to take by way of correction and discipline. He must do this under the appraising eyes of Congress and in the knowledge that morale in his agency and the future of its research office will be affected.

It is worth noting that AID's troubles with Congress over research, like those of the National Institutes of Health, are over matters not of substance but of procedure. Congress may not understand research but it does have strong views on contracting, and this is perhaps the moral of the tale for the research-supporting agencies.

—JOHN WALSH

Federal Grant Policy: Academy Requested to Undertake Study

The council of the National Academy of Sciences, at its 8 June meeting, will consider a request from the American Society of Biological Chemists that the Academy undertake a review of the government's research grant policies.

The request, in a resolution passed by the society's membership at its April meeting, reflects growing concern, both scientific and political, over the relationships between federal agencies and their grantees. The resolution follows.

The condition of mutual dependence between the federal government and institutions of higher learning and research is one of the most profound and significant developments of our time. It is abundantly clear that the fate of this nation is now inextricably interwoven with the vigor and vitality of these institutions. In turn, the fate of these institutions is dependent upon the wisdom and enlightenment with which federal funds are made available in support of their activities. It is imperative, therefore, that the conditions governing this mutual interdependence be subject to continuing appraisal and that the policy underlying administration of federal programs in support of research assures that this relationship will continue to be mutually beneficial.

The basic instrument which has served to define these relationships has been the research grant, a device which should place the federal government and the grantee institution in a relationship of trust while conveying to the individual investigator public funds to be prudently expended in the accomplishment of his research objectives.

The necessity for clearer definition of the relationships involved has been brought into focus by the criticisms recently directed by the Intergovernmental Relations Subcommittee of the House Committee on Government Operations against the management of the research grants program of the United States Public Health Service. While regretting the manner of criticism of the House Committee and their failure to provide constructive leadership, we suggest that the time is indeed opportune and the moment critical for appraisal of the relationships which properly should obtain among the federal government, universities and scientific investigators if the national interest is to be served.

Accordingly, we, the members of the American Society of Biological Chemists, do urgently request that the National Academy of Sciences undertake a critical appraisal of these relationships in the support of fundamental research, not only by the National Institutes of Health but by all other federal agencies which are substantially so committed. It is our earnest hope that, following such appraisal, the Academy will enunciate the principles and philosophy which could serve as basic policy in the future conduct and administration of federal programs in support of fundamental research.

Hailsham vs. Cambridge: British Science Minister Will Get Degree

Ending the eruption which transformed the usually genteel ritual of awarding honorary degrees into a major academic controversy, the faculty of Cambridge University has agreed, after all, to give Lord Hailsham, Britain's Minister for Science, an honorary degree.

Faculty dismay over Hailsham's analysis of the emigration of British scientists to America was so severe that the university administration temporarily withdrew its nomination. Hailsham had blamed the widespread emigration on "America's need to live parasitically on other people's brains." The dons thought that this view was "impolite," and that the problem had at least as much to do with the organization of education and research in Britain (*Science*, 8 March and 19 April).

When, last week, the administration violated the gentlemanly tradition by which candidates are discreetly affirmed by the faculty and subjected Hailsham's candidacy to an actual vote, the results were close—304 to 284. Hailsham will get his degree, but he seems to have left a great many Cambridge fences unmended.—E.L.

Project Westford: Air Force Experiment Opens Successfully

The controversial space "needles" experiment, Project Westford, has finally gotten under way. In an announcement on 12 May from M.I.T.'s Lincoln Laboratory, which is conducting the project for the Air Force, it was reported that the needles had been launched from an Air Force satellite into successful orbit, and that radar contact had been made. No date was given for the launching.

The Laboratory reported that "the fibers are still in a compact cloud, centered about the dispenser package and circling the earth every 166 minutes in a near-polar orbit some 2000 miles high at an inclination of approximately 87 degrees. The cloud is expected to fan out . . . until the dipoles form a complete narrow ring or belt around the earth."

The announcement predicted that the fibers would have a life span of not more than 5 years. "By that time," it said, "the solar radiation pressure will have forced all the dipole fibers down to lower altitudes where the atmospheric density is greater and they will harmlessly disappear."

The link between the Air Force and the scientific community on Project Westford is William Liller of the Harvard Observatory. Liller, representing the Westford committees of both the International Astronomical Union and the Space Sciences Board of the National Academy of Sciences, will relay tracking data on Westford to interested observers. He may be contacted at the Harvard Observatory, Cambridge 38, Mass.—E.L.

Disarmament Agency: A New Look in ACDA's Research Programs

Two new research contracts signed last week by the Arms Control and Disarmament Agency with M.I.T.'s Center for International Studies mark a change from ACDA's emphasis on inspection and verification techniques.

Under a $65,000 contract to be completed in December 1964, the M.I.T. Center will study the implications for the Soviet Union of various arms control proposals. A second project, to be completed in September 1964, for $145,000, will examine possible regional arms control agreements in Africa, Latin America, and the Middle East and their implications for U.S. foreign policy. The M.I.T. group will be joined on the second project by groups from Harvard (Middle East aspects), Boston University (Africa), and Columbia (Latin America).

A third contract is drawn up along the lines of previous ACDA research contracts. For $202,000, Sylvania Electric will study inspection techniques for policing an agreement to disarm conventional forces.

Taken together, the contracts make a sizable inroad into the Agency's $4 million 1963 research budget. Just 6 weeks before the fiscal year closes, the Agency still has $1.25 million on its hands, though it anticipates that several contracts will be closed and that its surplus will be no more than about $35,000. The Agency has now let a total of 18 contracts since it was established, in September 1961.—E.L.

Announcements

CBS Reports for 22 May will present a filmed interview of **Igor Evgenievich Tamm**, Nobel-prize-winning Soviet physicist. In "Reflections of a Soviet Scientist" Tamm discusses disarmament, scientists, and U.S.–Soviet relations. According to CBS, the interview is "unrehearsed and uncensored;" it takes place inside the P. N. Lebedev Institute of Physics, Moscow, where Tamm is director of the theoretical physics laboratory. The program time varies with location.

The U.S. Atomic Energy Commission and NASA have standardized the size of **microfilmed reports** on science and technology released by each agency. They have adopted a reduction ratio of 18 to 1, an image frame size of 16 by 23 mm, and a precise separation between frames of 0.5 mm. Further information on the project is available from the Division of Technical Information, AEC, or the Office of Scientific and Technical Information, NASA, Washington 25.

Grants, Fellowships, and Awards

Research appointments are available at the recently established E. O. Hulburt Center for **Space Research**, Washington, D.C. Applicants may be Ph.D. candidates, postgraduates, or university faculty members; they must be U.S. citizens and must have or be able to obtain a Department of Defense secret clearance. The grants, sponsored by the National Science Foundation, are generally for 1 year. Stipends will vary with the applicant's degree and professional status and experience. (E. O. Hulburt Center for Space Research, U.S. Naval Research Laboratory, Washington 25)

The Maimonides Hospital, Brooklyn, is offering a 1-year research appointment in the **experimental surgery** laboratory. An interdisciplinary research program will stress electronic control of physiologic systems. The appointment carries a $6500 stipend. (Adrian Kantrowitz, Maimonides Hospital, 4802 10th Ave. Brooklyn 19, N.Y.)

Fellowships are available from the Helen Hay Whitney Foundation for biological or medical research on **diseases of the connective tissues**. Applicants must hold an M.D. or Ph.D. degree, and be no more than 35 years of age. The awards are for 3 years, and carry a yearly stipend of $6500, plus a $500 annual increment and $500 for each dependent. Deadline for applications: *15 August*. (H. H. Whitney Foundation, 22 E. 65 St., New York 21)

Courses

A course on **botanical histochemistry** is scheduled 8–26 July at the University of California, Berkeley. It will cover histochemical procedures, with emphasis on application to plant tissue and use in specific research problems. Lecture and laboratory sessions are included. (Univ. of California Extension, Berkeley 4)

Massachusetts Institute of Technology will offer a course on **probabilistic systems analysis**, 8–19 July. The program, on a graduate level, will develop the theory of probability from fundamental concepts. (Director, Summer Session, Room 7–103, M.I.T. Cambridge, Mass.)

The New York University **statistics** institute for engineers, statisticians, and administrators of engineering firms will take place this year in two phases. Statistics of life testing will be emphasized 17–28 June, and probabilistic techniques in systems reliability and maintainability will be discussed 4–14 September. Applicants may register for either or both sessions. (R. N. Wilburn, Bureau of Conferences and Institutes, New York University, 6 Washington Square North, New York 3)

The University of Michigan will hold a course in **written communication** for scientists, engineers, and technical writers, 5–9 August. Lectures and workshops will be included. Each participant will receive a set of lecture notes. The fee for the course is $160; advance registration is required. (Conference Secretary, Engineering Summer Conferences, Univ. of Michigan, Ann Arbor)

Columbia University is offering a 1-year course leading to a master of science degree in **radiological physics**. Training will center around the work of physicists in a hospital radiology department; it will also provide a foundation for research or applications of radiological physics, radiation protection, and dosimetry. Applicants must have a bachelor's degree with a major or strong minor in physics.

Financial aid is available through a U.S. Public Health Service grant. Applicants must be U.S. citizens or have filed a declaration of intent. (W. Gross, 630 W. 168 St., New York 32)

A course on modern **industrial spectography** is scheduled for 15–26 July at Boston College. It is designed for chemists and physicists in industry, and will cover techniques of emission spectroscopy used in analytical work. (J. J. Devlin, S.J., Dept. of Physics, Boston College, Chestnut Hill 67, Mass.)

The biology department at Clark University and the electrical engineering department at Worcester Polytechnic Institute, Worcester, Mass., plan a cooperative **biomedical engineering** program beginning in September. The schools have established reciprocal policies on course credit, tuition, and enrollment prerequisites. Graduate students who emphasize engineering in their course work will receive the M.S. degree from W.P.I., while those who

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