

## Toward an Open Advisory System

*It no longer suffices for me to call a group of scientists to my office and, when we have finished, to announce that based on their advice I have arrived at a certain decision. Rather it is necessary for me to lay my scientific evidence and advice on the table where it may be examined and, indeed, cross-examined by other scientists and the public alike before I make a final decision.<sup>1</sup>*

—William Ruckelshaus,  
Administrator of the  
Environmental Protection Agency,  
after scientific criticism of a  
leaked advisory report resulted  
in EPA rejection of the  
report's recommendations

Congress, the public, and the scientific community have allowed the federal executive branch to establish a system of science advising committees whose activities and reports have usually been kept confidential—except when it has suited the purposes of a particular department or agency to make them public. This has made it possible for government spokesmen to create the public image that federal policies for technology follow directly from the facts and analyses provided by technical experts, even when these policies have been in reality politically motivated and technically misguided. It is intolerable that the government advising system has been so easily subverted and turned into a propaganda device for tranquilizing instead of informing public opinion. Democracy is meaningless in the absence of an informed public.

As the last chapter stressed, the integrity and effectiveness of the advising system rests in part on the willingness of individual advisors to defend it against

abuse. But exhortations to advisors are not enough. Government science advisors are by and large individuals of personal integrity who try to serve their fellow citizens to the best of their ability. If they do not always succeed, that is more often the result of faulty institutions and procedures than of corrupt individuals. Governmental institutions—particularly the confidential nature of the advising system—should be reformed so as to buttress, not undermine, the personal responsibility of advisors. Fortunately, a limited but important step in this direction was taken in 1972 when, after two years of hearings, Congress finally passed the Federal Advisory Committee Act (Pub. L. 92-463). This new law has already had a considerable impact on a large proportion of federal advisory committees.

The most immediate effect has been to make these advisory committees visible. There is now a new category of announcements in the federal executive branch's official "bulletin board," the daily *Federal Register*: "Meetings." These items, of the order of ten a day, announce the meeting of various government advisory committees, at least half of which we would call scientific advisory committees. The announcements indicate the name of the committee, the purpose of the meeting, the time and place of the meeting, what parts if any of the meeting will be closed to the public and the reasons for such closure, and the required procedures for submitting written (and sometimes oral) presentations for the committee's consideration.

Inspection of these announcements often reveals that reasons cited for excluding the public are one or another of the exemptions to the Freedom of Information Act of 1967 (5 U.S.C. 552)—exemptions which also apply to the Advisory Committee Act. Sometimes meetings directly concerning the public health and welfare are closed, such as discussions of the safety and efficacy of particular drugs or the safety of particular nuclear power plants. But this does not mean that the Advisory Committee Act is useless. The fact remains that the principle of openness has been written into law, the public is informed of the meetings, and interested parties can threaten to go to court if they think that meetings are being improperly closed. Such a threat by one of Ralph Nader's lawyers was effective, for example, in getting parts of the meetings of the Atomic Energy Commission's Advisory Committee on Reactor Safeguards opened to the public.

Another useful provision of the Advisory Committee Act stipulates, subject again to the exemptions to the Freedom of Information Act, that

the records, reports, transcripts, minutes, appendixes, working papers, drafts, studies, agenda, or other documents which were made available to or prepared for or by each advisory committee shall be available for public inspection and copying at a single location in the offices of the advisory committee or the agency to which the advisory committee reports.<sup>2</sup>

The Advisory Committee Act has clearly effected a fundamental change in the context of government science advising. Even more important, perhaps, is the increased public skepticism regarding administration pronouncements that has resulted from the Pentagon Papers and Watergate episodes with the

attendant revelations of the extent of systematic government deception of Congress and the public.

In the future, it will certainly be more difficult than it has been in the past for executive-branch agencies to misuse their advisory committees. But the subversion of the advisory system has a certain timeless quality, and we expect that, as long as governments receive advice, attempts will continue to be made to exploit the advisors and their advice for political purposes. A new law, an altered advisory structure, even a new public appreciation of democracy following a close call for the republic—none of these change the fact that technical advice will always be needed and that political advantage will always be sought by the administration. New developments do not mean that the battle for an open advisory system has been won—only that it will have to be fought on somewhat different terms.

That part of the battle waged using the provisions of the Advisory Committee Act will increasingly take place in the courts. But the new act is a very limited legal instrument. Part of its problem lies with the vagueness of some of the exemptions to the Freedom of Information Act. Because there are no provisions for punishing those who abuse these exemptions, because only exceptional pieces of information are worth the trouble and expense of the legal process, and because even such information will probably be much less valuable by the time judicial procedures are completed anyway, the arbitrary denial of information by government officials and bureaucrats is virtually risk-free.

A second weakness of the Advisory Committee Act is that it can be interpreted to apply only to advisory committees directly appointed by government officials. In particular, the advisory committees whose services are contracted for through the National Research Council (NRC) of the National Academies of Science and Engineering appear to be entirely exempt from the act's provisions. The NRC fields some 800 advisory committees, with a total membership of about 8,000 scientists (of whom only about 225 are members of the National Academies themselves). These comprise nearly one-half of the entire executive-branch science advisory establishment.<sup>3</sup>

In 1970 the National Academy of Sciences (NAS), following its embarrassing experience with the NAS-NRC report on the possibility of damage from SST sonic booms (see p. 54), established a Report Review Committee. The new review procedure involving this committee has prevented some obviously biased advisory reports from seeing the light of day in their original form. And the NAS does its best to see that the final reports are not suppressed for illegitimate reasons. While this self-policing is laudable, it does not diminish the importance of the openness provisions of the Advisory Committee Act. Furthermore, having different criteria of openness for different advisory committees may encourage secrecy-minded bureaucrats to "shop around."

Because of the legal complexities of the Advisory Committee and Freedom of Information acts and because of their inapplicability to research done under contact by nongovernmental concerns, the confidentiality of the advisory committee system promises to remain a problem for a long time. For this reason it is

worth discussing the traditional arguments that have been used to justify advisory confidentiality, many of which were set forth as reasons for adopting the exemptions to the Freedom of Information Act.

### *The Arguments for a Closed Advisory System*

Four principal reasons have been put forward for limiting the openness of the executive branch's system: (1) advisors must be protected from pressure or retaliation; (2) executive-branch officials must be able to have frank and open discussions with advisors during the policy-making process; (3) the confidentiality of advice and information relating to military technology which could be of use to a potential enemy must be assured; and (4) commercial trade secrets and personal privacy must be safeguarded. Each of these has some degree of merit and must therefore be weighed in individual cases against the general arguments for openness.

#### PROTECTING THE ADVISOR

President Nixon, when asked why the SST Advisory Committee report and the Garwin Report on the SST were being kept secret, explained in a news conference:

I have no objection to the substance of reports being made public. The problem here is that, when reports are prepared for the President, they are supposed to be held in confidence. And some of those who participate in the making of those reports have that assurance.<sup>4</sup>

A dozen years earlier, a similar official explanation was given by President Eisenhower to Senator Lyndon Johnson when the latter demanded the release of the Gaither report on U.S. military preparedness:

From time to time the President invites groups of specially qualified citizens to advise him on complex problems. These groups give this advice after intensive study, with the understanding that their advice will be kept confidential. Only by preserving the confidential nature of such advice is it possible to assemble such groups or for the President to avail himself of such advice.<sup>5</sup>

That such explanations are not always totally honest is shown, for example, by the fact that the members of the Gaither committee themselves were pressing for the release of their report in a "sanitized" version (i.e., with military secrets omitted).<sup>6</sup> Similarly, the report of the PSAC panel on the Safety of Underground Nuclear Testing was kept secret despite the panel's explicit recommendation that it be released.<sup>7</sup> The desire to avoid giving their critics ammunition is a more plausible explanation for Presidents' unwillingness to release such advisory reports.

There are certainly circumstances where advisors might fear retaliation from their employers or funding agencies if the substance of their advice became known. For example, if the chairman (as of 1973) of the NAS-NRC committee advising the Defense Department on cereal and general products, who happens to be employed by the ITT-owned Continental Baking Company, were ever to advise the government that his company's products are in some respect inferior to a competing brand and this information became known to ITT, it is possible that his future prospects at Continental would be somewhat diminished. Problems like this obviously should be minimized by choosing advisory committee members so as to minimize conflicts of interest.

Another, more legitimate concern that might bother an advisor is that he will receive unwelcome attention if it becomes widely known that he is advising on some currently controversial issue. For example, some Columbia University physicists who were members of the elite Jason group of summer consultants to the Defense Department found themselves being harassed by threatening telephone calls and hate mail because of the group's work on weapons technology for the war in Indochina.<sup>8</sup>

An earlier and much more serious example is the case of J. Robert Oppenheimer, the physicist who led the atomic bomb project during World War II. In 1954 Oppenheimer was called before an Atomic Energy Commission hearing board, stripped of his security clearance, and politically disgraced—mostly on the basis of charges twice previously investigated and dismissed as relatively unimportant. The belief is widespread among scientists that Oppenheimer was persecuted because he became too highly visible as a government advisor and because elements in the military who disagreed strongly with his advice on strategic weapons wanted to destroy his influence.<sup>9</sup>

These have been unhappy episodes, and we would be the last to wish to see them repeated. However, an overly protective attitude toward advisors would only engender more abuses of the sort documented in our case studies. Government officials with important public responsibilities are expected to be answerable to the people for the way they carry out these responsibilities. If science advisors are unwilling to take public responsibility for their participation in government decision making, the seriousness of their dedication to the public interest comes into question. In the last analysis, the support of the scientific community and the confidence of the public in the integrity of the policy-making process seem to be the best and most appropriate guarantees of the political independence of the science advisor.

#### FULL AND FRANK DISCUSSIONS

If the public were given access to every discussion within the executive branch, the result would be quite disruptive. Certainly the ability of officials to participate in "full and frank discussions" during the governmental policy-making process would be inhibited. On the other hand, if executive deliberations were entirely insulated from the press and public, the only external voices heard in these deliberations would be those of large Presidential-campaign contributors

and other well-connected parties. Clearly some middle ground must be sought between complete openness and complete secrecy. Traditionally, Presidents and other executive-branch officials have leaned in the direction of secrecy.

The most potent device the President can use to resist requests from Congress for executive-branch documents is the invocation of "executive privilege." Executive privilege is legitimately supposed to protect delicate matters such as ongoing international negotiations and the President's personal consultations. The President's immediate full-time staff is usually also considered to be shielded by the umbrella of executive privilege—at least to the extent that they act as the President's personal agents and advisors. But the wholesale extension of this doctrine to include large numbers of documents prepared by groups of part-time advisors is unjustifiable. In cases like that of the Garwin Report on the SST, needless confidentiality has denied Congress and the public timely access to the only comprehensive and authoritative studies in existence.

Early in his Presidency, Dwight Eisenhower issued a directive to his Secretary of Defense in which he gave his interpretation of the justification for and extent of executive privilege:

Because it is essential to efficient and effective administration that employees of the Executive Branch be in a position to be completely candid in advising with each other on official matters, and because it is not in the public interest that any of their conversations or communications, or any documents or reproductions, concerning such advice be disclosed, you will instruct employees of your Department. . . not to testify to any such conversations or communications or to produce any such documents or reproductions. . . .

I direct this action so as to maintain the proper separation of powers between the Executive and Legislative Branches of the government in accordance with my responsibilities and duties under the Constitution.<sup>10</sup>

This statement was construed by many executive agencies as justifying almost any refusal of information that may be requested by Congress.

President Eisenhower issued his directive in a period when Senator Joseph McCarthy's (R.-Wisc.) investigations had induced a state of near-paranoia in the executive branch. Since that time, Presidents Kennedy, Johnson, and Nixon have each expressly repudiated the applicability of executive privilege to the whole executive branch, affirming that this power may be invoked only by the President himself.<sup>11</sup> But these fine promises have not always been observed—most notably during the Watergate affair, when Attorney General Richard Kleindienst testified at one point that the President could, if he wanted to, apply executive privilege to the entire executive branch, and that if the Congress did not approve of this policy, its only recourse was to impeach the President.

The legal status of executive privilege remains obscure because the issue seldom comes to court. Except for litigation, the only limitation on what the President can get away with in withholding information is Congressional and public outrage. Consequently, the invocation of executive privilege has long been a Congressional irritant. In 1960 the House Government Information Subcommittee commented:

The great bulk of requested documents are eventually released, but the questionable doctrine of Executive privilege results in unwarranted delay. Because of the timing of legislation and the shortness of the sessions of the Congress, delay is frequently tantamount to complete obstruction, preventing the timely exposure and correction of executive branch errors.<sup>12</sup>

As far as Congress is concerned, executive privilege at most extends to the President's personal consultations on matters of state. The only restrictions on full disclosure of the deliberations and memoranda of lower-ranking executive-branch officials are the explicit exemptions written into the Freedom of Information Act. In cases not covered by standard exemptions like military security, the last refuge of a reticent bureaucrat is "exemption 5," which exempts

interagency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the agency.

According to the interpretation of the federal Office of Management and Budget, this exemption applies also to the verbal discussions of advisory committees which would be covered were they written down, if, in addition, the agency head determines that

it is essential to close such meeting (or portion) to protect the free exchange of internal views and to avoid undue interference with agency or committee operation.<sup>13</sup>

Unfortunately, the exact legal meaning of these provisions is not entirely clear. The primary function of advisory committees should be to discuss the factual and analytical bases for a decision—and it would seem that these should ordinarily be made as freely available to the concerned citizen as to the government official. Certainly the wholesale concealment of advisory reports, such as those on the safety of underground nuclear tests in the Aleutian island of Amchitka or the Garwin Report on the supersonic transport, is not required by any general considerations of good government. Judicial opinions regarding "exemption 5" in two representative cases seem to support this view.<sup>14</sup> In *Mink et al. v. EPA* (Amchitka), the district court held that

while the exemption protects the decisional processes of the President, or other policy-making executive officials, it does not prevent the disclosure of factual information unless it is inextricably intertwined with policy making processes.<sup>15</sup>

In *Soucie v. David*, concerning the release of the Garwin Report, the appeals court gave a similar interpretation of the law:

Factual information may be protected only if it is inextricably intertwined with policy-making process. . . . [The] courts must beware of the inevitable temptation of a government litigant to give [this exemption] an expansive interpretation in relation to the particular records at issue.<sup>16</sup>

In view of these opinions, the legitimate applicability of "exemption 5" to the deliberations of advisory committees would appear to be rather small.

Accordingly, it might be appropriate for Congress to make this exemption inapplicable to advisory committees by law.

#### SECURITY CLASSIFICATION

"Exemption 1" under the Freedom of Information Act applies to matters specifically required by Executive order to be kept secret in the interest of the national defense or foreign policy.<sup>17</sup>

Although modest in length, this exemption leaves inviolate the whole bureaucratic nightmare which goes by the name of "security classification."

The present system of security classification has few defenders. In a 1970 report to the Secretary of Defense, the Defense Department's own Defense Science Board Task Force on Secrecy estimated that "the volume of scientific and technical information that is classified could profitably be decreased by perhaps as much as 90 percent through limiting the amount of information classified and the duration of its classification."<sup>18</sup> Even the National Security Council official responsible for drawing up revised security classification procedures in the wake of the Pentagon Papers incident admitted that there was a problem: "We are trying to reverse 20 years of practice under which there were abuses in overclassification."<sup>19</sup>

Unfortunately, the Nixon administration's revision of the classification procedure is not very convincing. Its major new provision is automatic declassification of documents after a certain number of years; but even documents that are merely classified "confidential" (the lowest security classification) must wait six years before automatic declassification. Furthermore, this "automatic" declassification is subject to bureaucratic review, the final authority in case of disputes over classification being the Interagency Classification Review Committee—consisting of members of the agencies which classify documents. It is no wonder that Representative William S. Moorhead (D.-Pa.) criticized Nixon's executive order establishing the new system as "a document written by classifiers for classifiers."<sup>20</sup>

One merit of the executive order, however, is that it includes a capsule description of the abuses of security classification which should be prevented:

In no case shall information be classified in order to conceal inefficiency or administrative error, to prevent embarrassment to a person or Department, to restrain competition or independent initiative, or to prevent for any other reason the release of information which does not require protection in the interest of national security.<sup>21</sup>

One obvious measure to prevent such abuses would be for Congress to set up an independent review board with the power to hear and rule on classification matters. Its services should be available to help members of Congress, the press, and the public locate and obtain information to which they are legitimately entitled. Hopefully the time will come when a citizen has reasonably prompt recourse when he is told, for example, that the findings of a survey on the incidence of birth defects in Vietnam has been "classified." (See page 158.)

## TRADE SECRETS AND CONFIDENTIAL MATERIAL

A final justification frequently used to defend closure of science advisory committee meetings is "exemption 4" of the Freedom of Information Act, regarding

trade secrets and commercial or financial information obtained from a person and [matters which are] privileged and confidential.<sup>22</sup>

Here, as with the other exemptions, respect for the rights of individuals and businesses must be balanced with the social concern for freedom of information. Two examples will give an idea of the types of cases in which this issue arises:

1. Committees which advise the National Institutes of Health close their meetings during discussions of the abilities of particular scientists and the merits of their research proposals. Here, a proper respect for the privacy of the individual researcher must be balanced against society's concern that the taxpayers' money be well spent. It is difficult to decide this balance on general principles. Most scientists believe that the peer review system is currently working in the public interest.<sup>23</sup>
2. The Food and Drug Administration closes advisory committee meetings in which the safety and effectiveness of particular drugs are discussed—arguing that among the relevant information are trade secrets. The Atomic Energy Commission uses the same argument to justify the closing of those parts of meetings of its Advisory Committee on Reactor Safeguards which discuss the effectiveness of key reactor safety systems on particular reactors.<sup>24</sup> In both cases it would seem that the public interest in seeing that these safety issues are properly handled is so overwhelmingly great that secrecy should not be tolerated. If necessary, the Freedom of Information Act should be amended to make this clear.

*Problems of Bias in Advisory Committees*

The Advisory Committee Act gives no guidance on issues relating to the membership of advisory committees other than to specify that the names and occupations of each committee's members be published in an annual report to Congress. Presumably the architects of the act felt that the provisions of openness it contains would expose problems of bias and conflict of interest to public view and thereby tend to bring about corrective action. And many executive agencies, and also the National Academy of Sciences, have recently established procedures for eliminating obvious bias and conflict of interest in their advisory committees.

These problems are persistent and subtle, however.

For one thing, any committee made up solely of experts in a particular subject is likely to be biased from the outset. People used to working and thinking in a certain discipline, and who thus tend to see issues in the context of

that discipline, inevitably base their advice on a certain set of implicit technological, social, and political assumptions. Hugh Folk has described the problem:

It is inevitable that experienced experts will usually be drawn from the interests involved in a problem. In many instances the experts will have created the problem. The A.S.E.B. [Aeronautics and Space Engineering Board of the National Academy of Engineering] appears to be incapable of entertaining an idea injurious to air transport. Just as automotive executives and engineers could not generate any interest in auto safety, so these men cannot generate any interest in quiet. They perceive the problem in terms of "tolerable noise."<sup>25</sup>

Obviously such a bias should be compensated by including members with qualifications other than expertise in the "offending" technology.

Another way in which bias is introduced into an advisory committee is through the exclusion of individuals who have taken strong public stands on the matters at issue. At first sight such a procedure might seem neutral and in the interests of an effective committee. Decision makers want advice, not unresolved arguments (it is explained), and persons with strongly held views will not easily be persuaded to join a consensus.

Unfortunately, the exclusion of such individuals automatically results in a bias toward the status quo. In public controversies about technical issues, scientists who disagree with established policies have to raise their voices merely to be heard, while scientists who support existing policies encounter little such resistance—if they feel the need at all to add their voices to those of official government spokesmen. Consequently, an advisory committee made up of "moderates" often lacks a spokesman for the very criticisms that may have prompted the convening of the committee in the first place. Characterizing scientific critics of established policies as "contentious," "unreasonable," "uncompromising," or "disruptive" is one of the most unfortunate by-products of public controversies over technology. In interviewing a substantial number of these "controversial" scientists in researching this book, we have found their most distinctive characteristic to be not contentiousness but rather the self-confidence and lack of awe for authority which are obvious prerequisites for individuals who are going to stand up and effectively articulate nonestablishment positions in the public arena. It is a considerable loss to society for such individuals to be systematically excluded from advisory committees after they have taken a public stand.

In 1972 a prestigious National Academy of Sciences committee (whose members included two former presidents of the NAS) was commissioned by the Advanced Research Projects Agency of the Department of Defense to look into the problem of identifying and recruiting young advisors. The committee's report described the standard procedure—the "telephone method" or "buddy system"—as follows:

Staff members, members of an executive committee, or others assigned to this activity in the responsible organization call professional colleagues or write to them describing the committee's task and soliciting suggestions of candidates.

Those usually asked to make nominations are people with established reputations in the field, who often have served as members or chairmen of committees. Their judgement is respected by the sponsoring organization. Cross-checking and collection of further information about nominees follow. The list of names of nominees is screened repeatedly as the requirements become better established, until a group of persons who meet the dominant criteria has been selected.<sup>26</sup>

Although the committee reported that this selection procedure basically works well, it did acknowledge that "it tends to call upon 'the same old faces' repeatedly." Methods for improving the search procedure were suggested but with so little conviction that the NAS itself has essentially ignored them.

One method for broadening the membership of important advisory committees to include scientists who could make valuable contributions but who might not come to the attention of the ordinary "buddy system" is to publish in relevant magazines a notice of the charge to the committee and at the same time solicit suggestions as to how the committee might best go about carrying out that charge. This would help to identify people interested in and actively thinking about the question at hand; and obviously some procedural suggestions might be very useful. A magazine like *Science* might appropriately carry such notices, and the news magazines of professional societies could also publish those notices which might be of special interest to their members. Another method might be for the professional societies themselves to circulate questionnaires among their members asking whether they would like to advise or do other work *pro bono publico*, and if so, in what areas. On the basis of the replies, a committee might be established to nominate members for particular advisory committees. Beyond this, the professional societies should encourage discussion—at their meetings and in their publications—of the responsibilities of advisors—especially in light of the provisions of the Advisory Committee Act.

### Conclusions

We have argued here the importance of further drawing aside the curtain of confidentiality behind which executive-branch advising and decision making have too long been hidden. Besides making important information available to those who need it both inside and outside government, free access to advisory reports and proceedings will almost inevitably improve the quality of the advice—because data and judgments would be subjected to the scrutiny of free scientific debate; because the various practices by which officials attempt to influence advice, from "packing" of committees to intimidation of advisors, would become less practicable; and also because creative proposals and thoughtful judgments would redound to the credit of their authors.

Scientists are always rightly suspicious of any scientific claims or conclusions which are presented without adequate supporting evidence. There is no reason why this fundamental tenet of the scientific method should not apply equally to the technical advice and analyses on which public policy is based.

### NOTES

1. Quoted in *Science* 174 (1971): 43.
2. Federal Advisory Committee Act (Pub. L. 92-463; 86 Stat. 770), Sec. 10(b).
3. *The Science Committee, a Report by the Committee on the Utilization of Young Scientists and Engineers in Advisory Services to Government* (Washington, D.C.: National Academy of Sciences, 1972). See especially Appendix, Table D-1. See also *NAS-NAE-NRC Organization and Members* (Washington, D.C.: National Academy of Sciences, annual), and John Walsh, *Science* 172 (1971): 242 and 343.
4. *Public Papers of the Presidents of the United States: Richard M. Nixon, 1970* (Washington, D.C.: Government Printing Office, 1971), pp. 1104-5. Quoted in the *New York Times*, December 11, 1970, p. 32.
5. Quoted in *ibid.*, January 23, 1958, p. 10.
6. See Morton H. Halperin, "The Gaither Committee and the Policy Process," in *The Presidential Advisory System*, ed. Thomas E. Cronin and Sanford D. Greenberg (New York: Harper & Row, 1969), p. 199. The Gaither committee—composed of prominent industrialists and scientists and chaired by H. Rowan Gaither, Jr., chairman of the boards of the Ford Foundation and the Rand Corporation—was assembled in 1957 to advise the National Security Council on the need for fallout shelters and on other defense problems. Their report warned of growing Soviet military strength and recommended crash programs to build fallout shelters and to decrease the vulnerability of American strategic weapons. The Gaither report was finally released in 1973 as a result of an appeal by the *New York Times* to the newly established Interagency Classification Review Committee (see p. 119). See the *New York Times*, January 20, 1973, p. 1.
7. This report—known as the "Pitzer report" after Kenneth Pitzer, who chaired the PSAC panel—was released only three days before the "Milrow" nuclear weapons test at Amchitka Island, after strong pressure had been brought to bear by the Senate Foreign Relations Committee. See U.S. Congress, Senate, Committee on Foreign Relations, *Underground Nuclear Weapons Testing*, 91st Cong., 1st Sess., September 29, 1969, esp. pp. 31ff. The Pitzer report is included in U.S. Atomic Energy Commission, *Underground Nuclear Testing*, Report No. TID 25180, September 1969, pp. 51 ff.
8. In addition, during the summer of 1972, demonstrations by students in Europe prevented two prominent physicists from giving scheduled lectures and even resulted in the premature closing of the summer school at which one of them was to be a lecturer. See Deborah Shapley, *Science* 179 (1973): 459.
9. The dramatic transcript of the Oppenheimer security hearing along with the texts of the principal associated documents and letters are reprinted in U.S. Atomic Energy Commission, *In the Matter of J. Robert Oppenheimer* (Cambridge, Mass.: MIT Press, 1970).
10. Letter from President Eisenhower to the Secretary of Defense, May 17, 1954. Quoted in Charles R. Dechert, "Availability of Information for Congressional Operations," in *Congress: The First Branch of Government*, Alfred de Grazia, ed. (New York: Anchor, 1967), p. 182.

11. Regarding the statements of Presidents Kennedy and Johnson, see *ibid.*, p. 183. Such a pledge by President Nixon was noted by Representative Reuss in the *Congressional Record* 115 (1969): 34743.

12. U.S. Congress, House, Committee on Government Operations, *Executive Branch Practices in Withholding Information from Congressional Committees*, House Report No. 2207, 86th Cong., 2nd Sess., August 30, 1960, p. 4.

13. Draft Joint OMB/Department of Justice Memorandum on Implementation of the Federal Advisory Committee Act, Section 10 a(3)(c)(iii)(c). This memorandum is included as Appendix D to *Federal Advisory Committees: First Annual Report of the President* (Washington, D.C.: Office of Management and Budget, March 1973). The latter document also includes a list of current government advisory committees. More detailed information, including membership, meetings, and publications, is included in U.S. Congress, Senate, Committee on Governmental Operations, *Federal Advisory Committees, First Annual Report of the President to Congress, Including Data on Individual Committees*, 93rd Cong., 1st Sess., May 2, 1973, 4 vols, 5703 pp. See also Linda E. Sullivan and Anthony T. Kruzas, eds., *Encyclopedia of Governmental Advisory Organizations* (Detroit: Gale Research Co., beginning July 1973).

14. A summary of judicial decisions relating to the Freedom of Information Act may be found in U.S. Congress, House, Committee on Government Operations, *U.S. Government Information Policies and Practices—Administration and Operation of the Freedom of Information Act, Part 4*, 92nd Cong., 2nd Sess., March 1972, pp. 1347-1367. See also Nicholas Wade, *Science* 175 (1972): 498. The Freedom of Information Center, Box 858, University of Missouri, Columbia, Mo. 65201, responds to requests for information on the Freedom of Information Act. See *Saturday Review*, March 31, 1971, p. 92.

15. Quoted in *U.S. Government Information Policies and Practices* (above reference), p. 1363.

16. Quoted in *ibid.*, p. 1365.

17. 5 U.S.C. 552 (b)(1).

18. U.S. Department of Defense, Office of the Director of Defense Research and Engineering, *Report of the Defense Science Board Task Force on Secrecy*, July 1, 1970, p. 2. This task force was chaired by Frederick Seitz; other members were Alexander H. Flax, William G. McMillan, William B. McLean, Marshall Rosenbluth, Jack P. Ruina, Robert L. Sproull, Gerald F. Tape, and Edward Teller—a substantial fraction of the Defense Department's high-level science advisory establishment, including the current Defense Science Board chairman (Tape) as well as his predecessor (Seitz). Their recommendations were received favorably by Deputy Secretary of Defense Packard and have been partially implemented, according to letters of March 1 and October 26, 1972, from DSB Executive Secretary Leon Green, Jr., to one of the present authors (J.P.).

19. David R. Young, quoted in *National Journal*, April 5, 1972, p. 657.

20. Quoted in *The New Republic*, July 22, 1972, p. 8.

21. Executive Order No. 11652, Sec. 4, March 10, 1972.

22. 5 U.S.C. 552 (b)(4).

23. For scientists' responses to recent Nixon administration attacks on the peer review system of the National Institutes of Health, see Barbara J. Culliton, *Science* 180 (1973): 843 and 1035.

24. For typical examples, see *U.S. Federal Register*, Vol. 38, March 1, 1973, pp. 5496ff (FDA committees); *ibid.*, September 4, 1973, pp. 23814ff, and September 11, 1973, pp. 24937ff (AEC Advisory Committee on Reactor Safeguards).

25. Hugh Folk, "The Role of Technology Assessment in Public Policy," in *Technology and Man's Future*, ed. Albert H. Teich (New York: St. Martin's Press, 1972), p. 250.

26. *The Science Committee* (ref. 3, above), Appendix E, p. 62.

# PART IV

## *The People's Science Advisors—Can Outsiders Be Effective?*

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*You've convinced me. Now go out and bring pressure on me.*

—President Franklin Roosevelt  
as quoted by Saul Alinsky  
in the Prologue of  
*Rules for Radicals* (1971)