News and views

HUMAN RESOURCES

STUDIES IN PROGRESS ON MANY FRONTS

The emergency situation, apparently destined to be of long standing, has given rise to much concern over the state of the nation's potential in human resources, and the past several months, in particular, have seen a sudden upsurge in the number of surveys to study various aspects of this potential. Many professional organizations and educational institutions are now either examining the extent of our trained manpower reservoir or are attempting to discover means for insuring the health of the educational system from which it must come. It is significant that support for such studies is being given not only by philanthropic organizations but by certain government agencies as well. While much emphasis has been placed upon the need for an adequate supply of specialists in the physical, medical, biological, and engineering sciences, there is evidence that other intellectual disciplines are not entirely to be neglected and that considerable effort is being made to avoid a situation such as that which confronted American education during the last war.

On April 4th it was announced that a project supported by a $100,000 grant from the Ford Foundation has been established at Columbia University to appraise national manpower needs and human resources in a period of "enduring emergency". A council made up of fifteen leaders in business management, labor, agriculture, education, and science will be asked to identify and evaluate areas in which significant manpower wastes occur, to determine methods for improving the utilization of human resources, and to recommend ways of developing potential resources. The program, which will be administered by Columbia's Graduate School of Business, will be largely an expansion of an existing Columbia project to study means for the conservation of human resources. The latter program has just completed a year of preliminary study of the national manpower potential.

A project somewhat similar to that started by Columbia has just gone into full operation in Washington, D. C. under the sponsorship of the Conference Board of the Associated Research Councils, which includes the National Research Council, the Social Science Research Councils, the American Council of Learned Societies, and the American Council on Education. Designed primarily to study the highly trained manpower potential rather than human resources in general, the project has been in an initial phase for more than three years. Its findings, when they are made public, will provide a better picture of what must be expected of our educational institutions than any which now exists. The Rockefeller Foundation is financing the study.

Meanwhile, the national emergency has posed difficult problems for colleges and universities all over the country, and there are no indications that the situation is one which may be expected to diminish with time. College-level enrollments have already fallen off seriously at some institutions and rising costs have added materially to the financial problems they must face. The small liberal arts colleges have apparently been the hardest hit, a problem which has been highlighted by the reported discharge of one-third of the faculty at Rollins College in Florida. One step in the direction of meeting this situation is being made by the Social Science Research Council, an organization with membership drawn from the national social science associations; with the aid of the Twentieth Century Fund, a two-year grant of $150,000 has been established for the assistance of liberal arts colleges in holding young teachers in the social sciences whom they might otherwise have to discharge.

At the same time, a number of the smaller colleges have announced summer sessions, reportedly in the hope that some of the young men reaching draft age in the early part of the year might thus become eligible as students for educational deferment. Concerned by the situation, the American Council on Education, which represents a majority of the educational institutions and organizations of the country, held a conference on acceleration in Washington last March to consider what steps might be necessary to meet the problem of the draft-interrupted year at colleges. A poll of 205 college administrations was taken before the conference and of those answering, fifty-seven per cent believed that acceleration at present was neither necessary nor desirable. Spokesmen for the armed services told the conference that the military would not ask for a full speed-up of college training unless full mobilization became necessary.

Although a number of the larger Eastern colleges have taken the position that they will not speed up the educational process unless requested to do so by the military, at least one major institution, The Johns Hopkins University, has decided in favor of what may amount to an accelerated program. On the occasion of the University's seventy-fifth anniversary celebration in February, Detlev W. Bronk, president of Hopkins, outlined long-range plans which would effectively eliminate the sharp distinctions between undergraduates and graduates by allowing students to progress as rapidly as they are able. "In these times," Dr. Bronk said, "and in the kind of period we see ahead, educational processes must be speeded up. There are youth capable of going at a pace faster than the present formalized schedule of the secondary schools, the colleges, and the graduate schools. The Johns Hopkins program will provide for such students, who are anxious to take the most rapid and productive route toward objectives of creative scholarship without in any way sacrificing the quality of the education they receive."

Union College of Schenectady, N. Y. has also announced plans to experiment in the development of interdepartmental courses which will emphasize a higher degree of integration than is normally provided by elective study systems. With the aid of a $15,000 grant from the Carnegie Corporation, the College will carry out a five-year program of integration in response to a feeling on the part of its faculty that "in too many cases the Bachelor of Arts and Bachelor of Science degrees represent a collection of disparate courses amounting to only the required semester hours for academic credit".

In the sciences, a survey has been started by the National Science Teachers Association of the National Educational Association which is intended to furnish information for the guidance of teachers who are called upon to recommend room arrangement, furnishings, equipment, supplies, and other facilities for science instruction. The project, which is to continue for about two years, is expected ultimately to result in improved facilities for science teaching throughout the nation, the Association said. It was pointed out that the most recent federal report on science layouts

and furnishings in school laboratories was published in 1927 and is now out of print.

Scientific manpower, currently the subject of much debate, is being looked at simultaneously from several different directions and while the impetus comes immediately from the needs for increased technical production, the results are expected to have considerable long-term value.

In late February, plans were announced for a survey of available scientific personnel and research equipment at all American educational institutions under a program to be carried out by the Engineering College Research Council, a unit of the American Society for Engineering Education, with the cooperation of the Defense Department's Research and Development Board. Planned as a relatively short-term project, the survey covers a broad list of engineering and scientific fields, including aeronautical engineering, astronomy, chemistry, electrical engineering, electronics, geology, mathematics, metallurgical engineering, meteorology, oceanography, physics, psychology, and many other categories. A more general inventory of the facilities of educational institutions is being collected by the Office of Education. Information concerning existing physical and human resources is being gathered from more than one thousand institutions of higher learning.

As most physicists are probably aware, the nation-wide registration of scientists by the U. S. Office of Education under a program sponsored by the National Security Resources Board has been in process for some time. With the help of the National Research Council, the American Institute of Physics, and the American Chemical Society, questionnaires have been mailed to physicists, chemists, and certain other scientists. As a part of this registration program also, the American Institute of Biological Sciences and the American Geological Institute have circularized people in their respective fields.

The Office of Naval Research has for the past several years been conducting a survey of specialized personnel under projects carried out by the National Research Council, the publishers of *American Men of Science,* and several of the scientific societies. The most complete statistical information to be provided in these studies has concerned science and engineering personnel, for the purpose was not only to provide a register of names but also to give statistical details about the individual and the factors which may have influenced his choice of profession. Also being surveyed, however, is the state of available manpower in the social sciences and humanities. It is expected that this study will continue for several more years. Some parts of the survey have been reported in previous issues of *Physics Today* and it is hoped that as further information becomes available it can also be made public.

The foregoing gives only a sampling of the existing and contemplated surveys designed to explore the nation's actual and potential reservoirs of human resources. Additional studies are being made by a number of government agencies, professional organizations, and universities. The resulting statistics, when and if they can be properly analyzed and related, should provide a very comprehensive picture of the nation's trained potential and may prove significant in future efforts to enlarge these reservoirs.

AFFILIATED

SIGMA PI SIGMA JOINS AIP

Sigma Pi Sigma, national physics honor society, formally joined the American Institute of Physics as an affiliated society last March 17th when the governing board of the Institute unanimously approved a Sigma Pi Sigma request for affiliation.

Founded in 1921 as a local honor organization at Davidson College in North Carolina by nine physics students and faculty members who sensed a need for an organization which would bring physicists into closer association, the original society proved so successful that a movement for a larger organization was launched in 1925. After two years of restricted growth, a more extended period of expansion began until now the society is national in scope and influence, with seventy-seven chapters well distributed among colleges and universities in the country. The total membership is in the neighborhood of nine thousand. The society's chapters are restricted to colleges and universities of recognized standing which offer a strong major in physics. Physics students and a few others in closely related fields are accepted as members upon attaining "high scholarship standing, professional merit, and academic distinction".

In addition to its affiliation with the Institute of Physics, Sigma Pi Sigma is a member of the American Association of College Honor Societies and is one of the "Associated Societies" in Section B of the American Association for the Advancement of Science. M. H. Trytten, director of the National Research Council's Office of Scientific Personnel, is the society's president. Other officers are Vincent E. Parker of the Louisiana State University, vice-president, and Marsh W. White of the Pennsylvania State College, executive secretary.

The latest chapter of Sigma Pi Sigma was formed at Hofstra College in Hempstead, Long Island, where a charter group of fifty students and faculty and alumni members held installation ceremonies on March 17th. Dr. White conducted the ceremonies, and the installation officers included Dr. Trytten, Donald E. Kirkpatrick of Queens College, and J. H. Rohrbaugh of New York University. Both the BA in physics and BS in applied physics, together with work leading to the MA, are offered in the Hofstra physics department, which is headed by James B. Kelley. Jack E. Brooks was selected as the chapter advisor.

COMPLETED

THE RADIATION LABORATORY SERIES

March 22nd marked the publication date of the twenty-seventh and final volume of the Radiation Laboratory Series, a collection of technical books tracing the wartime record of radar work at the Radiation Laboratory of the Massachusetts Institute of Technology. Published by the McGraw-Hill Book Company under contract with MIT, the Series was started in 1947 and totals more than 16,000 pages. McGraw-Hill reports that over 150,000 copies of the published volumes have been sold to date. Louis Ridenour, dean of the University of Illinois Graduate School, served as editor-in-chief of the Series, and a large number of research workers who were associated with the radar project carried on at MIT during World War II participated as authors. Publication of the Series, which Dean Ridenour describes as a "compendium of basic information on microwave radar and modern electronics", has brought a net saving of approximately $260,000 to the Government, according to an estimate of the McGraw-Hill Company, as a collection of official technical reports. In addition, the publishers have announced paying over $80,000 into the U. S. Treasury as royalty on sales here and abroad.