More Scientists for Europe

Plans for action by the countries in the Organization for European Economic Co-operation to increase the supply of qualified scientists and engineers have been reviewed by the council of the OEEC. At a meeting in October to discuss the program for the first year, the secretary general, René Sergent, outlined the actions already taken and the activities for the remainder of the first year, which include steps to improve the teaching of science and mathematics, a program for the exchange of senior scientists, and the support of training institutions in highly specialized scientific fields.

The secretary general emphasized that action by the OEEC in the scientific personnel field grew out of the conviction that the economic growth of Western Europe depended in substantial measure on the underlying strength of its science-based industries. This industrial strength is possible only if the countries of Western Europe make full use of their human resources.

Sergent also announced that the policy for the second year will be considered by the council on 15 December. In conjunction with this announcement, the U.S. Government offered to increase its contribution to the program from $500-000 to up to $750,000, to be matched by an equal contribution from the OEEC countries.

The OEEC will in the next year, through a program already developed by the Governing Committee for Scientific and Technical Personnel, take the following steps.

1) Improve the data on the demand and supply of scientists and engineers. Specific proposals for improving forecasting techniques and establishing international comparability of definition and equivalence of professional titles are included in the program. Improve the teaching of science and mathematics at the secondary-school level. OEEC's Office of Scientific and Technical Personnel has already sponsored two international demonstration courses for secondary-school teachers and supervisors at Keele University in Great Britain and at Tutzing in Germany. A third course, principally concerned with the teaching of mathematics, will be held at Sèvres in November. Approximately 122 educators from 18 countries will have participated in these sessions.

3) Increase the flow of senior scientists among training or research institutions in member countries to exchange techniques and strengthen the training institutions. A program of senior visiting fellowships financed from a general fund will be put into action immediately.

4) Support the growth of individual institutions with special competence for giving training in important highly specialized fields; these institutions are to be open to students from any of the member countries. Proposals for the support of training centers of this kind are now being jointly drawn up by several of the member countries that have agreed to collaborate in this scheme.

5) Identify the most effective means of providing opportunity for additional scientific and technical training to those already in industry. A special study of effective techniques now in practice in the member countries will be undertaken to provide information that will make possible more widespread use of these schemes throughout the OEEC community.

6) Conduct an annual review of developments in the training and utilization of scientific and technical personnel in each of the participating countries, thus identifying techniques that might be used in another country, and at the same time showing the areas where international action can be most effective. The first series of these annual reviews will be inaugurated by an examination of the programs of scientific personnel of the United Kingdom, Denmark, and Norway; this will take place in November. The inquiry conducted in these countries, by teams of international specialists, will culminate in a meeting in Paris on 2 and 3 December that is to be attended by senior officials of the countries being examined, an international panel of experts composed of members of the examining teams, and the OEEC Governing Committee. Surveys of the remaining countries are scheduled throughout the year at approximately 6-week intervals.

At the October meeting the secretary-general expressed the hope that the program would continue to have the active interest and support already given it by industrial, labor, educational, and professional scientific and technical groups. In this connection, he noted with satisfaction the resolution adopted recently by the Consultative Assembly of the Council of Europe; this resolution recommended that the Committee of Ministers of the Council of Europe support the Council of the OEEC in its activities in this field.

Scientific Information Conference

The problem of the storage and retrieval of scientific information will be explored by specialists from more than a dozen countries at an International Conference on Scientific Information, to be held at the Mayflower Hotel in Washington, D.C., 16–21 November, under the sponsorship of the National Academy of Sciences–National Research Council, the National Science Foundation, and the American Documentation Institute [for program outline, see *Science* **126**, 464 (29 Aug. 1958)]. Without convenient and rapid access to data from previous research, there can be no real scientific progress. Under ideal circumstances, all such data are first published in full for workers in the immediate field; then abstracted for interdisciplinary dissemination; indexed, codified, microfilmed or otherwise processed for storage; and, finally, retrieved in library search.

During recent years, however, the outpouring of data has all but overwhelmed the small group of abstractors, indexers, and other information specialists. More scientific information is being produced than can effectively be stored and retrieved, and that body of information is said to be doubling every 10 years.

Since the nature and scope of the problem was first examined formally by the Royal Society of London in 1948 and UNESCO in 1949, various solutions have been offered, including many ingenious proposals for the use of mechanical and electronic aids in the preparation of material for storage and retrieval. Some of these methods have already been put to use and will be described at the conference; others, such as mechanical devices for translating and abstracting, are still in the design or conjectural stages.

Although there is some controversy over the most promising solutions to the problem of storage and retrieval, there is little disagreement about its magnitude. At the present time, many investigators find it less expensive to conduct laboratory experiments anew than to search for previously reported data, even though their existence can be taken for granted.

The conference program, which has been 3 years in preparation, will include discussions of the kind of information scientists need, the effectiveness of present-day systems for organizing information, intellectual and mechanical problems encountered in the development of new systems, the search for a general theory, and finally, a consideration of the responsibilities of government, professional societies, universities, and industry in the field of information services.

Two unusual features of the conference reflect painstaking efforts on the part of the organizers to deal directly with the problems under discussion:

1) To make more effective use of conferees' time, none of the 75 papers selected for presentation at the conference will be read during the meeting; instead, full-text preprints of all papers, in 1500-page volumes, have been made available to the discussants in advance