

The Choice for Scientists and for Society

Our political system is currently in a state of flux. Faith in institutions and faith in progress are on the decline. Yet for many the disillusionment is accompanied by a deepened understanding of the importance of the fundamental democratic processes and has led to a new political activism. Only time will tell whether the signs of decay or those of renewal more accurately portend the future.

The manner in which technology is exploited—for whose benefit? at whose expense?—will substantially influence this future. And the case studies in this book show that the ways in which scientists inject information into the decision-making process will to a large extent determine whether future policy making for technology will be made in a secret totalitarian manner or in an open democratic one. Only individual scientists can equip concerned citizens with the information and confidence which they need to answer the government's constant challenge: We have our experts; where are yours?

Will scientists accept their public responsibilities? Or will they largely restrict themselves to the tasks assigned them by their employers—thus accepting the status of supertechnicians and paving the way for ever-greater concentrations of power? The answer to these questions must depend upon the independence of scientists, the encouragement society gives to their public interest activities, and the creativity they and their allies exhibit in institutionalizing public interest science.

As this book is written, the influence of scientists in government and their economic independence are probably lower than they have been since before World War II. The President's science advisory apparatus has been dismantled after being essentially ignored for some years, and the priority of support for science and technology has been downgraded except in a few politically profitable areas. As a result of this decreased support and because of the tremendous increase in their numbers, scientists who ten years ago would have been able to choose from among a variety of attractive research jobs are now often unable to continue in research at all.

There is a natural tendency under these circumstances for scientists to concentrate on the bread-and-butter issues of professional survival. This is reinforced by the increasing tendency of administrators to treat scientists more as ordinary employees who should "get on the team" than as irreplaceable assets who must be humored and coddled lest they be wooed away by better job offers. Thus most scientists are becoming painfully aware that they are no longer a privileged elite and must in the future share the uncertainties and vulnerabilities of ordinary men.

At the same time that the economic independence of scientists has been so reduced, a political atmosphere has developed in which the public seems to be almost begging them for independent information on the possibilities and dangers of technology. After the disastrous involvement of the United States in the Indochina war and in the wake of revelations that government decisions have been "for sale" on an apparently unprecedented scale in exchange for political contributions to the President, the public has become less and less comfortable with the invitation from federal agencies to "leave the driving to us." The Indochina war demonstrated particularly clearly the almost unlimited capacity of a powerful bureaucracy to deceive itself, to avoid making unpleasant decisions, and to mislead the public in the process. In many respects each of the issues discussed in this book—the SST, DDT, nuclear reactor safety, the ABM—has been a technological Vietnam. Sanity had to be forced on the responsible bureaucracy in each case by an aroused public.

The debates over these issues have revealed the great reservoir of citizen interest and the organizing talent and energy available in this country—once the issues have been made clear and intelligible. At the same time, however, the past decade of political debate has caused considerable discouragement among these same individuals. The political battles over the issues of racism, the Indochina war, the arms race, and environmental pollution have shown that these issues are much more complex than was thought initially and that there are no easy political solutions or "technological fixes." Each bit of progress has revealed a new layer of interconnections of the problems with our social structure, until it seems almost as if one can solve no specific problem without restructuring the entire society. But few people can indefinitely sustain an intense involvement with issues remote from their personal lives. Sooner or later most of us must withdraw from campaigns to save the world in order to mend fences at home and on the job. Obviously the challenge is to develop goals which are not only realistic but also personally meaningful to large numbers of people.

Currently it takes an unusually adventurous and astute individual to be an effective public interest scientist. Such exceptional personalities are no more common in science than in other fields, and society has become too complex to depend for salvation on the activities of a few individuals. The challenge to scientists and citizens alike, therefore, is to civilize the environment of public interest science so that more scientists can contribute. In this connection it is instructive to study the "opposition": government and corporate bureaucracies.

Bureaucracies provide their members with a very important commodity:

legitimacy. There is a widespread presumption that an individual as a representative of an organization has a legitimate reason to be concerned with an issue affecting his organization, while if the same individual takes up an issue on his own, the presumption is that he is a crackpot. The flimsiest sort of organizational base can have a substantial effect in raising the debate above the level of personalities. Thus, for example, Henry Kendall and Dan Ford as representatives of the Union of Concerned Scientists—an organization little more substantial than its irregularly scheduled meetings, secretary, and post office box—were able to challenge the Atomic Energy Commission on an organization-to-organization basis.

There is no reason to consider it "illegitimate" or "immoral" to exploit such an institutional "front" as a means of precluding distracting debates over the qualifications of the participants and of forcing discussion of the issues themselves. Indeed, if our case studies are any guide, it seems that, despite the great resources of expertise available to government agencies (such as the AEC and FDA), the credentials of agency decision makers and their reasons for making decisions will often stand up under inspection much more poorly than the arguments of carefully prepared public interest scientists. Or to put it another way: If an agency spokesman can invoke legitimacy by virtue of the expertise at the disposal of his agency, why should not the public interest scientist also be allowed to claim legitimacy by virtue of his affiliation with a university, a scientific society, or a public interest group? Once it has been established that neither a government agency nor its challenger has an exclusive monopoly on truth or good judgment, the debate can focus on the merits of the case made by each.

In fact, as more young scientists become involved in public interest activities, as the issues multiply, and as legal tools are developed making policy-making for technology subject to judicial intervention, public interest science is finding a home in a great variety of organizations. In the past the issues were brought into the public arena when extraordinary individuals with a public identity raised their voices: Rachel Carson (pesticides), Linus Pauling (radioactive fallout), Hans Bethe (ABM). The new public interest scientist has to do much more than raise his voice to get a hearing: Shurcliff (SST) became a fund raising and media expert, Kendall and Ford (nuclear reactor safety) immersed themselves in the AEC's administrative hearing process, Wurster became involved in legal challenges to the use of persistent pesticides at the state and then the national level, Meselson (CBW) became an expert lobbyist with both Congress and the White House. Organizational efforts have grown naturally out of each of these enterprises: the Citizens League Against the Sonic Boom, the Consolidated National Intervenors, the Environmental Defense Fund, and the AAAS Herbicide Assessment Commission.

There seem to be an infinite variety of forms which public interest science can take. The public support exists, scientists want to become involved, and there are plenty of dragons with which to do battle.