

tion. In few fields—mathematics is one of the notable exceptions—has the annual award of degrees surpassed the figures for 1950. Had the President used 1955 as the base year for the biological sciences, a comparison would show that degrees conferred in 1960 had increased from 12,800 to 16,700; had he used 1954 as the base year for the physical sciences, a comparison would show an increase from 10,900 to 17,100.

The President's figures for engineering enrollments contributed generously to the confusion. Contrary to what he reported, engineering enrollments rose from 146,900 in 1951 to 268,700 in 1957; enrollment in 1961 totaled 232,100, but the number of degrees awarded last year was 37,800, a slight drop from the previous year, but the third highest total since 1951.

It should be noted that while engineering is experiencing a drop in enrollments, mathematics is a rapidly expanding field of study; it produced almost twice as many graduates in 1960 as in 1950 (11,400 to 6,300); in the physical sciences, growth has also been rapid, and the 1960 total of graduates was 17,100, compared with 19,600 in the peak year of 1950.

The picture presented by the President was also rendered misleading by his failure to note that the population of 18-year-olds—from which the great majority of college students are drawn—actually dipped slightly between 1950 and 1957, but still produced steady increases in all fields but engineering.

(An inquiry into what led the President to err in the presentation of the statistical information revealed that the information was requested by a White House aide shortly before the press conference got underway and apparently was hurriedly delivered to Kennedy, who used it without time for checking or reflection.)

Manpower Utilization

In the opinion of a number of manpower specialists, the failure of the engineering profession to match the growth of other fields is the result of "image" problems. The title "engineer," it has been noted, is loosely protected in this country, with the result that janitors are "building engineers" and repairmen pass themselves off as "engineers" of one sort or another. In addition, the nomenclature employed by the press assigns the title "scientist" to

great numbers of professionals who are engineers in training and practice. Many "space scientists" are, purely and simply, engineers, but a young man contemplating a career is led to the impression that engineering is one of the lower orders of professional endeavor. The engineering profession is naturally aware of its public relations plight, and can be expected as the situation continues to invest some effort and money into public relations aimed at elevating the profession's public image.

One of the problems which will be reviewed in the study ordered by Kennedy is the utilization of scientific and engineering personnel, working for some of the larger firms doing business with the government. The impression is widespread that many of these firms engage in "hoarding" of highly trained specialists so that they will be on hand as evidence that a company is qualified to carry out a government contract. In addition, a review will probably be made of the sticky problem of bidding on government contracts. While Congress pressures the Executive to throw open more contracts to bidding, the agencies letting the contracts are aware that a vast amount of engineering and scientific effort goes into the preparation of bids. The outcome is that the effort pays off for one company, but is time and talent down the drain for the others.

Another subject that may be scrutinized is the advertising for scientists and engineers which many companies purchase in considerable volume. The suggestion has been made that some of these advertisements are inspired more by a desire to impress the public than to hire help. Notice that a firm needs a large number of scientists and engineers can have a beneficial effect on its stock-market position. The truth is hard to pin down, but there are cases where it would appear that corporate image building has been extended to the help-wanted ads, producing distortion in the manpower picture.

The general manpower review ordered by the President is expected to get underway within the next few weeks. Among those responsible for carrying it out there is an awareness that no quick answers are in the offing and that a great deal of careful number gathering will be necessary before the problem can be viewed with reasonable clarity.—D.S.G.

Announcements

A new **section on statistics** (section U) was established by the AAAS during its 1961 annual meeting in Denver. Although statistics, as a methodology, has long been a part of AAAS activities, affiliated statistical organizations were necessarily associated with the section on mathematics (A) or the section on social and economic sciences (K). The new section will serve to correlate these organizations and help intensify the contributions of persons engaged in statistical work.

The committee's principal administrative body, chaired by a vice-president of the AAAS, will consist of representatives of the participating associations; four members, chosen at large; and a secretary, chosen by the Board of Directors. Morris B. Ullman, of the Bureau of the Budget's Office of Statistical Standards, has been appointed secretary for the current term.

Individual AAAS members who wish to be identified with the new section are requested to write the association. (Membership Department, AAAS, 1515 Massachusetts Ave., NW, Washington 5, D.C.)

A popular survey of the **measurement of time** will be presented over the NBC-TV network on Monday evening, 5 February, as part of the Bell System Science Series. The hour-long program, "About Time," will cover the evolution of the calendar, development of clocks, built-in timing mechanisms of plants and animals, techniques of precision timing, reconstruction of geological time, and relativity.

Bibliographic and documentation services in **biotoxicology and natural products chemistry** are available through the World Life Research Institute. Services include exhaustive literature searches, continuing current and generic searches, and literature procurement. (B. W. Halstead, WLRI, Colton, Calif.)

The National Institutes of Health's Office of International Research has established a branch in Paris to represent U.S. Public Health Service interests in **European medical research**. Duties of the new office, headed by Charles P. Hutterer, former assistant chief of the NIH Grants and Training

Branch, will include collecting information on medical research potential and needs in Europe, advising NIH grantees in the European area, and working in cooperation with representatives of other American and foreign organizations having similar interests in foreign scientific activities.

Meeting Notes

A 2-day conference on the **psychotherapy of schizophrenia** will be held in Philadelphia 15 and 16 March. The conference will include live and filmed patient-treatment sessions. (Temple University, Department of Psychiatry, 3401 North Broad Street, Philadelphia 40, Pa.)

Technical papers are being solicited for presentation at a 2-day conference on **vacuum metallurgy**, to be held in New York 18 and 19 June. Deadline for receipt of title and 3-page synopsis: *26 February*. (R. F. Bunshah, Lawrence Radiation Laboratory, University of California, P.O. Box 808, Livermore)

New Journals

APL Technical Digest, vol. 1, No. 1, November 1961. Applied Physics Laboratory, Johns Hopkins University, Silver Spring, Md. Bimonthly

Biochemistry, vol. 1, No. 1, Jan. 1962. H. Neurath, Ed. American Chemical Society, 1155 16 St., NW, Washington 6, D.C. Bimonthly.

Fishing News International, vol 1, No. 1, Oct. 1961. A. J. Heighway, Ed. Arthur J. Heighway Publications Ltd., Ludgate House, 110 Fleet St., London, E.C.4, England. Quarterly. £1.10 per annum.

Inorganic Chemistry, vol. 1, No. 1, Jan. 1962. R. W. Parry, Ed. American Chemical Society, 1155 16 St., NW, Washington 6, D.C. Quarterly.

Journal for the Scientific Study of Religion, vol. 1, No. 1, Oct. 1961. P. Pemberton, Ed. Society for the Scientific Study of Religion, 409 Prospect St., New Haven 11, Conn. Semiannually. \$5 per year.

Journal of Catalysis, vol. 1, No. 1, 1962. J. H. de Boer and P. W. Selwood, Eds. Academic Press, 111 Fifth Ave., New York 3, N.Y.

Journal of Pharmaceutical Sciences of the United Arab Republic, vol. 1, No. 1, 1960. Science Council, United Arab Republic, Cairo, Egypt.

Scientists in the News

Sir **Harold Jeffreys**, of the University of Cambridge (England), and **Felix A. Vening Meinesz**, of the University of Utrecht (Netherlands), are joint recipients of the \$25,000 Vetlesen prize. The award, administered by Columbia University, is presented every 2 years for work "resulting in a clearer understanding of the earth, its history, or its relation to the universe."

I. Gordon Fels, chief of the biochemistry section at the Hines (Ill.) Veterans Administration Hospital, has been appointed senior biochemist at the Virginia Institute for Scientific Research in Richmond, and recipient of the first Old Dominion Foundation research scholar award.

Arthur G. Rodgers, Jr., psychiatrist, is retiring as director of Syracuse (N.Y.) State School. He plans to maintain private practice.

A. R. T. Denues, former acting director of the Sloan-Kettering Institute for Cancer Research, has been named president of CANCECO (Cancer International Research Cooperative) in Rye, N.Y.

Lee Leiserson, former chemist for the Air Force Office of Scientific Research, has joined the U.S. Department of the Interior's Office of Saline Water as chief of the inorganic chemistry branch.

Reginald L. Reagan, former professor of virus diseases at the University of Maryland, has joined Hazleton Laboratories in Falls Church, Va., as a virologist.

Harry Beckman has retired from the chairmanship of Marquette University's department of pharmacology. He plans to continue his research in malariaology at the medical school.

John D. H. Wilson, radiologist at St. Mary's Hospital in Clarksburg, W. Va., has been appointed clinical associate professor of radiology at West Virginia University School of Medicine.

O. P. Puri, former research fellow in the University of Notre Dame's department of metallurgical engineering, has been appointed associate professor of physics and chairman of the department at Clark College, Atlanta, Ga.

J. Hoover Mackin, professor of geology at the University of Washington, has been named William Stamps Farish professor of geology at the University of Texas, effective in September.

Ralph D. Myers, professor of physics at the University of Maryland, has received the Washington Academy of Sciences' annual award for services in the teaching of science.

J. Sen, lecturer in botany at Calcutta (India) University, will succeed the late **D. Chatterjee** as superintendent of the Indian Botanic Garden at Howrah.

Gregory Abdian, a former program director in the National Science Foundation's office of scientific information service, has joined the staff of the Institute for Advancement of Medical Communication in New York.

Donald Fairbairn, associate professor of parasitology at McGill University in Montreal, has been named Commonwealth professor and head of the department of zoology at the University of Massachusetts.

Recent Deaths

Tom W. Bonner, 51; head of the department of physics at Rice University and member of the board of directors, Oak Ridge Institute of Nuclear Studies; 5 Dec.

Gioacchino Failla, 70; senior physicist emeritus at Argonne National Laboratory; 15 Dec.

Brian L. Goodlet, 59; former head of the engineering research and development division at the Atomic Energy Research Establishment, Harwell, England; 28 Oct.

Esper S. Larsen, III, 48; geologist with the U.S. Geological Survey; 6 Oct.

W. L. McAtee, 78; research biologist and technical editor of wildlife publications for the U.S. Biological Survey (Fish and Wildlife Service) from 1908 until his retirement in 1950; 7 Jan.

James M. Murphy, 49; research professor of veterinary medicine at the University of Pennsylvania; 14 Dec.

Seymour L. Shapiro, 45; director of organic research at U.S. Vitamin and Pharmaceutical Corp. in Yonkers, N.Y.; 9 Dec.

A. Franklin Shull, 80; geneticist and emeritus professor of zoology at the University of Michigan; 7 Nov.