AAAS Board Visit to China-

A Brief Report

The Board of Directors made a 3-week visit to the People's Republic of China (13 November to 3 December) as a AAAS international science initiative. Cities visited included Peking, Shanghai, Kweilin, and Canton. The visit was arranged through an exchange of letters which culminated in an invitation from the Scientific and Technical Association of the People's Republic of China (PRC). All Board members participated except Drs. Gifford, Mosteller, and Yang. The China initiative was in accord with the recommendations of the Committee on Future Directions concerning the importance of a wider role for AAAS in international science. It was the first time the Board of Directors, as a body, has participated in a new program initiative.

The Board substantially fulfilled its expectations for the visit to China.

1. The primary purpose of the trip was to develop a workable basis for cooperative exchanges between AAAS and its counterpart association in the PRC. The Scientific and Technical Association of the People's Republic of China (STAPRC) is a federation of some 64 scientific societies which is beginning again to hold annual and disciplinary meetings, publish scientific journals, and work toward the "popularization" of science. The visit was successful in producing a framework for such exchanges and agreement was reached on initial areas for cooperation in 1979 and 1980. The undertakings on AAAS's part reflect objectives in the AAAS Constitution, that is, to further the work of scientists, to facilitate cooperation among them, and to increase the public understanding of science.

At a special audience with Vice Premier Fang Yi (chairman of the State Commission for Science and Technology), a high-level approval was given to the principle of cooperative relationships on a people-to-people basis. We invited the Chinese to make a return visit to the United States, and they will send a substantial delegation here in May or June 1979. We offered to share AAAS publications and symposium reports and to include the Chinese as observers or participants in our annual meetings. The



AAAS Board members and Chinese hosts in the Great Hall of the People, Peking. Left to right, first row: Margaret McCormack, Mike McCormack, Kenneth Boulding, Chou Pei-yuan (acting head, STAPRC and president, University of Peking), Emilio Q. Daddario, Fang Yi (vice premier and chairman of the State Commission for Science and Technology), Edward E. David, Jr., Pei Li-sheng (vice chairman, STAPRC), Ann David, Russell W. Peterson, Lillian Peterson; second row: William Wight (AAAS), Philip H. Abelson, William D. Carey, Eloise E. Clark, Nancy David, Sybil Golden, William T. Golden, Madame Wong Cheng (responsible person, International Department, STAPRC); third row: Arleen Cummings, Martin M. Cummings, Neva Abelson, Renée C. Fox, Mary Margaret Carey, Su Hung (vice chairman, Scientific and Technical Association of Peking), Lu Ching-ting (responsible member, International Department, STAPRC); fourth row: Hsiong Chang-su (staff member, International Department, STAPRC), Wong Wen-chung (teacher, Peking #2, International Foreign Language Department—principal interpreter for trip).

Chinese asked AAAS to take a central role in persuading U.S. experts from academia and industry to go to China for extended lecture visits and in generating a cooperative project in the area of popularizing science and technology. Other possibilities to be pursued by correspondence include some joint activity in science education and a possible Sino-American symposium at the 1980 annual meeting.

2. The Board sought meetings with key figures in the PRC in areas of science, technology, and government to clarify China's intentions and priorities in modernizing science and technology.

This was accomplished with in-depth

meetings with such leaders as Fang Yi, Professor Chou Pei-yuan (acting head of STAPRC and president of Peking University), top officials of the Ministry of Education and the Academy of Sciences, and heads of universities and institutes concerned with basic and applied science.

All contacts and meetings with officials and scientists were extremely cordial; the Chinese were disarmingly frank in assessing the damage visited upon education and science between 1965 and 1975. Equally clear was the government's and Party's solid commitment to recovery and modernization of science, technology, and education and for a

Warren Weaver 1894-1978

Warren Weaver, former AAAS president and Board chairman, died 24 November 1978. At the time of his death, Weaver was consultant for scientific affairs at the Alfred P. Sloan Foundation.

A mathematician by training—Ph.D., University of Wisconsin—Weaver spent most of his career with philanthropic foundations. He was director for natural sciences (1932-55), vice president for natural and medical sciences (1955-59), and vice president (1959-64) of the Rockefeller Foundation.

Weaver also served as director for natural science at the General Education Board, 1932-37; chief, applied mathematics panel, 1943-46, and chairman, Naval Research Advisory Committee, 1946-47; member, National Science Board, 1956-60; member, National Advisory Cancer Council, 1957-60; and vice president, Sloan-Kettering Institute, 1958-59. He was instrumental in founding the Scientists Institute for Public Information and served as its director from 1963-67.

At its meeting in Houston, 3 January 1979, the Board adopted the following:

"Warren Weaver will be remembered for many reasons. He early understood how greatly the tools and techniques of physics and chemistry could advance knowledge of biological processes, and used his position in the Rockefeller Foundation to identify, support, and encourage the young scientists who years later earned Nobel Prizes and other honors for their contributions to genetics or molecular biology.

As a skilled interpreter of science, he helped many audiences to understand the sweep and nature of scientific work. His collaboration with Claude E. Shannon on *The Mathematical Theory of Communication* introduced scientists from a broad range of interests to the power and usefulness of communication theory. His deep personal commitment to improving the public understanding of science was honored in 1965 by award of the first Arches of Science Medal for outstanding contributions to the public understanding of the meaning of science to contemporary men and women, and in the same year by award of UNESCO's Kalinga Prize for distinguished contributions to the popular understanding of science.

Government, other foundations, and many scientific institutions and societies called upon him to fill posts of major responsibility. AAAS was fortunate to have him as President in 1954 and Chairman of the Board in 1955; as a member or chairman of numerous boards and committees; and as the primary author of the Arden House statement, a 1951 declaration of principle that has since served as value guide in setting the goals, the plans, and the procedures of the Association.

Be it resolved that the Board and Council of the American Association for the Advancement of Science record their lasting appreciation for his wise counsel and his versatile and farsighted leadership." strong Western connection to help bring them about. While a mere 3 weeks spent in a society as complex as China's is too short a time to produce strong conclusions, the evidence available indicated a decisive turn in China's internal and external policies for science, technology, and development.

3. The Board tried to get a clear understanding of institutional arrangements for policy-making in science and technology. The answers came in bits, for the most part. In important ways, the policy structure reflects the residual influence of the former Soviet presence with an interlocking apparatus in which the Party, the State Commission, the Academy, the ministries, and the provincial organs are all involved. Despite many signs of liberalization, the Party organs still provide the direction over research institutes, and scientists are required to be, in the words of Party Vice-Chairman Teng, "both red and expert." While the values of basic science are acknowledged at every level, expectations for benefits to defense, industry, and agriculture are very high. This may reflect a tilt in the early years toward emphasis on applied science and technological innovation.

4. We sought a broad and mixed view of the state of basic and applied research. It is very clear that the Chinese have pragmatic reasons for reentering the larger world of science and rebuilding both their laboratory competence and their science information resources. With occasional exceptions, the general impression was that both basic research and applied research must overcome a decade of neglect and disruption. The "needs" cover the whole spectrum: modern instruments, new equipment, replacement of facilities, contact with overseas scholarship and literature, higher standards of undergraduate and postgraduate education, replenishment of faculty, and foreign language capability. Where the Chinese appear to have an advantage is in combining traditional Chinese science with Western approaches to science, notably in such areas as health care and preventive strategies. With this, China has an impressive cohort of zealous and resourceful younger scientists who are now doing good work under Spartan conditions. As they get opportunities to study abroad, the prospect is that China may be less than one generation away from putting on a very good scientific show.

5. Because the education system is critical to the four modernizations (industry, agriculture, defense, and science and technology), and especially to progress in science, the Board made special efforts to look into this area. What we found was a universal recognition by the Chinese of the predicament confronting them in education. Universities had been shut down, postgraduate study stopped, libraries vandalized, and professors farmed out to hard labor in factories and the countryside. Foreign language teaching had been proscribed, and the flow of foreign literature and especially foreign communication had been effectively shut off. Today, the universities are reopened and students are being tested before admission. The quality of appointees to key university administrative and academic positions is impressive, and many of them are alumni and alumnae of American universities. Emphasis is being given to importing foreign experts for extended lecture tours and to arranging student exchanges. Language training is being speeded up, with emphasis on English. An impressive expansion program is in the works to multiply the number of universities while at the same time decentralizing science education to the factories and communes through what we would call outreach programs. Technical and vocational schools are on the drawing boards, and the plans envisage 2-year community colleges as well. In short, there is an explosive movement toward the creation of the infrastructure for development, limited in practical terms by problems of teacher quality and student quality. To fill these gaps, the Chinese are looking to overseas training to supplement domestic crash programs. Education in China at this point is a very serious business.

6. The Board members went to China expecting to be asked to give lectures. The Chinese had a great appetite for these lectures, and they were given to audiences varying in size from 50 to 500. The lectures traversed the gamut from industrial management and the U.S. science policy system to medical information networks, technology assessment, energy policy choices, scientific journal management, social sciences, the biological sciences, sociology of medicine, and roles of private hospitals in health care delivery. What were expected to be short lectures always took a full half-day as the Chinese pressed questions.

As evidenced by the responses generated by our lectures, throughout China Board members were struck by the keen interest in questions of science. It is obvious the Chinese have a long way to go to recoup the time and talent lost between 1965 and 1975, but the desire and 9 FEBRUARY 1979

Fourth Annual R&D Policy Colloquium

The fourth annual AAAS Research and Development Policy Colloquium will be held 19-20 June 1979 at the Mayflower Hotel in Washington, D.C. In addition to topics related to federal R&D, the FY 1980 budget, and R&D in industry and the economy, the program will include international aspects of R&D policy.

Research and Development: AAAS Report IV will be available in book form in time for the June 1979 Colloquium.

For further information, write to R&D Budget Project, Office of Public Sector Programs, at the AAAS address.

determination to reach parity in matters of science and technology are also clear.

Prognosis is risky, considering the modern history of the revolutionary movement in China, but on the evidence of a brief and strenuous visit it appears that the changes under way are widely supported by both policy and public opinion, and that in the decade ahead Chinese science will give a very good account of itself.

The cooperative arrangements agreed to by STAPRC and AAAS represent one step in many that the Chinese will take as normalization proceeds and the People's Republic of China goes about rebuilding its scientific capabilities.

> WILLIAM D. CAREY Executive Officer

AAAS Introduces New Life Insurance Program

This year AAAS is introducing a new membership benefit—a program of group term life insurance that has been developed especially for AAAS members and their families. The benefit is being offered in response to the expressed interest on the part of many AAAS members, who over the last several years have inquired about the availability of life insurance at attractive low group rates.

Some 2 years ago, the Board of Directors authorized an investigation into the possibility of making such a program available to members. After determining at an early stage that the services of a professional independent insurance administrator would prove essential in helping to provide this type of membership service, AAAS carefully examined more than a dozen administrators and interviewed some eight of them. Based on their experience, reputation, and client references, AAAS selected Association Consultants, Inc., of Chicago, to help develop and administer the program. They are operating under the general supervision of the AAAS Board, an insurance committee of the Board, and AAAS staff.

Also, as a part of this process, AAAS conducted a survey of a cross section of members, in which they were asked to indicate their professional interests, preferences about *Science*, comments on the annual meeting, and possible membership benefits that AAAS could offer in the future, including insurance protection. The response provided valuable information that will help in setting future editorial and management policies. In addition, it helped to determine just what type of insurance program would best suit members' interests and needs.

Using the information gained from the survey, AAAS developed specifications for the proposed insurance program and invited several of the major insurance carriers to submit proposals. After reviewing proposals from several insurance carriers, AAAS selected the program underwritten by Northwestern National Life Insurance Company and their subsidiary, the North Atlantic Life Insurance Company of America. Established in 1885, Northwestern National ranks in the top 2 percent by size of the more than 1800 U.S. life insurance companies.

The new Group Term Life Insurance Plan for AAAS members is uncomplicated and designed to accommodate the needs of the majority of the membership. Benefits of the program include:

• During the Open Charter Enrollment Period, all members under age 70 can apply for up to \$100,000 coverage.

• Also, during the Open Charter Enrollment Period, all eligible members under age 50 are guaranteed \$10,000 or \$20,000 coverage.

• Members can elect to insure their spouses for up to the same amount that they select for themselves.

• All dependent children between 14 days and 23 years of age may be insured for \$5000 each.

• At age 70 all insured members qualify for a paid-up benefit.

AAAS has established a special group