

editorial

From anti-science to pro-science

One bit of encouraging news we can welcome in the middle of the hot summer is the report by social scientist Amitai Etzioni and Clyde Nunn that public confidence in science seems to be taking an upswing. In a paper appearing in the summer issue of *Daedalus* devoted to public appreciation of science, the authors review responses to public-opinion polls in recent years and report that whereas in 1966 56% of the public expressed a "great deal of confidence in science," this figure fell to a low of 32% in 1971 but has since risen to 37% in 1973. Moreover, although in both 1966 and 1971 science ranked only fifth in public confidence among institutions ranging from the military to religion, in 1973 science has moved up to a second-place tie with education (medicine remains in first place).

Perhaps the most important point is the conclusion by Etzioni and Nunn that the marked dip in public confidence in science was part of a much broader reaction of public feeling against authority in general and not specifically towards science. In fact confidence in science suffered a more moderate decline and has shown a better recovery than confidence in institutions such as the military and business corporations.

Does this mean that we can relax about the problem of the public understanding of science? No, say Etzioni and Nunn. It would appear that at a confidence level of 37%, the problem of public understanding of science is a middle-sized one for which effective action might be possible (as opposed to a drastic disaffection which might be hopeless to reverse). They observe, "The scientific enterprise seems to be in a state where it could benefit from a major effort to broaden and deepen the public's understanding of science. Of all American institutions, science seems to be the least understood by the wider public. And spreading science information and educating various publics to its values seem to be relatively effective in improving attitudes toward science. Therefore, a major campaign to inform and educate the public would yield more understanding and support than such campaigns usually yield."

That increased public understanding is highly desirable is no longer a subject of debate among scientists. It is clear that the various scientific disciplines can not continue to flourish and make their unique contributions to our society unless they are assured of continued (or in some instances expanded) support from public funds. In the end such assurances will depend upon public understanding.

Organizations, such as the American Institute of Physics, which represent the various disciplines have over the last several years been working hard at fostering public understanding and it is tempting to believe that the slight upswing observed by Etzioni and Nunn might be to some extent a response to these efforts. However, a "major campaign"—say an order of magnitude greater than the sciences are now conducting with their own resources—will require federal funds.

The largest government investment so far in this area is the AAAS program in public understanding supported in part by a three-year NSF grant of about \$500 000. The first phase of this program, now in its third and final year, was intended as a pioneering effort to foster understanding of science as a whole and has resulted in a development of a number of promising approaches, including television programs, the development of audiotape materials for use in schools and colleges, the establishment of mass-media summer intern programs for science and social-science graduate students and the organization of community seminars. The logical next phase of the program would be to expand this pioneering effort with a much larger program that would set into motion on a steady-state basis the various approaches that have been developed. Any such effort would have to involve the strong support of all of the scientific disciplines, and we would suggest that it is not too soon for the leaders of the various professional societies to begin thinking about how they could work together to formulate a major program in public understanding of science as a whole and argue for its support by the government.

Beyond any such large-scale institutional efforts, there are new opportunities coming up for physicists to contribute in this area on an individual basis. One of the best ways to foster public understanding is to be able to point to and explain the contributions of scientists working in the Washington limelight on problems of direct national interest. The recently funded Office of Technology Assessment (see page 61) in its anticipated hiring of consultants and letting of research contracts will provide new opportunities for the public to see physicists in the kind of role. We have previously explored similar opportunities on both the local and national levels in our special issue on Public Interest Science in June.

As a means of helping public understanding on the home-town level, the Division of Public Relations at AIP is thinking of ways to encourage physicists to make contacts with the programs managers of their local television stations. These stations have to continually provide their own programming for some fraction of their broadcast time and many would welcome the idea of physicists or other scientists appearing on this non-prime time to talk about their research activities or provide interpretations of major scientific events.

It is good to hear that the general public may not be as anti-science as we had thought, but we can hardly claim that the general public is pro-science either. Now is the time for vigorous efforts that will educate the public to the point where we can make that claim.

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