Association Program Seeks Broader Awareness of Issues in Science, Arms Control, and National Security

In early December, more than 30 congressional staff will spend 2 days in plenary, round-table, and workshop sessions addressing difficult questions about arms control. The conference, part of a series of educational and interactive seminars on arms control and national security issues for members of Congress and their staff, is the direct result of a commitment by the AAAS to involve itself more actively in these critical questions.

The commitment began nearly 5 years ago when the Board of Directors and the Council decided that the AAAS should make a more concerted effort to enhance both scientists' and the public's understanding of technical and policy aspects of arms control and national security issues. To achieve this goal, the AAAS Committee on Science, Arms Control, and National Security was formed.

George Rathjens of Massachusetts Institute of Technology served as the Committee's first chair; Rodney Nichols of Rockefeller University currently chairs the Committee which is made up of 15 scientists and public policy experts with a particular expertise in the area of arms control. One exceptionally valuable member who was instrumental in the Committee's formation, Herbert "Pete" Scoville, Jr., died in August after a long battle with cancer. His efforts to alert the world to the dangers of nuclear war serve as a model of the scientist as public servant. (See *Science*, 11 October 1985, p. 125.)

The Committee's plan of action includes publishing monographs and books on key issues; holding symposia at Annual Meetings; conducting congressional seminars and other education programs; developing an arms control fellowship program for scientists; and holding an annual colloquium on science, technology, arms control, and national security.

As its initial project area, the Committee focused on an issue which is both technical and critical to progress in arms control—the verification of strategic nuclear arms control agreements. *The Verification Challenge: Problems and Promise of Strategic Nuclear Arms Control Verification* is the first full-length book published by the Committee. It covers the history, underlying principles, politics, and technology of verification, and examines past and current compliance controversies; the book includes a comprehensive glossary of verification terms. Two other publications are *Strategic Nuclear Arms Control and Verification Terms and Concepts: A Glossary* and *Strategic Nuclear Arms Control Verification: An Annotated Bibliography, 1977–1984*.

In addition, verification of arms control agreements was the topic of the Committee's first congressional seminar, held in February 1984. The seminars are designed to assist members of Congress and their staff in examining a broad range of viewpoints on a specific issue. In February 1985, another congressional seminar focused on the arms control implications of proceeding with the Strategic Defense Initiative. A monograph, *The Strategic Defense Initiative: Some Arms Control Implications*, was developed from that seminar. The publication has been praised as a concise and clear overview of the arms control issues surrounding the Strategic Defense Initiative.

"Preventing Nuclear War: Steps That Can Be Taken Now" was the topic of the third congressional seminar (September 1985). The "Steps" include crisis control centers, improvements in the hotline, better crisis preparedness, and avoiding provocative or destabilizing behavior. Two background papers—one surveying the reports summarizing these recommendations and studies on the subject and another by the Harvard University Avoiding Nuclear War Project summarizing their recommendations for action—are available from the Committee on request. Future plans include the sponsorship of two to three such seminars per year, with the next seminar scheduled for the spring of 1986. A presummit press briefing, cosponsored by the committee, *Science 85*, and the AAAS's Office of Communications, focused on arms control and U.S.–Soviet issues. Some 60 reporters attended the briefing.

The December retreat will be the Committee's first 2-day conference for congressional staff. Its focus is "Prospects for the Next Year in Arms Control." The program includes sessions on our current negotiating position, arms control and antisatellite weapons, compliance and verification issues, experiences in negotiating with the Soviets, and how the congressional agenda of arms control issues may shape up over the next year.

Since its founding in 1981, the Committee has sponsored eight to ten symposia at each AAAS Annual Meeting. A wide variety of timely issues discussed by experts have been featured at these sessions, including the effects of thermonuclear war, the Strategic Defense Initiative, verification, nonproliferation, and the comprehensive test ban. The Committee has used the Meeting to present an annual update on current arms control talks by top negotiators such as Ambassadors Rowny, Nitze, and Goodby. Audiotapes are available for all of the Committee's sessions.

Based largely on material contained in symposia at the 1985 Annual Meeting, an edited, half-hour educational videotape on the issue of vertification is in production. The videotape, designed as an instructional tool for colleges, universities, and civic groups, will feature arms control experts such as Herbert Scoville, Sidney Drell, Sidney Graybeal, and others. The instructional package will include the videotape, background material, and an instructor's guide. The videotape package will be available in March 1986.

Activities currently in the planning stage include an annual colloquium on science and arms control, tentatively scheduled for fall 1986; workshops focused on specific issues for discussion by scientific and other professionals; an

arms control policy fellowship program for scientists; and a book on the history, politics, and technology of a comprehensive test ban.

For more information on the Committee's activities and products, write to the Committee on Science, Arms Control, and National Security, at AAAS, 1333 H Street, NW, Washington, D.C. 20005.

RICHARD A. SCRIBNER
Committee on Science, Arms Control, and National Security

AAAS Board Visits China

Several members of the AAAS Board of Directors visited China late last summer, at the invitation of Professor Zhou Peiyuan, chairman of the China Association for Science and Technology (CAST). This was the first Board visit to China since 1978—shortly before the normalization of diplomatic relations between the United States and the People's Republic of China—and the delegation noted many significant changes.

President-elect Lawrence Bogorad headed the delegation which also included William T. Golden, Donald N. Langenberg, Dorothy Nelkin, Sheila E. Widnall, and Linda S. Wilson. J. Thomas Ratchford, associate executive officer and head, Office of International Science, was also in the delegation as was Lisbeth A. Levey, coordinator of the AAAS China Exchange Program. Accompanying the delegation were Rosalyn Bogorad, Patricia Langenberg, and William Widnall. The group visited Beijing, Xian, Shanghai, Guangzhou, and Shenzhen. In addition to meeting with government officials, researchers, and administrators, delegation members gave lectures in Beijing and Shanghai.

One of the highlights of the trip was a meeting with Premier Zhao Ziyang in Beijing. Premier Zhao received the delegation in the Zhongnanhai Compound, which he explained is sometimes called "the heart of power in China" because the offices of the Chinese Communist Party Central Committee are located on one side and those of the State Council are on the other. He said that he believes it is essential to establish the importance of science and technology (S&T) in the minds of the population and to effect a closer integration between S&T and economic development.

The first task, Zhao noted, was in large part accomplished at the 1978 National Science Congress; the second is now being addressed in the current S&T reforms and he delineated three types of S&T development: high technology, especially the development of information industries, appropriate technology for small and medium-size industries, and the introduction of technology reforms into the agricultural sector.

China's S&T reforms were the subject of a 2-hour meeting with Teng Teng, vice chairman of the State Science and Technology Commission. In outlining different types of programs to promote technology transfer, Teng contrasted "spark" programs, those aimed at developing appropriate technologies especially suited to the needs of small and medium-size firms in counties or townships with "torch" programs, those based on high technology at the national level. Teng also described China's S&T administrative funding processes, methods for supporting basic research, and procedures for employing Chinese students and scholars when they return to China from their studies abroad.

The delegation discussed recent reforms in higher education when they visited Qinghua University in Beijing, Fudan University in Shanghai, and Zhongshan University in Guangzhou (Canton). Many universities, such as Qinghua and Fudan, have opened consulting offices of their own and have begun a contract system for their staff. Qinghua was one of the first universities to institute teaching contracts. In the past, promotions were very difficult to arrange, in part because faculty members were reluctant to resign or retire and also because Ministry of Education approval was necessary at every level. Now Qinghua administrators have the autonomy to give promotions themselves and room to maneuver as well, for between 300 and 400 teachers from Qinghua have retired or moved to other positions since 1984.

Staff at the Shanghai Biochemistry Research Institute, affiliated with the Chinese Academy of Sciences (CAS), were able to give the delegation an idea of how S&T reforms will affect research institutes. The major change will be in the funding process. Until now, the CAS has supported its institutes entirely. This year, as part of an effort to reduce the number of unproductive institutes, their support dropped overall by 14.6 percent and the institutes were required to apply for grants and contracts to make up the difference.

Even on the basis of such a short visit, it is obvious that China is undergoing extraordinary changes that are transforming the rural and urban sectors and the bureaucracy at every level. One of the most striking differences, Board members observed, is one of attitude. Egalitarianism and the concept of "everyone eating from one big pot" are being replaced by a policy that rewards productivity and entrepreneurial behavior, whether it be from manual labor or brainpower. Although it is too soon to tell how successful the S&T management reforms will be, members of the delegation noted that it appears as if the country's leadership is moving ahead in a systematic and realistic manner. The sheer variety of these activities is noteworthy; contracts for university personnel, consulting, science foundations, technology transfer at different levels of sophistication, and special economic zones are but a few of the experiments the delegation encountered.

Nevertheless the success of the abovementioned programs will depend on the government's ability to resolve possible conflicts between basic and applied research priorities, enhance cooperation between research institutes and universities on the one hand and between research units and production enterprises on the other, ensure that funds (especially foreign currency) are not misused, and overcome popular and cadre distrust of scientists and other intellectuals. None of this will be easy, but Board members generally expressed the belief that the Chinese appear to recognize the complexity of the problems that confront them and what must be successfully solved if they are to achieve their goals.

A full trip report is available, free, by writing Lisbeth A. Levey, Executive Office, AAAS, 1333 H Street, NW, Washington, D.C. 20005.

LISBETH A. LEVEY
China Exchange Program

AAAS Participates in Tour of Central American Universities

This past August the Consejo Superior de Universidades Centroamericanas (Executive Council of Central American Universities) (CSUCA), an umbrella academic group based in San Jose, Costa Rica, hosted a tour of Central American public universities for U.S. academics and representatives of scientific and research groups. Among participants were Helen Safa, director, Center for Latin American Studies, University of Florida, and former president, Latin American Studies Association (LASA); and Kathie McCleskey, senior program associate, AAAS Committee of Scientific Freedom

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