correspondents whose replies are printed in Annex III. An awareness of this argument is implicit in the Unesco statement concerning the basic principles that should determine the criteria for selection of research projects, to which I have made reference.

The other objections referred chiefly to problems of a material and presumably temporary nature. The problem of scientific personnel, for example, presents some very difficult angles. Institutes and research centers are even now multiplying throughout the world at a faster rate than the scientists can be trained to staff them. National scientific developments, particularly in the smaller nations, would be weakened or retarded if valuable personnel were drawn from them to new international centers. On the other hand, the new centers might well be organized in such a way as to provide much-needed training facilities which would soon help the small nations to expand their corps of experts. Any way one looks at it, the bottleneck of limited numbers of adequately trained scientists and engineers appears to be one of the most serious obstacles in the path of progress toward more universal sharing of the benefits of modern science and technology. Although we Americans may well be proud of recent steps, such as the Fulbright fellowships, designed to break through that bottleneck, there is much more that needs to be done, at both the national and the international level.

The most frequent objection, however, was based on consideration of the expenses that would be involved. Existing research institutions are everywhere appealing for additional financial support. It is quite natural to fear that the establishment of central laboratories might be disadvantageous to them. There were numerous suggestions that the United Nations put large new credits at the disposal of laboratories and research institutes throughout the world where problems of international significance are already being tackled by well-qualified teams of research workers. There is no necessary antagonism between the two ideas, other than the inevitable competition for limited funds, should both be adopted. One cannot refrain from cheering the suggestion that a fraction of the money now being spent by many nations upon competitive armaments could better go to the constructive projects envisioned by those who are giving attention to the potentialities of modern knowledge as a tool for improving human welfare.

The relationships between the proposed United Nations research laboratories and existing international bodies committed in whole or in part to the advancement of science present many obvious problems. Unesco, of course, supports the proposals and presumably would be charged with much of the responsibility for carrying them through. The International Labor Organization stresses the value of the undertaking in certain fields where it has already taken action. The International Civil Aviation Organization, although doubting whether an international organization for technical research in aeronautical

construction could produce effective results, believes that the establishment of an international research center for work in cartography and meteorology would be desirable. The World Health Organization, on the other hand, would reserve to itself the prerogative of selecting and directing any research on the international level in the field of medicine and public health. The United Nations Food and Agriculture Organization, moreover, does not favor the policy of developing international centers at this time, but proposes rather to encourage and support the scientific work of national institutions.

Whatever the outcome of the consideration of the important, basic question to which this report is addressed, there can be no doubt that the next steps will be taken only after the most widespread consultation with all the organizations and individuals that are competent to contribute toward the making of wise decisions. Now in the planning stage, the whole program may confidently be expected to develop along lines that are both practical in nature and idealistic in goal. Here is certainly a place where the United States may contribute leadership and demonstrate a spirit of cooperation that may bring results of truly epoch-making significance. The universal character of science may yet provide the cement to bind together the broken fragments of humanity into at least a semblance of "one world." It can do so, however, only if the intelligence of science is directed by dynamic good will.

The Chaotic University

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SOME REFORMER once suggested that every judge should be required to spend a week in gaol, incognito. With similar intent, I would require every educator—college president, school head, commissioner, administrator of foundations—to read Aldous Huxley's *Brave New World,* as a dreadful warning, before taking office. Then, as a reward, I would let him read Sir Walter Moberly's *The Crisis in The University.*[1]

Brave New World is an entertaining book, but as a glimpse of utopia it is emetic. It paints just the future world—of gorgeously planned mechanical marvels and material comfort, soulless educational efficiency, and utter poverty of spirit—that many an educator has been thoughtlessly declaring as his aim. In contrast, *The Crisis in The University* glances back on the great past and looks at the present with dismay, but a wind of culture blows through the book and will bring refreshing thinking, (and some hopes as well as fears) to readers who have the long term good of the universities at heart. And it is the privilege of universities themselves—in England, in America, in the world—to be able to take a long term view, to remember a past that stretches back to the age of Pericles, to look forward to the future with enduring purpose.

The Crisis in the University is a book about British universities and their present failure, as the author sees it, to meet their responsibilities. The book is neither a wailing complaint nor an angry condemnation. It is a critical analysis of the working and aims of the universities, by one who has spent his life in British universities, studying and teaching in some, at the head of some, and now putting his own measures to trial in a college of his own founding. The book begins with a discussion of the functions and aims that have been claimed for universities by statesmen, thinkers, and scholars. There is a comparison of the two types of university nicknamed "Oxbridge" and "Redbrick." Redbrick stands for the provincial universities which have grown up in the last century, doing good teaching but offering a meager social life because they are mostly nonresidential, with students commuting daily.

Then follows a statement of present failures and a discussion of remedies. Each remedy is shown to be either spurious in itself or unworkable in modern conditions; till finally the author produces a tentative suggestion of a cure. And there he leaves the reader.[2]

Sometimes a reviewer feels he can extract the es-

[1] *The Crisis in the University.* Sir Walter Moberly. London: SCM Press; New York: Macmillan, 1949. 316 pp. $2.50.

[2] As my colleague Prof. F. F. Stephan put it: "In his main discussion Sir Walter acts like a receiver in bankruptcy, reporting on the universities. He asks, 'What are their liabilities? What are their assets? How can we keep the critical situation from destroying the assets in hand, and get the business of the universities back on its feet?"