1982 Annual Report of the Executive Officer

William D. Carey

From the perspective of the AAAS, 1982 was a good year, if less than of vintage quality. On the upside, the Association was robust and stable in its vital signs—membership, publishing programs, vigorous *pro bono* service by its members, cooperative ventures with affiliated societies, growing international initiatives, effective public policy activities, promising interventions for science and mathematics education, and timely monitoring of human rights problems throughout the world of science. On the downside, the troubled national economy bit into the Association's revenue expectations and led to an unwanted, though manageable, budget shortfall. More serious, however, was the emergence of a deep shadow over the open practices of scientific communication and discourse in unclassified research, arising from successive restraints and interventions by federal agencies aimed at preventing foreign powers from garnering U.S.-generated scientific and technical information of possible security value. The government's own spectacular budget deficits, both actual and projected, operated to severely curtail research and training opportunities in some fields, while on the other hand there emerged a distinctly favorable Administration commitment to the advancement of basic scientific research and to the stimulation of economic recovery and technological innovation through off-budget incentives. Ambiguous as the state of the U.S. research enterprise may seem in 1982, it still bears no comparison with the lot of developing nations clinging to the fringes of scientific and technical progress and taking last place in the priorities of the advanced nations.

Highlights of the AAAS's year include:

- The National Magazine Award for General Excellence, plus a dozen art awards, to *Science 81;*
- The George Polk Award in Journalism to *Science* for excellence in its News and Comment, together with the Science-in-Society Journalism Award to R. Jeffrey Smith by the National Association of Science Writers for a series on the MX missile;
- A highly successful Annual Meeting in Washington, D.C., in January 1982, with a total attendance of 8000, including 2000 high school students and 800 science writers and reporters;
- Two major multi-year grants to the AAAS from Phillips Petroleum Company and Standard Oil of Ohio, in support of precollege science and mathematics education;
- Formation of a Coalition for Education in the Sciences, comprised of some 60 affiliated societies;
- A seventh annual Colloquium on R & D in the Federal Budget, held in June in Washington, D.C., based on the AAAS Budget Report authored by Willis Shapley, Albert Teich, and Jill Weinberg;
- A daily radio science program, *Report on Science*, entered its second year, coproduced by the AAAS and the CBS Radio Stations News Service and heard by an estimated audience exceeding 5 million;
- Our Regional Divisions (Arctic, Pacific, and Southwestern and Rocky Mountain) continued to reflect credit on the AAAS through lively and well-attended annual scientific meetings and impressive professional publications;
- A pilot publishing agreement with Charles Scribner's Sons for co-publishing of AAAS books based on materials from *Science 82;*
- Congressional seminars on "Black Youth Unemployment" and "Our Nation's Children," with a combined attendance of 325;
- Congressional testimony by Board Chairman, D. Allan Bromley, President E. Margaret Burbidge, and Executive Officer William D. Carey on federal funding for science and technology;
- Vigorous AAAS challenges to escalating government policies and actions to constrain open scientific communication in fields of unclassified research;
- The formulation of a substantial set of activities to focus the resources of AAAS in exploring and fostering effective approaches to the control of nuclear weapons and other pressing national security concerns;
- Establishment of a network of organizations concerned with increasing the participation of women and minorities in science;
- With financial support from the National Science Foundation, successful workshops in three cities on applications of science and technology for the physically handicapped, concluding with a major conference cosponsored by the Senate Committee on Labor and Human Resources, the House Committee on Science, Research and Technology, the Congressional Office of Technology Assessment, the President's Committee to Employ the Handicapped, the Rehabilitation Engineering Center of the University of Virginia, and the AAAS;
- International cooperative projects increased as the 80-member AAAS Consortium of Affiliates for International Programs hit its stride. The Western Hemisphere Cooperation project held symposia on biofuels and science education, and undertook an Interciencia Bioresources Program with funding from the Inter-American Development Bank. A 2-year project on methods of measuring and evaluating ecosystems approached completion, under contract with the U.S. National Park Service and funded by the Agency for International Development. AAAS exchanges of delegations with the People's Republic of China continued successfully. A major event in 1982 was Indian Prime Minister Indira Gandhi's appearance to address a large meeting of scientists which was convened by the AAAS. Under the auspices of the AAAS Climate Project, an international conference was held on the direct effects on plants of rising levels of atmospheric carbon dioxide;
- The report of the AAAS Five-Year Outlook Project, supervised by the AAAS Committee on Science, Engineering, and Public Policy, was published by the Government Printing Office as part of the NSF's second *Five-Year Outlook* and subsequently by Westview Press as *Science, Technology, and the Issues of the Eighties: Policy Outlook;*
- Under the joint AAAS–American

Association of Science–Technology Centers project, more than 1000 AAAS volunteers are involved with six science museums (Atlanta, Chicago, Detroit, New York, North Carolina, and the District of Columbia) in public outreach programs.

Two years ago, the Board and Council committed the AAAS to a long-term effort to fight the decline of science and mathematics education. Under the leadership of F. James Rutherford as our Chief Education Officer, initial emphasis went to defining AAAS's focus, which we believe is at the precollege level, and to searching for substantial nongovernment funding to sustain a long-term strategy. With the generous responses from the Phillips Petroleum Company and the Standard Oil Company of Ohio (SOHIO), and building upon existing AAAS strengths, we are now prepared to launch work on several fronts. The Phillips Petroleum Company's grant supports a mathematics education project, *Challenge of the Unknown*, in developing resource materials to help middle-grade teachers enliven and enrich mathematics learning through the use of films, publications, and computers. Funded by the SOHIO grant, the AAAS will produce a continuing stream of materials for improving the quality of science education in junior high schools. Other funds being sought would support community-based continuing professional education involving scientists and engineers for persons of all ages and utilizing science museums, local libraries, youth organizations, and adult forums. AAAS is not underestimating the scope and difficulties of its education agenda, nor do we look for quick results. Tough work lies ahead, but so does accomplishment.

The AAAS's center of gravity is located in its communications functions. *Science*, the flagship journal, coheres the membership of the Association and serves both to chronicle the advances in science and to keep the scientific community abreast of developments, good and bad, which condition the environment of science. Our new general-audience magazine, *Science 83*, provides needed outreach to an educated but mainly nonscientist readership, and with the completion of its third anniversary issue with a stable circulation of 700,000, we can consider it "normalized" as an activity of the AAAS. With the two publications accounting for about 75 percent of our expenditure budget and the bulk of our income, the well-being of our publishing operations takes first place in priorities. We owe much to the editors and staffs of *Science*, *Science 82*, and *Science Books and Films*, as well as the authors and volunteer reviewers on whom we depend for content and quality control.

It needs to be said, in passing, that journal and magazine publishing is a costly affair and promises to be even more so. It is extremely sensitive to inflationary pressures and, as we have come to find out, to rocketing postal rate increases. These factors are beyond our control, and they threaten the future of scientific and technical journals across the entire spectrum of disciplines and societies. As the federal government's budget deficits approach disaster proportions, what remains of the beneficial "revenue foregone" postal appropriation is melting rapidly, posing severe dilemmas for nonprofit organizations already buffeted by the ailing economy. Lacking the cushion of endowments for the most part, nonprofit organizations have no real choice but to protect their liquidity by increasing dues and charges.

Grants and contributions from corporations and foundations amount to 6 percent of revenues. Government grants and contracts play a smaller role in the operations of this Association, and in 1982 they represented only 2 percent of gross revenues. Although federal funding makes a real difference in our ability to conduct such important programs as those dealing with the improvement of career opportunities for minorities, women, and the physically handicapped, together with environmental concerns, the fact is that the AAAS has not been compulsively addicted to federal funds for two good reasons: the necessity to preserve the independence of the Association and the obvious instabilities of government budgets from one year to the next. One of the most encouraging happenings of 1982, from our viewpoint, has been industry's willingness to give generously and without strings in support of the AAAS's efforts for science and mathematics education.

The "independence" of the AAAS deserves a few further words. If we were hampered by obligations, economic or ideological, the Association's positions

Table 1. Summary budget for 1983

Major category of revenue	1983 revenue budget	Office/Center	AAAS funds	Direct grant and contract funds	1983 expense budget
Revenue (in thousands)		Expense (in thousands)			
Dues of annual members	$ 6,395	Executive Office	$ 908	$	$ 908
Institutional subscriptions (*Science*)	2,040	Office of Administration	2,655		2,655
Science 83 circulation	7,573	Office of Comptroller	572		572
Advertising in *Science*	5,950	Office of Communications and Membership	1,176	21	1,197
Advertising in *Science 83*	5,330	Office of Development	345		345
Grant and contract funds	3,081	Office of Information Systems and Services	247		247
Product sales	1,515	Editorial Center—*Science*	8,885		8,885
Investment income	1,000	Editorial Center—*Science 83*	12,630		12,630
Annual meeting registration and exposition	237	Meetings and Publications Center	860		860
Contributions and other items	230	Programs Center	1,142	2,960	4,102
Total	$33,351	Contingency Reserves	700		700
		Total expense	30,120	2,981	33,101
		Unexpended operating balance	250		250
		Total	$30,370	$2,981	$33,351

on issues germane to the advancement of science inevitably would be qualified. Depending upon what the particular question may be at a given time, the Board or Council must have the freedom to be in support or in opposition to public or private policy trends involving science and technology and their societal impacts. In the same way, the editorial orientations of our journal and our magazine should be constrained only by the dictates of responsibility, accuracy, balance, and professional ethics. Independence does not, in any case, translate to rashness or arrogance, and certainly not to partisanship or single-issue monomania. It may be worth observing that independence sometimes comes at a high price. AAAS's policy of excluding cigarette advertising from the pages of *Science 82* waves off upward of $1 million in revenues annually, a sacrifice not generally shared by competing commercially sponsored science magazines.

While the financial facts of life dictate lean standards of living for the AAAS, we have been able to avert staff layoffs and program terminations in 1982. Damage control is exercised through employment ceilings, cost reductions in publishing operations, and other management controls. As a result, the AAAS has been able to sustain undiminished momentum in its operating programs. I have already reported the support received from corporate and governmental sources, but members' dues and voluntary contributions furnish the critical base upon which our activities stand or fall. The result is an array of activities that can only be called impressive: strong and viable publications, lively cooperation with affiliated scientific organizations, vigorous science policy initiatives, high visibility in the area of scientific freedom and human rights, a growing capability to illuminate the issues of national security and arms control, striking leadership in relation to opportunities in science for minorities and the handicapped, significant contributions to environmental management, an enviable capacity to untangle and analyze the federal budget process as it affects research and development, fellowship programs to enhance the technical resources of the Congress and the media, and a fast-developing set of initiatives to remedy the deficiencies in science and mathematics education. In all of this, good performance must be credited to able and hardworking staff with the guidance of the Board and the generously given involvement of AAAS members in program-related sectional, divisional, and standing committee activities. The budget (Table 1) does not reflect the economic value of this extensive voluntary service to the AAAS, for which we are immensely indebted.

If this recitation seems unduly upbeat, it can be balanced with the identification of some problems facing the Association. First, as noted, we are not flush with money, and the erratic national economy, coupled with further prospective shocks in the form of postal rate hikes, places a burden on our financial structure. Second, our real estate problem remains acute as we operate from four separate locations in Washington, while an affordable solution remains elusive at this writing. Third, the constitutional reforms adopted in 1973 which created a complex and expensive electoral process call for reassessment and simplification. Fourth, the architecture of our Section structure presents obvious anomalies, together with gaps, and we have not addressed the problem. Finally, the fact that we have a formidable set of activities that address a whole array of problems that matter greatly to the health and progress of science cannot mask the equally evident fact that these problems will be with us for a long time to come and are resistant to our best efforts. We face 1983, then, with a mixture of confidence and realism.