Ethics Project Completes Report

Professional Ethics Activities in the Scientific and Engineering Societies, the result of an 18-month project, is now available to AAAS members and others.

The report of the AAAS Professional Ethics Project includes the results of a survey of professional ethics activities in the scientific and engineering societies affiliated with the Association, and a summary of a 2-day workshop which reviewed the role of professional societies in developing ethical rules for their members (see Science, 1 February 1980, pages 514 and 515; 7 September 1979, page 36; and 6 July 1979, page 989). The report and the AAAS Professional Ethics Project were funded by a grant from the National Science Foundation and the National Endowment for the Humanities. The report highlights selected ethics activities from 13 societies, including excerpts from ethical codes, procedures for investigating complaints, and hypothetical or actual cases involving ethical

More than 170 AAAS-affiliated scientific and engineering societies responded to the project survey which was conducted in June 1979. The report includes the following analysis of the survey findings:

- Forty-six societies, about 30 percent of the survey respondents, have adopted their own ethical rules of conduct, most commonly in the form of codes of ethics. Almost half of those societies represent the social and behavioral sciences and the medicine and health sciences.
- These 46 societies represent almost 1 million individual members. Additional societies reported that they subscribe to the rules of another society or that their members subscribe to the rules adopted by their primary profession. This combined figure indicates that a total of almost 1.5 million members of the responding societies are governed by some form of ethical rules.
- An additional 12 societies were considering the adoption of ethical rules at the time of the survey.
 - Fifty-four societies reported that

they have committees that are responsible for matters relating to professional ethics.

- Twenty-five percent of the respondent societies reported that their societies had received complaints involving matters of professional ethics.
- Less than half of the societies reported that they had sanction procedures available to enforce their ethical rules. An informal reprimand is the most frequently applied sanction.
- About 20 percent of the societies reported available procedures to support members who observed their ethical rules. Mediation and counseling are the most common forms.

The report was authored by project co-directors Rosemary Chalk, staff officer of the AAAS Committee on Scientific Freedom and Responsibility, and Mark S. Frankel, project director for the Center for the Study of Ethics in the Professions at the Illinois Institute of Technology, and project associate Sallie B. Chafer, policy analyst at the National Science Foundation. Members of the AAAS Committee on Scientific Freedom and Responsibility, chaired by John T. Edsall of Harvard University, served as an advisory group for the project.

The report concludes that there is little evidence of formal strategies for implementing or enforcing ethical rules in the scientific and engineering societies. The societies appear to share a common assumption that complaints involving ethical concerns or code violations should be handled in an informal and private manner. The project revealed much interest, but few visible programs in the professional societies directed toward encouraging attention to ethical concerns in science and technology.

Recommendations in the report include a suggestion that the societies distinguish between broadly defined ethical principles and more narrowly prescribed rules of conduct in their formal ethics statements. The report further recommends that the societies ensure that seri-

ous allegations of unprofessional conduct are handled in a manner that provides a fair review for all parties involved in the allegation.

The authors suggest that professional societies regularly review values important to their members' work, and coordinate their professional ethics activities to call attention to concerns that cut across disciplinary lines. Further research and the development of methods to collect data of significance to professional ethics concerns are also recommended.

Copies of the 224-page final report are available from the AAAS Product Sales Office at the AAAS address. The price of the report is \$4. Payment should accompany orders.

ROSEMARY A. CHALK Committee on Scientific Freedom and Responsibility

Environmental Science and Engineering Fellowships Announced

This year, AAAS in collabortion with the Environmental Protection Agency (EPA) initiated a program of six Environmental Science and Engineering Fellowships.

On 30 March 1981 the first six Fellows were competitively selected from a total field of about 50 applicants. They are Ann C. Hurley, Scripps Institution of Oceanography, University of California, San Diego; William W. L. Lee, Civil and Urban Engineering Department, University of Pennsylvania; Jennifer A. Logan, Department of Atmospheric Chemistry, Harvard University/Earth and Planetary Physics; G. Earl Peace, Jr., Department of Chemistry, College of the Holy Cross; James N. Seiber, Department of Environmental Toxicology, University of California, Davis; and Frances E. Sharples, Environmental Sciences Division, Oak Ridge National Laboratory.

During their 10-week fellowships, these men and women will assist EPA's Office of Strategic Assessment and Special Studies (OSASS) in its responsibility for identifying and assessing the significance of long-range environmental problems and opportunities. In addition, the program will enhance the ability of EPA to better communicate the results of its

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strategic assessments and studies outside the agency, and provide an additional outreach to the professional community concerned with such environmental problems.

AAAS will structure a 3- or 4-day orientation for the fellows with particular emphasis on environmental R&D and arrange for weekly seminars.

The selection committee for the program included: Roger Cortesi, associate deputy assistant administrator, Office of Health Research, EPA; Warren Easley, director, Regulatory Affairs, Monsanto Company: David Gushee, chief, Environmental and Natural Resources Division, Congressional Research Service, Library of Congress; William Moomaw, professor of chemistry, Williams College; Martha Sager, director, Environmental Systems Management Program, American University; Richard A. Scribner, manager, Science and Policy Programs, AAAS; Dennis Tirpak, director, Office of Exploratory Research, EPA; and Phyllis Windle, science and diplomacy fellow, Office of Environmental and Health, U.S. Department of State.

Puerto Rican Scientists Call for New Organization and Reforms in Science Education

At a recent meeting, Puerto Rican scientists and science students called for the creation of an organization to serve their interests and drafted recommendations for increasing their number and status in scientific, biomedical, and technical fields.

The meeting was held 22–24 April in Bethesda, Maryland, under the auspices of the AAAS and 12 institutes and divisions of the National Institutes of Health. Seventy-five Puerto Rican scientists, engineers, and students, mostly from the mainland United States, presented background papers, held work sessions on topics arranged by educational level, and heard panelists and speakers. The conference was chaired by S. Maria Hardy, physiologist, Louisiana State University at Shreveport, and chairperson, AAAS Committee on Opportunities in Science (OOS).

The conferees decried federal budget cuts which they perceived as conflicting with their goals. Among those cuts are: (i) proposals to eliminate the National Health Service Corps scholarship; (ii)



Mendez (left) and Raub at meeting of Puerto Rican scientists. [Photo Cesar Rodriguez]

proposed termination of National Science Foundation science education and research support for minority scientists; (iii) reductions in funding of the major NIH programs for minorities in biomedicine; and (iv) cuts in the Basic Educational Opportunity Grants.

Calling the distinction between mainland and island an artificial one, conferees called for much closer interaction and exchange through both formal and informal means. Puerto Rican scientists may work part of their professional lives in Puerto Rico and part on the mainland, so the meeting asked for a unified scientific association which includes both locations. However, on matters of education policy, inherent difference must be taken into account. For example, a resolution on bilingual instruction must note the native language.

Controversy surrounding the practice of "tracking" students by ability level, methods and objectives of organizing, and other topics surfaced during the meeting. The subject of statehood versus independence for the island was talked about among scientists between sessions but did not result in a formal resolution.

Recommendations which were endorsed included the following:

- 1) Materials should be produced which publicize the achievements of Puerto Rican scientists to encourage Puerto Rican students to think about such careers.
- 2) Wider dissemination should be made of traveling exhibits which offer students "hands on" experience in science to motivate them to pursue further study in technical fields.
 - 3) The director of Puerto Rican scien-

tists must be updated and computerized for use in role model projects, network creation, and peer review assignments by science agencies.

- 4) Career orientation programs should be initiated to brief Puerto Rican (and other) students on graduate school application, financial aid, and the availability of academic resources, and research opportunities for undergraduate students.
- 5) Student attendance at scientific meetings should be encouraged as a way to learn how scientists conduct their business and to establish contacts.
- 6) Churches, Puerto Rican clubs, and Spanish language media should be used to disseminate information about science and scientists.

The scientists decided to set up regional networks around the United States and on the island as a prelude to creating a national association, which might be formed next January at the AAAS meeting in Washington, D.C. Besides the island, regional centers are proposed for New York, California, the Rocky Mountains states, Boston, Philadelphia, and Washington, D.C., with possible future sites in Texas, the Southeast, and the Chicago area.

The Office of Opportunities in Science at AAAS will serve as "mailbox" for the regional groups until the national organization takes over the function.

Conference speakers included Major General Enrique Mendez, deputy surgeon general of the United States Army and currently the highest ranking Puerto Rican in the military. Mendez pointed to the positive effect of the long tradition of Hispanic culture in the United States and its notable absence from publications