Article XIII, Section 2

Delete the Section and Section title as printed and substitute the following:

The Participating Organizations are:

(a) the Gordon Research Conferences (designated in 1955);

(b) the Scientific Manpower Commission (designated in 1972).

Add the following new article:

Article XVII

These Bylaws shall go into effect on January 15, 1973, with the exception that the present Council of the Association shall continue to serve until the new Council can be established and convened. The Board of Directors and the Committee on Council Affairs, as appropriate, shall be responsible for implementing these Bylaws.

Note: (1) To facilitate conversion of the Association's present addressing system to computer, letter designations of four section have been changed, as follows:

Section on Biological Sciences (from "FG" to "G")

Section on Psychology (from "I" to "J")

Section on Dentistry (from "Nd" to "R")

Section on Pharmaceutical Sciences (from "Np" to "S")

(2) An error appeared in the Bylaws as printed in the *AAAS Bulletin*:

Article VI, Section 1 (b)

Delete the Section as printed and substitute the following:

The Committee on Council Affairs shall consist of eleven members: the President; the President-Elect, who shall serve as chairman; the Executive Officer, who shall serve as secretary; and eight members elected from among and by the Council delegates, from slates presented by the Committee on Nominations, for two-year, renewable terms. The terms of four of the eight elected members shall expire on December 31 of each year.

(3) With the adoption of the Bylaws, Article XII of the Constitution went out of existence.

Report to the Association—1972

Mina Rees and William Bevan

Nineteen seventy-two was another busy year for the Association. It was a period of increased program initiatives on the part of the Board of Directors, its several committees, the Committee on Council Affairs, and the Central Office staff. Programs undertaken during the past several years were strengthened and expanded and new programs, consistent with the Objectives of the Association, initiated. The traditional committee studies, Council resolutions, and Board policy statements were increasingly supplemented by direct action programs. The Congressional Science Seminars, now in their 13th year, have recently been expanded into two series each year, fall and spring. *Science—A Process Approach*, a curriculum for the teaching of science in the elementary grades, is now used by some 90,000 teachers with 2.7 million students. The audiotape program, begun as a means of bringing some of the interesting sessions of the Annual Meeting to a wider audience, has become an exciting new educational and informational medium for the Association.

These and other developments have taken place at a time when the Association has faced an increasingly difficult financial environment. After 2 years of deficit operation, 1972 should end in the black. But federal policy to the contrary, operating costs continue to increase: for example, costs of postal services in 1972 were 33 percent higher than in 1970; printing has gone up 14 percent in the last 2 years; and telephone costs have increased in that time by 57 percent. We have gone to lighter weight paper and to a new printing process in order to effect savings, but the outlook is still for increased costs. It now costs $23.15 to put his weekly copy of *Science* into the hands of the individual member within the continental United States. Increased costs also reflect the increased complexities of operation that go along with greater size and multiple sources of funding.

Table 1. AAAS membership.

Changes during 1972		
New members		20,213
Losses		
Deaths	713	
Resignations	5,590	
Dropped for non-payment of dues	16,983	23,286
Net decrease during 1972		3,073
Totals as of 31 December 1972		
Annual members in good standing		117,365
Graduate student members		5,869
Life and emeritus members		4,168
Total active membership		127,402

Twenty years ago, about half of our income came from dues; in 1972 about one third came from this source. Increasingly we have sought grants and contracts from both public and private sources to carry out our programs. In 1970 there were 9 grants totaling $541,765; in 1972 there were 16 grants totaling $1,212,650. For the future, funding from extramural sources will have to be increased manyfold if we are to achieve the level and quality of programs that the Association's leaders are eager to attain. This year it is imperative that we appoint a Development Officer to coordinate our increased fund-raising efforts.

The increased number of federal and other external policies to which the Association's activities must conform have also made changes necessary. In 1971 we established an Affirmative Action policy and in 1972 an Office of Personnel Services to insure rational policy and uniform practice where our Central Office staff is concerned. It has also been necessary to increase the staff of the Accounting Office in order to accommodate the wide range of financial activities our programs now entail.

Perhaps at once the most dramatic index of institutional zeitgeist and a significant portent of things to come in the life of the Association are the changes in governance policy and practice now under way. Members will recall that at its 1971 meeting in Philadelphia the Council adopted a new constitution without dissenting vote. During 1972 the Committee on Council Affairs worked diligently to prepare an accompanying set of bylaws, which were presented to and approved by Council at its 1972 meeting. With the

institution of these governance instruments, the Association will have taken a major step toward becoming a genuine membership organization. Last year for the first time in the modern history of the Association, the president-elect and members of the Board of Directors were elected by the membership at large. This year the membership of Council will be established in the same fashion. Under the new governance policies, any member will be eligible for nomination to any elective office of the Association, a right heretofore enjoyed only by fellows. And, of course, the Council, which will be only about 20 percent the size of the present Council, may be expected to assume an increasingly fruitful role in Association affairs.

Some Vital and Other Statistics

Membership reached a peak of 133,364 in 1970; 1971 saw a drop to 130,475. In 1972, despite an increased recruitment effort, membership continued to decline. At the end of December, it was 127,402 (see Table 1). However, some encouragement may be drawn from the fact that following a drop of some 6,000 in the early months following the Annual Meeting and the crisis in scientific employment, there was a partial comeback over the course of the year.

The budget for 1973, approved by the Board of Directors at its meeting on 27 December, is given in Table 2. A projected deficit for the year is accounted for by several prominent factors. First, there will be no Annual Meeting in 1973. Thus, $100,000 ordinarily found on the income side is absent, although staff and other costs incident to the planning of the late winter 1974 meeting necessarily continue. Second, the programs of the Association have grown, under Board and Council direction, until significant additional space has had to be sought.

The present headquarters building at 1515 Massachusetts Avenue, with its 15,000 net usable square feet, was opened when membership was about two fifths our current size and our programs were more limited in size and scope. To accommodate our present commitments, we have acquired additional space at 1444 N Street, NW, and 1776 Massachusetts Avenue. It is imperative that a more satisfactory manner of accommodating our space needs for the next decade than the accumulation of rental space be found, and the Board has the matter under active study at present.

Similarly, we must transfer our large membership record and circulation control systems from their present form to more efficient and flexible computer routines, and this entails transition costs of about $85,000.

Finally, the formalization of our personnel procedures, in the light of our staff growth and federal Affirmative Action policy, has resulted in a program to rationalize our compensation schedules at an estimated cost of $120,000, with adjustment scheduled over the next 3 years.

AAAS and Furthering the Work of Scientists

The Association, during its long history, has continued to give attention to furthering the work of scientists and facilitating cooperation among them. A major focus of the editorial program of *Science* magazine is directed toward this end. The staff responsible for Research News has been expanded from one to four and the number of pages devoted to this feature increased from 58 in 1971 to 124 in 1972.

The Annual Meeting continues to include, to a large extent, programs that are directed toward the scholarly interests of scientists, with special emphasis on those of interdisciplinary character. More than 50 percent of the offerings at the 1972 meeting may be said to be of this character. Similarly, the audiotape offerings from the Annual Meeting continue to reach an ever-widening segment of the scientific and professional community. And in 1973 the Association will offer audiotapes prepared from the offerings of the XIVth General Assembly of the International Union of Pure and Applied Physics which was held in Washington, D.C., last September. A new book on *Polar Deserts* has been prepared by the Committee on Arid Lands.

Intimately connected to its commitment to science is a necessary interest in the careers of scientists. Concern for the employment crisis of engineers and industrially based scientists, for the placement of newly graduated Ph.D.'s, and for the career development of women scientists and scientists from the ethnic minorities, all matters that have demanded greater attention in recent months, have eventuated in the establishment within the Central Office of an Office of Opportunities in Science.

In addition, by vote of Board and Council, the Scientific Manpower Commission has become a participating organization of AAAS, and its professional staff has taken up residence at 1776 Massachusetts Avenue, where it will have the opportunity to work closely not only with the staff of the Office of Opportunities in Science but also with other AAAS departments. The Commission, under the directorship of Mrs. Betty Vetter, publishes the very useful journal *Manpower Comments*; career guidance materials including *Search*, now in its seventh edition; and the widely valued *Salaries of Scientists, Engineers, Technicians*, now in its sixth edition. At present, the Commission is directing special attention to questions of minorities and women in science, at the several stages of career development.

AAAS and the Public Understanding of Science

Circumstances of the past several years have made this objective of the Association a catchphrase in the scientific community and have forced the realization that it is a necessary prerequisite to both the furthering of the work of scientists and the promotion of human welfare through science. Accordingly, in 1970 the Association undertook to invigorate and expand its commitment to this goal. The Annual Meeting is increasingly an eloquent testimony to this commitment. The program of the 1972 meeting included discussions of ethical, legal, and social issues in behavior control; genetics and society; changing the weather; interdisciplinary approaches to community mental health; the relation of science, government, and the public in oceans policy-making; the Alaskan pipeline decision; and science on television, to mention only a few. In addition, the Association replaced its traditional commercial exhibit with an experiment in regional information exchange. Titled "Capital City Readout," it concentrated on the Washington metropolitan area and consisted of exhibits prepared by more than 40 organizations—federal government, D.C. government, universities, hospitals, corporations, nonprofit organizations, and citizen groups—which described how each perceives an

important problem facing the Washington, D.C., area and its possible solution.

Television continued to be very much a part of the meeting, with four hour-long presentations in color concerned with child development, prisons, human genetics, and space research, respectively. National Public Radio gave in-depth coverage to the meeting sessions. After each Annual Meeting, the television programs are transferred to film and are made available at cost, on a rental basis, to schools, colleges, laboratories, corporations, and community groups. They are very much in demand.

In 1972 a special audiotape program, "Speaking of Science," was introduced. It consists of 12 ½-hour discussions with distinguished scientists on a wide range of topics in science as well as in the area that combines science and social issues. In addition, the Association, in cooperation with the Corporation for Public Broadcasting, is carrying out a year-long study of science for television. The study, under the directorship of Michael Ambrosino of Station WGBH, Boston, will eventuate in comprehensive recommendations for programming policy and practice and a set of pilot films that reflect these policies.

The Association is now planning a new publication, *Science and the Media*, a critical review of science coverage in the press and other media for writers, editors, producers, and publishers, and is planning a series of workshops for this same audience. The AAAS Congressional Science Seminars, as noted earlier, were expanded to a full-year program in 1971, and proposals were made last year to extend the format, adapted to ad hoc problem-solving, to include officials in local government.

It is important that we acknowledge that these new program developments have been made possible by a major grant from the National Science Foundation and increasingly encouraging support from private foundations and other sources.

Table 2. AAAS budget for 1973.

Revenue	
Dues of annual members	$2,045,000
Nonmember subscriptions	570,000
Subscriptions: *Science Books*	50,000
Advertising in *Science*	2,500,000
Sales	
Symposium volumes	55,000
Reprints from *Science*	125,000
Back issues of *Science*	12,000
Binders and emblems	7,000
Book lists	40,000
Audiotapes	75,000
Speaking of Science	40,000
Film rental	3,000
Membership lists	25,000
Rental receipts	10,000
Royalties	20,000
Contributions	10,000
Receipts from grants	
Direct costs	1,170,000
Indirect costs	120,000
Investment income	
Dividends and interest	210,000
Other income	5,000
Total revenue	$7,092,000
Expenses	
Administration (Executive Office)	
Staff	$ 129,050
Operations	32,000
Board of Directors	15,000
Personnel Office	26,000
AAAS sections	24,500
Committees	
Council Affairs	2,500
Nominations	35,000
Arid Lands	2,000
Scientific Freedom and Responsibility	2,000
Science and Public Policy	12,500
Support of Scientific Research	5,000
Science seminars	6,000
AAAS divisions	24,000
Scientific Manpower Commission	25,000
Discretionary funds	5,000
Contingencies	15,000
Total—Administration	$ 360,550
Business Office	
General staff	$ 183,300
General operations	47,500
Member recruitment	
Staff	37,200
Operations	127,500
Member records	
Staff	69,000
Operations	11,000
Addressing	
Staff	44,000
Operations	10,000
Sales	
Staff	28,650
Operations	6,000
Building maintenance and expense	
Staff	35,000
Operations	164,800
Depreciation of building and equipment	49,000
Emblems and binders	5,000
MISCO computer service	128,500
Total—Business Office	$ 946,450
Science	
General staff	$ 430,000
General operations	79,000
News and Comment	
Staff	142,000
Operations	33,500
Research News	
Staff	71,000
Operations	15,000
Printing and mailing of *Science*	2,275,000
Guide to Scientific Instruments	
Staff	25,000
Operations	18,000
Printing and mailing	105,000
Reprints	
Staff	16,500
Operations	1,500
Printing	55,000
Advertising—cost of sales	625,000
Total—*Science*	$3,891,500
Communications	
General staff	$ 118,750
General operations	19,000
Sales promotion	25,000
Committees	
Public Understanding of Science	4,000
Publications	900
Annual Meeting	
Television broadcasts	5,000
Press service	12,400
Program	2,000
Science Film Theatre	1,000
Symposium volumes	30,000
Science Books	39,500
Book lists	17,500
AAAS Bulletin	40,000
Audiotapes	44,000
Speaking of Science	18,750
Exhibits	3,000
Libraries	4,250
Public information	5,000
NSF program	
Staff	90,200
Operations	106,000
AAAS-Westinghouse awards	13,000
Total—Communications	$ 599,250
Education	
General staff	$ 106,450
General operations	48,000
Science—A Process Approach	
Staff	135,000
Operations	15,000
Chautauqua courses	
Staff	63,150
Operations	494,200
International Clearinghouse of Information	15,000
AAAS-Znaniye exchange	
Staff	1,900
Operations	8,000
Association of Academies	2,000
Science Education News	4,800
Total—Education	$ 893,500
Annual Meetings	
Staff	$ 68,000
Operations	24,000
Committee on Meetings	5,000
Total—Annual Meetings	$ 97,000
Science and Society	
Staff	$ 53,700
Operations	5,000
Committees	
Environmental Alterations	22,000
Science in the Promotion of Human Welfare	8,500
Industry, Technology, and Society	9,200
Regional Centers—Planning	25,000
Total—Science and Society	$ 123,400
Office of Opportunities in Science	
Staff	$ 33,000
Operations	7,000
Committee on Opportunities in Science	10,000
Total—Office of Opportunities in Science	$ 50,000
Provision for payroll increase	$ 128,000
Total expenses	$7,089,650
Net budgeted revenue	$ 2,350
Extra-budgetary item	
Mexico City meeting	122,000
Net expense	$ 119,650

AAAS and Science in the Promotion of Human Welfare

A variety of activities during 1972 have reflected the Association's concern for the uses of science in the promotion of human welfare. The Committee on Arid Lands issued a position paper on water importation in February and has one on off-road vehicles approaching final draft. It participated in the preparation of a book on *Food, Fiber, and the Arid Lands*, recently published by the University of Arizona Press. The Committee on Environmental Alterations has completed the first draft of its extensive 2-year study of electric power consumption in the United States and its implications for the future. It expects to issue the document this year.

Revision of *Science—A Process Approach* was begun during 1972 and the Chautauqua-type short course program for college teachers of science expanded to ten courses at each of 12 centers throughout the country. Some 3000 science teachers are now participating. The third edition of *Science for Society*, a bibliography of some 4000 books and articles, most of which were published within the previous year, was issued last summer and a fourth edition is under way. We anticipate that some 15,000 copies of the third edition will be sold.

The Committee on Science in the Promotion of Human Welfare initiated two programs during the year: an examination of the problem of educating health-care professionals and a study of the role of organizational structure in facilitating the applications of science and technology to societal problems. The Committee on Industry, Technology, and Society was organized and is directing its attention to the public understanding of technology and toward developing strategies for involving the scientific and technological community, through its professional associations, in assisting Congress in matters to which science and technology are relevant, and in creating a climate in which the evolution of a national policy on industrial technology becomes possible.

A major step toward the further involvement of the Association in the area of science and public policy was made last year when the Board approved a proposal that the Science and Public Policy Studies Group become a committee of AAAS. A university-oriented organization involving some 90 institutional groups, the Studies Group has been headquartered at the Massachusetts Institute of Technology. It arranges sessions on science and public policy topics at the meetings of various professional and scientific societies, develops bibliographies and curricular services for the field, organizes special meetings on particular subjects, operates a job exchange, and publishes a newsletter. Sometime this year it will shift its base to the Association's Central Office.

AAAS and International Science

Several events during 1972 reflect the Association's growing interest in international science. Planning for the special meeting, "Science and Man in the Americas," to be held in Mexico City, 20 June to 4 July 1973, has moved to its final phase. The meeting, cosponsored by AAAS and the Council of Science and Technology of Mexico (CONACYT), will involve participants from throughout the Western Hemisphere. Concerned primarily with the applications of science and technology to Latin American development, it is conceived of as a people-to-people effort at communication and understanding, and, if successful, can have great impact on the sense of community among scientists and engineers of the Americas as well as on essential inter-American cooperation.

The previously announced exchange of lecturers with Znaniye, the Russian approximate counterpart of AAAS, has been inaugurated. The first four U.S. visiting scientists, who will lecture to both scientific and lay audiences, are Melvin Calvin, University of California, Berkeley; Anton Lang, Atomic Energy Plant Research Laboratory, Michigan State University; David Grant, Department of Psychology, University of Wisconsin; and Frederick Doyle, U.S. Geological Survey.

Members of the Committee on Arid Lands are assisting the American Academy of Arts and Sciences, in cooperation with the government of Iran, to plan an International Arid Lands Institute to be located in Iran. The Association has also accepted the invitation of the Rockefeller Foundation to cosponsor an International Arid Lands Conference in Abu Dhabi this year.

Finally, a grant from the Rockefeller Foundation will make possible a year-long planning study of possible AAAS roles and organizational mechanisms in international science.

AAAS and the Future: Arden House II

In 1951, the Association's Board of Directors, along with several consultants, met at Arden House in Harriman, New York, to reassess the roles and functions of the AAAS. From those discussions came the conviction that the Association was uniquely constituted to concern itself with community-building within science and within the larger context of the whole society. From this vision has come the expansion of *Science* magazine from a journal of scientific research reports to a general review of science in all its aspects as an intellectual enterprise and a social institution, has come the transformation of the Annual Meeting from a composite of special-interest technical sessions to a major vehicle for communication across disciplinary lines and for the engagement of problems that involve the public in its several sectors, has come the tradition of in-depth study of major science and societal issues, and has come our interest in science education and the press, radio, and television.

Two decades have passed since the Arden House Conference, and it is now time to assess again the Association's goals and priorities. Accordingly, the Board of Directors has begun the planning of a sequel to the Arden House conference, to be held this fall. By way of preparation, a full day of papers and open-ended discussion was planned for the Washington meeting. A series of editorials for *Science* over the course of the next 9 months and a series of position papers on important aspects of Association function are now being planned as source materials for the conference participants. The Board will continue to seek in as many ways as possible the views of the membership at large as it confronts its important task in the months ahead.