
The Advisor's Dilemma

I have a feeling that a lot of them see me with a kind of horror—not just anger, but with an awe of the sort you'd have for an astronaut who stepped out of that capsule and cut his umbilical cord and just floated off into space and had become weightless, drifting in a black void, because he cut himself off from the capsule and from NASA, and the U.S. government, and the U.S. budget that supports that entire system. . . .

I think four-year-olds have fantasies like that . . . of what the world would be like when the mother went away. And the mother is the U.S. Executive Branch.¹

—Daniel Ellsberg describing the reactions of his colleagues at the Rand Corporation after he made public the "Pentagon Papers"

The executive branch's science advisory establishment makes many essential contributions to the effectiveness of policy making. It is also obvious from our case studies, however, that administration officials have learned to use the advisory establishment to mislead the public and Congress about the technical bases of executive decisions. In any particular case the advisor must therefore decide whether he is being asked to advise or to "legitimize." But what then? If he refuses to participate in a system which is being used to mislead the public, he will also be refusing to give his government the benefit of his advice. Such is the advisor's dilemma.

One deceptively easy resolution of this dilemma would appear to be for an advisor to say to himself: "I will give the administration the best advice that I can concerning technical considerations. Then, if I find that executive spokesmen start misleading the public about these considerations, I will give the public directly the benefit of my knowledge and experience."

Unfortunately, things are not quite so simple, because executive officials do not in general find such behavior acceptable. Advisors, like permanent government employees, are expected to be loyal and to abide quietly by final executive decisions, or else to "get off the team."

When an advisor decides to "go public" he is aware that he may very well at the same time be sacrificing his future access to the corridors of power and the sources of inside information. Since there are, in the first place, few advisors willing forcefully to present an unwelcome point of view to important government decision makers, an advisor can legitimately be concerned that his replacement by a "yes man" may in the long run outweigh any benefit the public might derive from his setting the public record straight on a particular issue. When concern about loss of future effectiveness within the executive branch is combined with the considerable doubt that most advisors have about the effectiveness of speaking out, it is not surprising that it is so extraordinarily rare that advisors "go public."

There are also strong social and psychological pressures operating against "going public." The high-level government advisor has typically undergone a long process of "socialization" in Washington during his slow climb up through the hierarchy of advisory committees. His self-esteem, not to mention his position in his organization and in the eyes of his colleagues, may not be unrelated to his advisory activities and his association with men in power.²

It is becoming more and more clear, however, that to the extent that the administration can succeed in keeping unfavorable information quiet and the public confused, the public welfare can be sacrificed with impunity to bureaucratic convenience and private gain. Thus advisors who keep their information and analyses confidential in the interests of preserving their "effectiveness" may find that very effectiveness decreasing as a poorly informed and uncertain Congress and public become less and less able to call the administration to account for irresponsible actions.

There is no consensus within the scientific community as to how the advisor's dilemma should be resolved. In fact, there has been very little discussion at all within the scientific community of the issues involved. Lack of such discussion leaves scientists unprepared when they become advisors and find themselves confronted with difficult and unfamiliar decisions, often in an atmosphere of great pressure. It is no wonder that under these circumstances advisors find themselves looking for guidance to the experienced government officials whom they advise and adopting rather uncritically the code of confidentiality and team spirit to which these officials themselves adhere.

Arguments Supporting the Confidential Advisory Relationship

Let us consider a few of the arguments which, by and large, the advisors adopt as their own:

1. *The relationship between a scientific advisor and the government official whom he advises should be confidential, just as is that between a lawyer and his client.*

This analogy compares a scientist or engineer who provides information and advice to the government—presumably with the intention of helping bring forth an optimal policy for the country as a whole—with the private lawyer hired to devise the optimal strategy in presenting his client's case. If we follow this analogy through, it would appear that the executive branch sees itself in an adversary relationship with Congress and the public. The fact that one side in the confrontation has a near-monopoly on the "lawyers" (science advisors) then becomes quite disquieting.

It is unfortunate that the ethical principles proposed for advisors by executive-branch agencies have more in common with the ethics of lawyers and physicians, which stress the protection of the client, than with the ethics of responsible public officials or public health officers, for whom the general welfare must be the primary concern. Science advisors, who are concerned with questions of the national interest, should also owe their first loyalty to the nation as a whole and to fundamental democratic principles, rather than to the personalities or policies of any particular administration. Patterning the ethics of science advisors on those of private lawyers or physicians is therefore inappropriate.

2. *The President is elected by all the people and has the ultimate responsibility for making national policy. This leaves the advisor with only the responsibility of seeing that the President and the officials in his administration are well informed.*

In response to the great inequality of activity and influence which has developed among the three branches of our government, the popular identification of our form of government as democratic has come to depend less on the theory of checks and balances and more on the fact that the President is elected "by all the people." We might thus caricature this view of our government as the "Four-Year Elected-Dictatorship Theory of Democracy." This theory has been particularly popular with the Nixon administration, whose behavior has given the country a most vivid demonstration of the dangers posed by an executive branch which feels that it can be held to account only once every four years.

What the elected-dictatorship idea leaves out entirely is the role of the individual citizen in the governmental process. The ultimate responsibility under a democratic government always lies with the individual citizen, and the

government advisor cannot escape his responsibilities as a citizen. In fact, by virtue of his greater knowledge of the subject on which he advises, the government advisor takes on enlarged responsibilities for the defense of the public interest in that area. The confusion of allegiance to the public interest with allegiance to the President in power indicates a basic lack of understanding of the meaning of democracy. That this misunderstanding has been shared by so many science advisors should be a matter of great concern to the scientific community as a whole.

Such concerns were raised about the long acquiescence of science advisors in Presidential policies for the Indochina War. Although a number of prominent scientists may have had private qualms about American actions in Vietnam, they confined themselves to producing a secret report, prepared during summer 1966 under the auspices of the "Jason" division of the Institute for Defense Analyses (IDA). The report argued against the bombing of North Vietnam, not on any moral grounds, but on the technical grounds of its ineffectiveness.³ Their criticism of the bombing was largely ignored by the generals—although it appears to have influenced Defense Secretary McNamara, who attached its conclusions to a memorandum to President Johnson opposing the increased bombing of North Vietnam.⁴ McNamara failed to convince Johnson and subsequently left the Pentagon. But a related proposal endorsed by the advisors was partially adopted: an electronically policed barrier along the northern borders of South Vietnam. The advisors claimed that such a barrier would be more effective than bombing in choking off the flow of military support to the Vietcong.⁵ The result was the "McNamara Line," which ultimately grew into the military fantasy-nightmare of the "electronic battlefield."⁶ But the bombing went on. One of the leaders of the Jason summer study told us that he was so embittered by this experience that he subsequently resigned from all his government advisory posts. "I was a dupe," he said. "Whatever advice you give the military will be twisted."

When government officials repeatedly fail to hear or heed their science advisors and when an advisory committee begins to moderate or even alter what it would really like to say (Trojan Horse strategy), advisors should perhaps consider other approaches. Bringing serious matters into the open and to the attention of government decision makers through their morning newspapers is one tactic for breaking through their bureaucracy-created isolation. It has been established repeatedly that public exposure of important issues can result in crucial facts and perceptions coming to the fore which would have been missed in the ordinary governmental process.

3. *It is quixotic for a lone scientist with no political constituency to hope to influence the public to reject the misrepresentations of administration spokesmen.*

The case studies of outside activities to be presented in Part IV show that a lone scientist *can* fight the bureaucracy—and win. It is true that it is usually ineffective for an insider just to sign a petition or make a single public statement and then go back to his usual activities. This will probably only succeed in

antagonizing those administration officials he has been advising. If an advisor wants to challenge an administration policy that he considers a threat to the public health and welfare, then his dedication in raising an opposition must be commensurate with the seriousness of the perceived threat. Great persistence and resourcefulness are also usually required—and often courage, too, since the scientist may be opposing agencies which fund his work or work at his institution.

Although serving as an advisor broadens one's first-hand knowledge of the considerations which enter into federal policy making for technology, it does not prepare one for the rigors of such a battle. Advisors are not encouraged to follow through on their advice and try to see that it is taken into account. Generally they are asked to prepare and submit reports rather quickly and then to forget about them unless called upon for further advice. Often, they are not expected to look seriously into the nontechnical aspects of the issue on which their advice is sought. Instead they are expected to form an opinion based primarily on the knowledge they already have and on the briefings they receive from government officials and from full-time government experts. They are paid for this, they gain prestige because their advice is sought by important government officials, and they make professional contacts which may prove important in the advancement of their careers. This is quite a different situation from the harsh and lonely world in which an independent scientist often finds himself.

Thus, of the three rationales offered in defense of the confidential advisory relationship, two—the lawyer-client analogy and the the-President-has-the-ultimate-responsibility argument—seem upon reflection to be absurd. The third, the you-can't-fight-city-hall argument is, as we said, simply a restatement of the fact that the life of a confidential advisor can be relatively easy and secure while that of the public interest scientist can be arduous and uncertain. As Abraham Lincoln said, "Silence makes men cowards."

It is obvious, from the superficiality of the widely held views which we have been discussing, that the ethics of advising should be subjected to a careful examination by the scientific community as a whole. Science advising, no less than scientific research, needs a code of ethics. And this code should explicitly take into account the fact that we live in a democracy in which the ultimate responsibility resides not with the President but with the individual citizen.

Discounting Future Effectiveness

The rather old-fashioned lecture on citizenship which we have just delivered does not by any means resolve the deeper dilemma in which a science advisor often finds himself: it simply acts to blow away the smoke screen concealing it.

Generalizations cannot resolve such dilemmas, for each case concerns an individual scientist's judgment of how he may most effectively serve the public interest. An advisor contemplating going public in order to challenge an emerging executive policy that he considers inimical to the public interest is weighing two great uncertainties: the effectiveness of such a move versus his future effectiveness as an insider if he maintains confidentiality.

The high-level advisor finds himself in a position which has usually required years of apprenticeship to arrive at. It is therefore natural, before challenging a policy, for him to think: "I've worked hard to gain my position of influence—for what it's worth. Let someone else take the issue to the public. That way I can keep presenting my arguments on the inside while they present theirs on the outside. (Besides, I'm the director of a large laboratory, and a lot more people will be hurt if I become unpopular with the current administration.)"

The problem, of course, is that such advisors represent a considerable segment of the leadership of science, and if they, in their positions of relative security, are unwilling even occasionally to set an example by taking the risk of going public, it is unreasonable to expect that enough high-caliber scientists outside the advisory establishment will step forward in their stead. Also, by asking other scientists to assume the entire burden of public interest science, the advisors may be asking them to close to themselves the doors to positions of honor and influence which the advisors themselves enjoy.

Unfortunately, it appears characteristic of human nature to overestimate what one's future effectiveness might be in comparison to what one judges one's effectiveness to be in the issue at hand. Participants in politics often must revise their hopes for future accomplishment down by an order of magnitude during the battle when they realize how tough it is to accomplish anything. This means that an advisor weighing the effectiveness of going public in a current situation is weighing this reduced expectation against his still-high hopes of future effectiveness. This gives rise to the apparently common situation where an advisor conserves his effectiveness like a beautiful girl her virginity—until no one is interested in it anymore.

What Does the Advisor Do About Uncertainty?

Uncertainty arising from incomplete information is one of the major problems facing a technical expert—advisor or not—when he is contemplating making an issue out of his concerns. Thus, taking examples from our case studies so far: It was not clear to what extent a fleet of SSTs would increase the earth's cloud cover or deplete its protective layer of stratospheric ozone. Nor was it clear how many birth defects would occur in South Vietnam from the massive use there of 2,4,5-T as a defoliant. And finally, it was not clear how many cases of cancer

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and birth defects would result from the public's massive use of cyclamate-sweetened drinks and foods.

A concerned scientist might therefore well have asked himself: "Is this a false alarm? Am I putting my reputation on the line over a danger which later information will prove not to exist?"

In these circumstances the decision must hinge on the advisor's answer to the question: Who should determine whether the benefits of the proposed policy exceed the risks? One PSAC panel, reporting on the safety of underground nuclear weapons testing, suggested that

the public should not be asked to accept risks resulting from purely internal governmental decisions if, without endangering national security, the information can be made public and the decisions reached after public discussion.⁷

(The panel's report was subsequently suppressed.) Thus, even if the dangers which concern a scientist might not materialize, the public should have an opportunity to express its opinion as to whether the potential risks are worth the benefits.

This does not mean that every such matter should be made the subject of a national referendum. What it does mean is that, in a democracy, the citizens should have an opportunity to defend their vital interests. Not infrequently an administration decision is made in secret and then, when the story gets out, the decision is reversed. What has happened is that the publicity has brought new political forces into play.

Guidelines for Advisors

While there are many cases in which advisors have refused to come forward to warn the public, we are unaware of a single case in which an advisor has sought publicity for an unfounded concern for the public welfare. It is not surprising that a bias exists toward acquiescing to the executive branch's demands for confidentiality: the advisors have working relationships with executive officials. It happens also that the counsels of timidity and ambition work in the same direction: no one has risen to high position by appealing over the government's head to the public, while many have constructed distinguished careers by playing the game according to administration rules.

Some advisors have not only accepted confidentiality as a necessity, they have even embraced it. Thus the technical society of operations analysts, the Operations Research Society of America (ORSA), includes in its "Guidelines for Professional Practice" the following admonitions:

Scrupulously observe any ground rules about confidentiality laid down by the organization being served.

Report the study's results only to the organizational elements sponsoring the study, unless specifically authorized by them to report to a wider audience.⁸

They further declare that

an analyst called upon to testify on behalf of a client whose decision he has helped to shape by his analyses should support his client's case. . . . An analyst who wishes to disagree publicly with his client is placed in a difficult ethical position.⁹

The perspective implicit in these guidelines seems rather narrow in comparison with that expressed in the *Code of Ethics for United States Government Service*, adopted by Congress in 1958, from which we quote the opening words:

Put loyalty to the highest moral principles and to country above loyalty to persons, party, or Government department.¹⁰

We submit that this higher loyalty implies a commitment on the part of government science advisors to provide their fellow citizens with the information and analyses necessary for effective participation in the political process. As a reminder of the fundamental democratic principles which are occasionally forgotten in the practical business of running the government, we offer here some simple guidelines on the limits of advising confidentiality:

1. The advisor has the obligation to bring to public attention government policies or practices that he believes may threaten the public health and welfare.
2. The advisor has the responsibility to speak out when he believes that public debate is being needlessly hampered by the misrepresentation or suppression of information.

We do not propose that our guidelines be engraved in stone. Our purpose is rather to stimulate discussion of the issues involved. Hopefully the advisors themselves and the scientific community as a whole will (perhaps with some prodding) define a new role for the scientific advisor which emphasizes his larger responsibilities.

To make the relevance of the guidelines clear, let us see how they apply to the behavior of advisors in the examples discussed in the preceding chapters.

Warning the Public

In two of our case studies, advisors took their concerns to the public. After he had been invited to testify, Richard Garwin drew Congressional attention to the degradation of the quality of life in metropolitan areas which would result from the enormous takeoff noise of the SST and to the technological setbacks which had compromised the plane's design. And, at the beginning of the public

debate over the Sentinel ABM System, two governmental advisors, Hans Bethe and Richard Garwin, presented in a *Scientific American* article¹¹ the arguments which led them to believe that building an ABM system designed to defend the population of the United States was futile. (Defense Department clearance for publication of this article was obtained only at the authors' insistence, and not without some duress.¹²)

These are the only examples in our case studies where advisors took the initiative in making their concerns public. In general, advisors remained silent—or, at most, muttered a little. The members of the Food and Nutrition Board of the National Academy of Sciences, for example, seem to have displayed a forbearance which can only be compared with that of Job while, for almost fifteen years, the Food and Drug Administration ignored their repeated expressions of concern about widespread public consumption of cyclamates.

Correcting the Record

In our case studies, advisors directly contradicted statements by administration spokesmen only when misquoted *by name*. Thus, for example, in the ABM debate, when Dr. Panofsky's name was taken in vain by Deputy Secretary of Defense Packard, and later, when Drs. Drell and Goldberger's confidential advice was misrepresented by Director of Defense Research and Engineering John Foster, a confrontation became unavoidable. In another case, Garwin, as we have already noted, tried to set the record straight—not by directly contradicting government statements, but by trying to set the actual technical basis for the decision at issue before the Congressional committees concerned.

It is not an infrequent occurrence for confidential government reports which contradict the statements of administration spokesmen to be "leaked" to the media. For example, the advisory report to the Environmental Protection Agency on the safety of 2,4,5-T entered the public domain without official approval. In this case the "leaker" was presumably concerned because the report uncritically dismissed serious concerns about possible dangers to public health. If so, his tactic was effective: as a result of criticisms of the leaked report by independent scientists, EPA administrator Ruckelshaus rejected its recommendations that 2,4,5-T be given a clean bill of health. This was an unusual case, however, in that there was a qualified group, the Committee for Environmental Information, outside government which immediately picked up and articulated the issues involved. In most cases one cannot expect a leaked report to be as influential as an advisor who himself draws the spotlight to the existence of a suppressed report and speaks to the broader implications of its conclusions. Even less useful than a leaked report is leaked advice without supporting documentation. For example, President Nixon's ad hoc SST Advisory Committee's negative views of the SST were accurately reported in the *New York Times*

In March 1969,¹³ but it was not until the documents themselves were released seven months later that widespread public interest was generated.

These remarks are not intended to discourage leaking to the media information that the public is legitimately entitled to have. We are simply restating our belief that scientific advisors should act more often to take the issue of suppression of information directly to the public. Excessive dependence upon Ralph Nader and the media in these matters reflects badly on the integrity of the scientific profession.

NOTES

1. Quoted in Studs Terkel, "Servants of the State: a Conversation with Daniel Ellsberg", *Harpers*, February 1972, p. 52.

2. The "socialization of the science advisor is discussed along with many other problems of the executive science advisory system by Martin L. Perl, "The Scientific Advisory System: Some Observations," *Science* 173 (1971): 1211.

3. Jason Division, Institute for Defense Analysis, "The Effects of U.S. Bombing on North Vietnam's Ability to Support Military Operations in South Vietnam: Retrospect and Prospect," August 29, 1966, reprinted in part in Neil Sheehan et al., *The Pentagon Papers* (New York: Bantam Books, 1971), pp. 502-9. A follow-up Jason study in December 1967 again concluded that the bombing of North Vietnam was militarily ineffective; see *The Pentagon Papers* (Boston: Beacon Press, 1971), Vol. 4, pp. 222-225, 231.

4. Robert S. McNamara, memorandum for President Johnson, "Actions Recommended for Vietnam," October 14, 1966, reprinted in Sheehan, *The Pentagon Papers*, pp. 542-551.

5. Sheehan, *The Pentagon Papers*, pp. 483-485. A more complete discussion of the organization of the Jason study is given by Deborah Shapley, "Jason Division: Defense Consultants Who Are Also Professors Attacked," *Science* 179 (1973): 459. Also illuminating is Eleanor Langer, "After the Pentagon Papers: Talk with Kistiakowsky, Wiesner," *Science* 174 (1971): 923-928.

6. See, e.g., Paul Dickson and John Rothschild, "The Electronic Battlefield: Wiring Down the War," *Washington Monthly*, May 1971, p. 6.

7. After a year's delay the report was forced out into public view by the Senate Foreign Relations Committee. The report was published in U.S. Atomic Energy Commission, *Underground Nuclear Testing*, AEC Report No. TID 25180 (Washington, D.C.: AEC, September 1969). The quote appears on p. 52. For a fascinating glimpse into how the advisory system was used and abused in this case see the hearing: U.S. Senate, Committee on Foreign Relations, *Underground Nuclear Weapons Testing*, 91st Congress, 1st Session, September 29, 1969.

8. "Guidelines for the Practice of Operations Research", *Operations Research: The Journal of the Operations Research Society of America* 19 (1971) p. 1123. This issue of *Operations Research* was devoted mainly to an attack on the Congressional testimony of several scientists (not members of ORSA) who opposed the Safeguard ABM system. ORSA's criticism bases a broad and unjustifiable condemnation of the ABM critics on their handling of a very narrow technical issue. For a detailed critique of the ORSA position see Paul Doty, "Can Investigations Improve Science Advice—the Case of the ABM," *Minerva* 10 (1972): 280.

9. "Guidelines for the Practice of Operations Research," p. 1134.

10. U.S. Congress, *House Concurrent Resolution 175*, 85th Congress, 2nd Session, 1958.

11. Richard L. Garwin and Hans Bethe, "Anti-Ballistic Missile Systems", *Scientific American*, March 1968, p. 21.

12. The article was partly based upon a talk by Bethe and Garwin at the annual meeting of the American Association for the Advancement of Science in December 1967. Anne Cahn in "Eggheads and Warheads: Scientists and the ABM" (Ph.D. dissertation, MIT, Department of Political Science, Science and Public Policy Program, 1971), p. 91, states that "Bethe claims he spent the last ten days before his scheduled talk on the phone, urging Defense officials to clear it [and that Director of Defense Research and Engineering] John Foster gave up a Saturday golf date on December 23 to clear the article personally." Cahn quotes Garwin as saying that he submitted his talk to John Foster only "for comment, not clearance, and received guidance on questions of classification regarding thermonuclear weapons."

13. *New York Times*, March 16, 1969, p. 1.