Function and Future

M. H. Trytten, director of the academy's Office of Scientific Personnel, has written on the function and future of the program: "Originally the program was deemed to be desirable as a contribution to the European area by acquainting young scientists with American practice in the relationship between academic and industrial research. While the program no doubt contributed to this objective, other worthwhile objectives have been attained which seem of considerable importance in respect to the worldwide program.

"The strengthening of the scientific activities of the free world is important per se. Intimate relationships between American scientists and the leading scientists of the future in these many countries can be of great significance. As before these young scientists contribute much to American science while guests in American laboratories. Finally, the direct cooperation between the organizations of scientists abroad and the Academy-Research Council offers a means of strengthening relationships which could lead to other fruitful cooperative activities. Aside from these benefits, there is the deeper question of the responsibility the nations leading in scientific competence have to assist in the development of indigenous scientific movements in nations less advanced. The burning desire for self-betterment and improved conditions which is so evident in these countries finds its focus in most instances in an urge to improve education and in particular to improve technology. Consequently it would appear to be of major importance to assist in strengthening the educational programs with special emphasis on scientific education. The needs are, of course, great. Not only is assistance needed in the basic sciences, but in the fields of public health, sanitation, natural resources, conservation, and in applied science for industry. The latent human resources in most of these countries are enormous.

"No firm plans for continuation of this program have been made as yet, since continued support by ICA depends on the budget support available. However, there seems to be continued enthusiasm for this type of program, and it would seem probable that a continued effort of this kind would be supported."

Soviet Research Ship Visits U.S.

The first visit of a Soviet scientific vessel to the continental United States during the International Geophysical Year occurred on 17 December, when the *Vityaz* arrived at San Francisco. Representatives of the National Academy of Sciences greeted the Soviet scientists and crew, who have been engaged in oceanographic studies in the Pacific as part of the IGY program.

During its IGY voyages, the *Vityaz* sounded a record depth in the Pacific of 35,948 feet, off the Philippines in August 1957; discovered a 20,340-foot depression in the ocean floor north of the New Hebrides Islands; and brought to the surface from depths of 35,000 feet several previously unknown species of sea animals.

Scientists who visited the ship when it docked at Vancouver, B.C., in November report that it is extremely well equipped for a variety of oceanographic work. Approximately 65 scientists and a crew of about the same number are on board, including about 35 women. Chief of its scientific party is Nikolai Sysoev, whom many U.S. scientists met in Moscow last August at the Fifth General Assembly of the World IGY Committee.

The Soviet Government indicated in advance that the *Vityaz* would be open to visit by American scientists and other interested persons while she was in San Francisco, and later in Honlulu, and that arrangements for such visits should be made with the ship's authorities after her arrival. The National Academy of Sciences' IGY Committee asked John Lyman, a member of the US–IGY Committee's panel on oceanography, to make arrangements for these visits and for visits by the Soviet scientists to American scientific research facilities and institutions. Scientists from the University of California at Berkeley, the Scripps Institution of Oceanography at La Jolla, the U.S. Navy Hydrographic Office, the U.S. Coast and Geodetic Survey, and representatives of other interested institutions went on board the vessel.

The *Vityaz* is one of 13 Soviet ships participating in the IGY oceanography program, nine of them being primarily research vessels. Including the U.S.S.R., 25 nations are engaged in IGY oceanographic work, using a total of approximately 70 vessels. Of these, United States institutions account for eight.

Technical Translations

The Department of Commerce will begin publication this month of a periodical planned to serve as a central source of information in the United States on Russian and other technical translations available to science and industry. The periodical, *Technical Translations,* will be published twice a month by the Office of Technical Services, in cooperation with the Special Libraries Association. It will list and abstract translated material available from U.S. Government sources, SLA, cooperating foreign governments, educational institutions, and private sources. The Special Libraries Association's *Translation Monthly,* familiar to all who have been working with translations, will be incorporated in *Technical Translations.*

Most of the foreign material that OTS is collecting from government agencies has not been previously available to the public, and the volume from this source alone is expected to run as high as 10,000 complete translations a year. Abstracts of this material will begin appearing in the new journal immediately. *Technical Translations* will will be sold by OTS at $12 a year ($4 additional for foreign mailing); single copy, 60 cents. Orders should be addressed to OTS, U.S. Department of Commerce, Washington 25, D.C.

Resources for the Future

Resources for the Future, which has headquarters at 1145 19th St., NW, Washington, D.C., has planned a forum, a series of six lectures and discussions that will deal with new developments in the natural sciences and in technology, and with their impact upon society and resources. Each lecture, given by a natural scientist noted in his field, will be followed by a discussion by leaders in the social sciences, business, or politics; these participants will relate scientific developments to their long-term social and economic significance. The forum series will be held in the Smithsonian Institution's Museum of Natural History. The program follows:

8 January: Genetics. George Beadle, chairman, Division of Biology, California Institute of Technology, and 1958 Nobel Prize winner; Henry A. Wallace, plant breeder, formerly Vice President of the United States, Secretary of Agriculture, and Secretary of Commerce; O. V. Wells, economist, administrator, Agricultural Marketing Service, U.S. Department of Agriculture.

22 January: Weather Modification. Horace R. Byers, chairman, department of meteorology, University of Chicago; Clinton P. Anderson, U.S. Senator from New Mexico, formerly Secretary of Agriculture; Edward A. Ackerman, geographer, assistant executive officer, Carnegie Institution of Washington.

5 February: Mineral Exploration. John A. S. Adams, associate professor of geochemistry, Rice Institute; Paul W. McGann, chief economist, U.S. Bureau of Mines; another speaker to be announced.

26 February: Chemical Technology. Earl P. Stevenson, industrial chemist, chairman of the board, Arthur D. Little, Inc.; Richard L. Meier, organic chemist, research associate in planning, University of Michigan; Frederick T. Moore,

economics division, Rand Corporation.

5 March: Nuclear Energy. W. F. Libby, physical chemist, member, U.S. Atomic Energy Commission; E. Blythe Stason, dean of the Law School, University of Michigan; Philip Mullenbach, economist, director of research on nuclear energy study, Twentieth Century Fund.

12 March: Outer Space. Lee A. DuBridge, physicist, president, California Institute of Technology; Alan L. Dean, political scientist, management analyst, U.S. Bureau of the Budget; another speaker to be announced.

Journal in Microform

An experiment in the publication of a scientific journal exclusively in microform is to be conducted during the next 3 years by the American Institute of Biological Sciences, Washington, D. C., with the assistance of grants from the Council on Library Resources of Washington, D.C., and the National Science Foundation. The journal which will be the subject of the experiment is *Wildlife Disease*. It is the publication of the Wildlife Disease Association, an international organization with a current membership of approximately 300, concerned with the parasites, diseases, physiology and other factors relating to the health and survival of wild animals, both in nature and captivity, and with the indirect relations of such factors to domestic animals and man. The journal will commence publication as a quarterly in January 1959.

The purpose of the experiment is to explore a number of unknowns with respect to the application of the microtext techniques to the publication of the results of research: (i) whether a small specialist group, unable to support the cost of a journal in letterpress, can do so with the use of microform; (ii) whether a journal in microform will serve the purpose of scientific communication in terms of author, reader, and library reaction; (iii) whether use of this technique will assist in expediting the publication of the results of research; (iv) whether—by reducing the cost of publication—this form of publication will require less abridgement of important data than has become necessary with scientific journals generally; (v) whether the technique of photographic reproduction which will be employed will lend itself to superior presentation of photographic data over half-tone reproduction; and (vi) what optima can be found in terms of microtext medium, page-size and arrangement, and other details of format and so forth.

The journal will be published on 5-by 3-inch Microcards to be manufactured and supplied by the Microcard Corporation of West Salem, Wis. Each quarterly issue will comprise approximately four cards. Each card will contain a single article of up to 47 pages in microtext, but will bear in full-size type the citation of author, title, and issue-number. A leaflet that contains abstracts of the articles in full-size type will accompany each issue. These abstracts will be reported to *Biological Abstracts*.

Optical devices will be needed to read the microscopic print in which the journal is printed. Nonportable reading devices for this purpose are familiar objects in libraries, but few individuals can afford to own them. Consequently, one of the objectives of the experiment will be to test the applicability for this purpose of a small portable, but also inexpensive, hand-viewer. Such a viewer will be provided to the original members of the association at a nominal charge and will be available to later members at a cost expected to be less than $10. Also, although the experiment is to be conducted initially with Microcards, it is anticipated that other forms of microtext may later be compared.

In order to explore the impact of this form of journal publication on libraries, the association has arranged that Foster E. Mohrhardt, librarian of the U.S. Department of Agriculture, be associated with the experiment to observe and report on this impact.

The co-editors of the journal are Carlton M. Herman, chief, Section on Wildlife Diseases, U.S. Fish and Wildlife Service, Laurel, Md.; and David E. Davis, professor, Johns Hopkins University School of Hygiene and Public Health, Baltimore, Md. The business offices of the association are at the headquarters of the American Institute of Biological Sciences, 2000 P St., NW, Washington 6, D.C. Membership in the association, which carries with it a subscription to the journal and an irregularly issued Newsletter, is $1 per year.

Hunter Laboratory of Psychology

The Walter S. Hunter Laboratory of Psychology was dedicated on 1 November at Brown University, where the late Professor Hunter was chairman of the psychology department from 1936 to 1954. During the ceremony, honorary degrees were conferred on Clarence H. Graham of Columbia University, Joseph McVicker Hunt of the University of Illinois, Donald B. Lindsley of the University of California, Los Angeles, and Nils Y. Wessell, president of Tufts University.

The dedication took place in the laboratory's auditorium, which has been named after Leonard Carmichael, secretary of the Smithsonian Institution, who was the principal speaker. Carmichael, a former chairman of psychology at Brown, said of Hunter: "Hunter became one of the leading exponents of an enlightened objective and behavioristic psychology that has now come to be almost synonymous with scientific psychology in this country."

To conclude the ceremony, Harold Schlosberg, present chairman of the department, expressed thanks for the building, which he described as being "anything and everything a psychologist could ask for."

Electronic Calibration Center

The Electronic Calibration Center of the National Bureau of Standards was formally dedicated at the bureau's Boulder, Colo., laboratories in mid-August. Housed in a new wing of the Radio Standards Laboratory, the center provides Government, industry, and the military services with access to the nation's primary electronic standards.

The chief mission of the new center is to calibrate interlaboratory standards for such quantities as voltage, power, and impedance in terms of the national standards maintained by NBS. These interlaboratory standards, in turn, are used to assure the accuracy of reference and working standards in laboratories, on the production line, and in overhaul stations throughout the nation.

The quantity of electronic calibrations required today in the design, manufacture, and adjustment of extremely complex electronic weapons, communications equipment, and industrial electronic apparatus is so great that branching chains of measurement are necessary to extend the national standards to the shop or field instruments used for this work. The large number of links in each chain, through which the units of measurement must be transferred, requires the highest practicable accuracy at each step in order to assure adequate accuracy of the shop and field instruments.

The fundamental system of electrical measurement now employed in the United States uses absolute units, that is, units derived from the fundamental units of length, mass, and time—the meter, kilogram, and second. Basic to the absolute system of electrical units are the absolute ohm and the absolute ampere. The absolute ohm is derived from the absolute henry, based on an inductor of accurately known dimensions. The absolute ampere is established in terms of the magnetic force on an accurately dimensioned current-carrying coil, measured with a current balance. These basic standards are maintained in the NBS laboratories in Washington, D.C.

Other units, such as the watt and the