

dated April 3, 1970: "It would be unfortunate to leave the impression that the [Garwin report] was 'highly critical' of the SST program." [Reprinted in *Congressional Record* 117 (1971): 32125.] DuBridges' letter stated further that the Garwin Report was prepared at President Nixon's request and would not be released; the quoted statement was evidently intended to deceive Reuss as to the report's actual conclusions.

7. NBC radio interview with Rep. Reuss, reprinted in *Congressional Record* 115 (1969): 34743.

8. *Congressional Record* 115 (1969): 32599-32613.

9. *Ibid.*, p. 32606.

10. *Ibid.*, p. 32608.

11. *Ibid.*, p. 32610.

12. *Ibid.*, p. 32607.

13. U.S. Congress, House, Committee on Appropriations, *Department of Transportation and Related Agencies Appropriations for 1971, Part 3*, April 23, 1970, pp. 980-994.

14. Quoted in *Saturday Review*, August 15, 1970.

15. The suit was filed by the American Civil Liberties Union on behalf of Gary A. Soucie, executive director of the Friends of the Earth, and W. Lloyd Tupling, Washington representative of the Sierra Club. Peter L. Koff of Boston was the volunteer attorney.

16. Letter from Edward E. David, Jr., President Nixon's science advisor, to Peter L. Koff, August 17, 1971.

17. Subcommittee on Physical Effects, NAS-NRC Committee on SST-Sonic Boom, *Report on Physical Effects of the Sonic Boom* (Washington, D.C.: National Academy of Sciences, February 1968).

18. *New York Times*, March 5, 1968. (This story was run in early editions but removed from the final edition of this date for space reasons. We received a copy of the article from the *New York Times* morgue.)

19. Results of government tests over a number of cities with military jets compiled by William Shurcliff in his *SST/Sonic Boom Handbook* (New York: Ballantine, 1970) give an average of about \$600 damage awards per million "man-booms"—even for sonic booms considerably less intense than those which would accompany the proposed SST. If we then assume that each of 400 SSTs flies 10,000 miles a day at supersonic speeds, creating a 50-mile-wide boom path populated with the average density in the forty-eight contiguous states of about 60 people per square mile, we obtain a rough estimate of 5 trillion man-booms per year and \$3 billion annual damage. This calculation is obviously very approximate. We should also note that the National Bureau of Standards used the same damage awards figures compiled by Shurcliff, but used the population of the relevant metropolitan areas—instead of cities—over which the boom tests were conducted, and thus obtained an estimate of \$222 damage per million man-booms. [U.S., Environmental Protection Agency, Report no. NTID 300.12, *The Effects of Sonic Booms and Similar Implosive Noise on Structures* (Washington, D.C.: Environmental Protection Agency, December 31, 1971).] The conclusion remains unassailable that if SSTs were flown over the United States, the damage to structures from sonic booms would be very costly. And the legal costs could dwarf the actual damage costs—see W. F. Baxter, "The SST: from Watts to Harlem in Two Hours," *Stanford Law Review*, November 1968, pp. 1-57.

20. The following discussion is based on information in Dr. Shurcliff's files.

21. John Walsh, *Science* 172 (1971): 242.

22. An example is discussed by Nicholas Wade, *Science* 173 (1971): 610.

23. *NAS-NRC-NAE News Report*, February 1969, p. 11.

24. Reported, for example, by Christopher Lydon in the *New York Times*, March 1, 1971, p. 15. We obtained a copy of the report itself from Dr. Leo L. Beranek, chairman of the SST Community Noise Advisory Committee. It was dated February 5, 1971, and was in the form of a one-page memorandum addressed to William Magruder.

25. *New York Times*, March 1, 1971, p. 15.

26. *Washington Post*, May 20, 1971, Sec. A, pp. 1, 8.

Invoking the Experts: The Antiballistic Missile Debate

... the report sent to the Secretary of Defense said that this equipment will do the job that the Department of Defense wants to do. . . .

—John Foster, Director of Defense Research and Engineering, citing secret O'Neill committee report on the Safeguard ABM system.

Dr. Foster's remarks indicate that we made recommendations that in fact we did not make.

—Professor Sidney Drell, member of the O'Neill committee.

In the previous chapter we presented some examples of the ways in which the public can be misled by the selective release and suppression of analyses and information on which government decisions are based. In this chapter we consider a debate during which government officials publicly misrepresented confidential advice. The advice concerned the effectiveness of first the Sentinel and later the Safeguard antiballistic missile systems.

Background

The search for a defense against intercontinental ballistic missiles armed with nuclear explosives began even before the development of the offensive weapons had been completed. The first contracts for feasibility studies

on an antiballistic missile (ABM) system were let by both the U.S. Army and Air Force in 1955.¹

Two years later, in October 1957, the launching of the first artificial earth satellite (*Sputnik*) by the Soviet Union convinced most Americans with a dramatic suddenness that the Soviets had developed a capability for intercontinental nuclear missile warfare.

The Armed Services responded to the resulting tremendous concern by proposing the deployment of an ABM system. On November 20, 1957, less than two months after the launching of *Sputnik*, the *New York Times* reported that Army Chief of Staff Maxwell Taylor made a proposal to the Joint Chiefs of Staff that the Army anti-aircraft missile system be upgraded into a system with ABM capabilities over a period of three years and at a cost of \$6.7 billion. The next day the *New York Times* reported that the Air Force had submitted a position paper to the Joint Chiefs which threw doubt on the capabilities of Army's proposed system. A few days later the Air Force announced that it was developing its own ABM system.²

PSAC is Created

The decision in this case was not entirely up to the military, however. In response to the crisis triggered by the launching of *Sputnik*, President Eisenhower had turned for advice to scientists and engineers outside the government. Most of these outside experts had become involved with weapons technology during World War II, when they had gained the nation's respect by leading the efforts which resulted in the development of radar and nuclear weapons. After the war they had remained advisors to the Atomic Energy Commission (AEC) and the Department of Defense. A month after *Sputnik*, Eisenhower gave them direct access to the White House by moving the Science Advisory Committee of the Office of Defense Mobilization into the White House as the President's Science Advisory Committee (PSAC). The president of MIT, James Killian, served as PSAC's first chairman and also as the President's full-time science advisor.

After consulting with PSAC, President Eisenhower decided not to approve the deployment of an ABM system—on the grounds that the technology was inadequate. Instead, following PSAC's advice, he created the new civilian post of Director of Defense Research and Engineering to supervise the armed forces' research and development activities. The first person appointed to the new post was a member of PSAC, Herbert York, a physicist and the director of the AEC's nuclear weapons development laboratory at Livermore, California.

But the Democratic majority in Congress blamed the Soviet space triumph on the complacency of the Eisenhower administration and was not satisfied with these actions. Congressional committees were set up to investigate the situation.

The chairman of the Senate committee, Lyndon B. Johnson—then a Democratic senator from Texas and the Senate's majority leader—was particularly critical of the decision not to develop an ABM system.³ The United States succeeded in launching its own satellite a few months after the Soviets, however, and the criticism eventually subsided.

In 1960, as the Presidential election approached, the issue came alive again. And in October, just before the election, the Democratic Presidential candidate, Senator John Kennedy, in a speech to an American Legion audience, denounced the Eisenhower administration for having allowed a "missile gap" to develop and for its failure to deploy an ABM system.⁴ After Kennedy was elected, however, his science advisors quickly convinced him that the technology was still inadequate, and he refused to order deployment despite a continuing public debate, fueled in part by Soviet claims of breakthroughs in their own ABM development program⁵ and in part by opponents of the proposed nuclear test ban who seized upon the danger of the Soviets winning the "antimissile missile race" as a reason for continued atmospheric testing.⁶

Occasional public statements during this period indicated a parallel debate going on within the executive branch between the scientific advisors and the generals. In January 1962, Hans Bethe, one of the most eminent scientific advisors on strategic weapons, stated that he felt that development of an effective antimissile missile was hopeless.⁷ A few months later General Barksdale Hamlett, Vice Chief of Staff of the Army, argued the opposite view.⁸ In March 1963, General Maxwell Taylor, now Chairman of the Joint Chiefs of Staff, warned in Congressional testimony that the United States must win the race for an antimissile missile.⁹ At the same time, however, the Department of Defense undertook a major program to develop multiple warheads for U.S. strategic missiles in order to insure that the United States would be able to overwhelm any Soviet ABM system by sheer force of numbers. The scientific advisors argued that the Soviets could similarly penetrate any U.S. missile defense with multiple warheads or other "penetration aids."¹⁰

The year 1964 was again a Presidential election year, and the Republican candidate, Senator Barry Goldwater, launched an all-out attack on the reliability of the U.S. missile deterrent and the lack of progress of the ABM development program. He was engagingly candid in stating that he was encouraged to make this attack by the fact that John Kennedy had used the "missile gap" charge with considerable effect against the Eisenhower Administration.¹¹ Goldwater's attack had little impact, however, as the major issue of the campaign became the war in Vietnam.

In late 1965 the Joint Chiefs of Staff, apparently discouraged with the political prospects of an ABM system oriented toward the Soviet Union, recommended deployment of an anti-Chinese system. (The Chinese had tested their first nuclear device a year before.¹²) But President Johnson, apparently strongly influenced by the impact which the \$20 billion program would have had on a budget already strained by the Vietnam War and "Great Society" programs, sided with Secretary of Defense Robert McNamara against deployment.

The Pressures for Deployment

The pressure for deployment continued to mount. In November 1966, Secretary of Defense McNamara made public the information that the Soviet Union was deploying an ABM system. According to Defense Department leaks, after the initial deployment of one ABM system around Moscow, deployment of another system had begun across the routes which U.S. missiles would travel in an attack on the Soviet Union. The Senate had already in the spring of 1966 added \$167.9 million to the Defense budget to be used for ABM "preproduction funds." The funds had not been requested by the administration, and they were not spent. Secretary McNamara responded to the heightened pressures for deployment by revealing more about the multiple warheads which were being developed for U.S. missiles to guarantee penetration of any Soviet system. Later it became clear that the larger Soviet "ABM system" was actually an antiaircraft system.¹³

In 1967, as his political position became weaker, President Johnson's support for McNamara's anti-ABM position also weakened. In his annual budget message to Congress, Johnson asked for funds for the deployment of a U.S. ABM system in case an agreement with the Soviets for a mutual moratorium on deployment could not be achieved.¹⁴

This weakening of the President's stance triggered an all-out public campaign for the ABM by the Joint Chiefs. Their chairman, General Earl Wheeler, stepped so far out of his role as McNamara's subordinate that he presented the case for ABM deployment on television.¹⁵

At about this time McNamara made a last attempt to convince President Johnson of the folly of going ahead with the deployment of an ABM system. He invited all the men who had served as Presidential science advisors or as Directors of Defense Research and Engineering (DDRE) to meet with Johnson and to present to him their views on the proposal for deployment of an American ABM system. All except the incumbent Director of Defense Research and Engineering, John Foster, told the President their reasons for opposing such a move. Johnson was not impressed.¹⁶

The Decision to Deploy

The pressure on the administration increased further that autumn when key Congressional committees joined the Joint Chiefs in calling for a decision to deploy ABM. The Senate Appropriations Committee under Senator Richard Russell (D.-Ga.) publicly informed the President that his administration would have to bear the responsibility for any further delay.¹⁷ And Senator John Pastore (D.-R.I.), chairman of the Joint Committee on Atomic Energy, announced that his committee would also fight for deployment.¹⁸

The coup de grace was delivered by Republican Presidential aspirant Richard M. Nixon on September 14, 1967. He stated that, unless Johnson decided to deploy the ABM, the President would find the issue of the "missile gap" turned upon him during the forthcoming 1968 Presidential campaign. "It's a deadly boomerang," he gloated.¹⁹

This time Johnson was on the wrong side of the Vietnam issue and in no position to take such a threat lightly. On September 18, four days after Nixon made his statement, Secretary of Defense McNamara announced the administration's decision to deploy a "light" anti-Chinese ABM system. The speech in which he made this announcement ironically also presented an extremely effective argument against deployment and warned against further surrender to the pressures for escalation of the arms race.

There is a kind of mad momentum intrinsic in the development of all nuclear weaponry. . . . The danger in deploying this relatively light and reliable Chinese-oriented A.B.M. system is going to be that pressures will develop to expand it into a heavy Soviet-oriented system.²⁰

McNamara's announcement marked the end of an era in the relationship between scientists and the executive branch. Scientists had gained influence—in some cases greater than that of the Joint Chiefs—as a result of the *Sputnik* crisis. A decade later, however, when it was obvious that the United States was far ahead of the Soviet Union in strategic weapons and in space technology generally, this area ceased being one of overriding public concern. The decision-making power then returned to the arms lobby.

Citing the Experts

Just as McNamara's September 18 speech served to mark the end of a decade of unparalleled influence for scientists in United States strategic weapons policy, it also gave an indication of what the new relationship between scientists and the administration in this area was to be. Toward the end of his exposition on the futility of building a heavy ABM system as protection against Soviet strategic missiles, McNamara invoked the names of the scientists whom he had brought together in President Johnson's office:

If we . . . opt for a heavy ABM deployment—at whatever price—we can be certain that the Soviets will react to offset the advantages we would hope to gain.

It is precisely because of this certainty of a corresponding Soviet reaction that the four prominent scientists—men who have served with distinction as the science advisors to Presidents Eisenhower, Kennedy, and Johnson, and the three outstanding men who have served as directors of research and engineering to the three Secretaries of Defense—have unanimously recommended against the development of an ABM system designed to protect our population against a Soviet attack.

These men are Doctors Killian, Kistiakowsky, Wiesner, Hornig, York, Brown, and Foster.²¹

McNamara's statement was misleading in that he presented only half the truth. He failed to mention that all of these scientists (with the exception of Foster) had also opposed the deployment of the Chinese-oriented system which he was announcing. He thus obscured the basic fact that a political and not a technical decision has been made. As skeptics suggested, the primary mission of the ABM system was not to defend against Chinese or even Soviet attacks; fundamentally, it was a Republican-oriented system.

Until McNamara made his announcement, the battle over whether or not to deploy an ABM system was, as we have seen, primarily a battle for the President's mind. Once McNamara and the President's Science Advisory Committee had lost that battle, however, a few of the scientific advisors, notably Bethe, Wiesner, and York, helped take the issue to Congress and the public. We will discuss the public debate which ensued in a later chapter. Here we will only describe some incidents which provided glimpses of the attention accorded within the executive branch to those advisors—notably those then on PSAC—who continued to express their opposition to the ABM within the administration on a confidential basis.

The Senate Foreign Relations Committee Hearings

Much of the technical basis for Congressional criticisms of administration ABM proposals developed during hearings held by a special Subcommittee on International Organization and Disarmament Affairs of the Senate Foreign Relations Committee. Senator J. W. Fulbright (D.-Ark.), chairman of the full committee, set up the subcommittee after the 1968 hearings of the Senate Armed Services Committee—which, following its usual practice (since changed), had not heard a single witness opposed to the administration proposals. The special subcommittee, chaired by Senator Albert Gore (R.-Tenn.), held hearings on the administration's ABM proposals during 1969 and 1970.

The subcommittee conducted its first hearings in March 1969, before the new Nixon administration had taken a public position on the ABM. During these hearings a number of former top scientific advisors on strategic weapons matters, including Bethe, Killian, Kistiakowsky, and York, testified against the Johnson administration's ABM proposal.

The objections of these scientists were of two basic types: technical—they felt that the proposed missile defense could be easily penetrated even by Chinese missiles; and strategic—they felt that the deployment of an ABM system was unnecessary and could trigger a new arms race with the Soviets. As time went on, however, the debate focused more and more on the technical objections. It was obviously the hope of many ABM opponents that the technical arguments

The Antiballistic Missile Debate

would be more effective than arms-race considerations in convincing Congressmen of all political persuasions to oppose the deployment decision.

Secretary Laird's List

When President Nixon, on March 14, 1969, finally announced his decision to deploy an ABM system, it turned out to be basically the Johnson administration's system with a different name, "Safeguard," and with the missile sites moved away from the cities—an obvious response to the opposition which had developed in many suburban areas against having nuclear weapons in their "back yards." (See Chapter 13.)

Nixon's Secretary of Defense, Melvin Laird, came to present this proposal to Senator Gore's subcommittee. But as he was giving his opinion that the deployment of the proposed ABM system would not trigger a new arms race with the Soviet Union, Fulbright interrupted:

SENATOR FULBRIGHT: Of course, I do not think that [the Soviets] are really very bothered about the ABM either, because I am sure they know, as nearly every witness outside the Pentagon knows, it is not much good. We have had a number of scientific witnesses who have said—

SECRETARY LAIRD: I hope you will listen to other scientific witnesses too.

SENATOR FULBRIGHT: I know the Pentagon.

SECRETARY LAIRD: Not from the Pentagon but outside the Pentagon.

SENATOR FULBRIGHT: Are there any outside scientists that are not either in the contracting business, working for your contractors or in your employ? What independent scientists are there? I would like you to name them.

SECRETARY LAIRD: I will be glad to supply you with a list.²²

When the list came back, it named eight scientists. Senator Gore invited four of them to testify: Detlev Bronk, who had served simultaneously as chairman of the DOD's top science advisory committee, the Defense Science Board, and as president of the National Academy of Sciences; Edward Teller, popularly known as the "father of the H-bomb," who was associate director of the Lawrence Radiation Laboratory at Livermore, one of the AEC's weapons laboratories; Eugene Wigner, Professor of Physics at Princeton, winner of the Nobel Prize for Physics in 1963, and former member of the General Advisory Committee of the AEC; and Gordon MacDonald, former vice-president of the Institute for Defense Analyses, a Defense Department "think tank." (At the time of the hearings MacDonald was Vice-Chancellor for Research and Development at the University of California at Santa Barbara, and a member of both the Defense Science Board and PSAC. He was shortly to be appointed by President Nixon to the new Council on Environmental Quality.)

Of the four scientists, three were willing to testify; Bronk asked in a letter to be excused from testifying, giving as his reason: "my opinions would be dangerously unqualified."²³

The other three testified but did not attempt to rebut the technical objections of the ABM opponents. Instead they supported the President's decision to deploy the Safeguard ABM system because they saw it as a long-awaited commitment of the nation to the idea of missile defense: Teller and Wigner in particular saw Safeguard as a step toward the development of a "heavy" system which would be designed to defend the U.S. population against Soviet attack.²⁴ Apparently it did not bother them that President Nixon had specifically rejected the mission of a Soviet-oriented population defense in his deployment announcement, stating his belief that an effort in that direction would only trigger an arms race between Soviet offensive and U.S. defensive forces which the United States could not win.²⁵

MacDonald was willing to endorse a very limited deployment of the Safeguard system if it were accompanied by a commitment to develop a system which could actually carry out one of the missions which President Nixon had given the Safeguard system—defense of some of the U.S. Minuteman missile bases against a possible Soviet first strike. MacDonald stated that "if properly emphasized, research and development could, in a short time, produce a system much better suited to defending our strike forces."²⁶

At the end of MacDonald's presentation Senator Gore commented:

There is a great similarity between the conclusion at which you arrive and that of Dr. Hornig which he has presented. Your logic is powerful. Thank you very much.²⁷

Hornig, formerly President Johnson's science advisor, had just testified against deployment.

It appears that the administration made an exception to its rules of confidentiality in volunteering MacDonald's services as a witness for the Safeguard ABM deployment. The other members of PSAC, who were almost unanimously of the view that the deployment of the Safeguard ABM system was senseless, were requested to keep these views confidential.

Deputy Secretary Packard's Consultations

Following Defense Secretary Laird's testimony before Senator Gore's subcommittee, a more detailed discussion of how the Safeguard ABM system would work was presented by Deputy Secretary of Defense David Packard. Packard had had the responsibility of directing the two-month-long review within the Nixon administration which resulted in the modified Safeguard ABM deployment proposal.

Toward the end of Packard's testimony, Fulbright asked for more information about who had participated in the review:

SENATOR FULBRIGHT: I think it would be very interesting to have before the subcommittee just who participated in the review and how, and in what depth it was made. The reason that particularly appeals to me is that this committee has done some reviewing too, with some of the leading authorities in the field of nuclear warfare. . . .

MR. PACKARD: The review utilized the full staff of the Defense Department, and those people that the Department had utilized for scientific evaluation. In addition to that, I have talked to some scientific people on my own about the matter, some people who have no connection with the—

SENATOR FULBRIGHT: Who were they who had no connection with the Pentagon? There is nothing classified or secret about this sort of thing is there?

MR. PACKARD: One of the men that I talked to, I have a very high regard for, is Professor Panofsky.²⁸

When Senator Fulbright asked the names of the other outside scientists Packard had consulted, he couldn't remember but promised to send Fulbright a list.

Two days later Panofsky appeared in response to an invitation to testify. A physicist and Director of the Stanford Linear Accelerator Center, Panofsky had been some years before the chairman of PSAC's Strategic Weapons Panel and was still involved in advising the executive branch on these matters. He had not (to the authors' knowledge) previously made public his views on the ABM.

Dr. Panofsky began as follows:

. . . To clarify the record I would like to state that I did not participate in any advisory capacity to any branch of the Government in reviewing the decision to deploy the . . . Safeguard system—I appreciate having had the opportunity of an informal discussion with Mr. David Packard, Deputy Secretary of Defense, several weeks ago prior to the . . . decision.

SENATOR GORE: To what extent was this? Was there an extended conversation over a period of time?

DR. PANOFSKY: About half an hour . . .

SENATOR GORE: Did you call upon him or did he call upon you?

DR. PANOFSKY: We happened to accidentally meet at the airport.²⁹

Panofsky thereupon went on to detail at considerable length his reasons for believing that the Safeguard ABM system deployment decision was "an unwise decision from many points of view, from the point of view of sound engineering judgment, economy, and stopping the arms race."³⁰

If this was the extent of consultation that Deputy Secretary of Defense Packard had had with Dr. Panofsky and this the type of advice that he had received from him, what about the list of other outside consultants he had promised Senator Fulbright?

When the list arrived it was entitled, "List of Scientists and Engineers Consulted by [Director of Defense Research and Engineering] Foster on ABM."³¹

Dr. Foster's Consultations—1969

The scientists listed as having been consulted by Foster were: (1) the members of the President's Science Advisory Committee; (2) the members of Foster's own advisory committee, the Defense Science Board; and (3) the members of the Defense Science Board Task Force on ABM. But when Fulbright followed up with a list of written questions to Packard asking for more details about the consultations, the replies revealed that (1) the President's Science Advisory Committee was "consulted" three days *after* Nixon had announced the Safeguard deployment decision; (2) the Defense Science Board had not been consulted at all during the review process; and (3) the Defense Science Board Task Force on ABM was consulted only once—at the end of the two month review process,³² three days before Nixon's announcement of the deployment decision.

Thus it became clear, despite the Defense Department's best efforts, that the outside scientists who had been so influential in helping to shape the Nation's strategic weapons policies for a decade had been almost entirely excluded from the Nixon administration's ABM review process. Indeed, all outside review was excluded. It appears, from the reluctance that was shown in admitting this fact, that the administration was more willing to forego the advice than it was to forego the support for the ABM which could be obtained by invoking the names of prominent advisory committees.

Dr. Foster's Consultations—1970

In 1969 the Senate authorized appropriations for construction of the first two bases of the Safeguard ABM system as a result of Vice President Agnew's tie-breaking vote. A year later the Nixon administration was asking for funds for additional sites. Once again Senator Gore's subcommittee held hearings.

This time three former Presidential science advisors (Kistiakowsky, Wiesner, and Hornig), a former Director of Defense Research and Engineering (York), and Panofsky were among those who presented the technical arguments against expansion of Safeguard.

The technical case for the administration was presented this time by Dr. Foster, Director of Defense Research and Engineering. Foster had not gotten far

into his testimony, however, when Senator Fulbright confronted him as he had Secretary Laird and Deputy Secretary Packard the previous year, with the impressive list of experts who had testified against further deployment of the Safeguard system:

What concerns me is the fact that there are so many scientific authorities in the United States, those not in the employ of the Defense Department, and many people who are not scientists, but who are knowledgeable about Soviet relations and have studied them for many years, and also have studied disarmament matters who think [further deployment] endangers the success of the SALT [Strategic Arms Limitations] talks. . . . You also know that every former Presidential science advisor is opposed to expanding Safeguard at this time.³³

Fulbright then went on to list some recent Department of Defense fiascos with advanced weapons systems. Some of these systems had cost billions of dollars more than the department had originally told Congress, and the performance of many had fallen so far short of specifications that it was not clear whether they could be used at all. He then continued:

In view of this record, I don't see how you can be so confident of your judgment about these matters. It really shakes my confidence as to whether the Department is capable of an objective view of these matters.³⁴

Foster was stung into making a rebuttal:

DR. FOSTER: Mr. Chairman, you have indicated the number of scientists who oppose this Safeguard deployment.

SENATOR FULBRIGHT: There are several grounds. They oppose it on the SALT talks alone. Then in addition they oppose it on the ground that it isn't technically feasible, at the present time at least.

DR. FOSTER: Well, Mr. Chairman, let me just simply point out that I asked a group of scientists to come together as an ad hoc committee and, before the Secretary of Defense made his recommendation to the President, review the program. I deliberately chose scientists who opposed the deployment of Safeguard as well as those who favored it.

In fact, as I recall, when they met there were more against it than for it. I had, however, one very simple instruction for them—to put politics aside and just ask the question: Will this deployment, with these components, do the job that the Department of Defense is trying to do? . . .

There was considerable concern about this move, but *the report sent to the Secretary of Defense said that this equipment will do the job that the Department of Defense wants to do. . . .* [Emphasis added.]

I think it is extremely important that, when you ask a scientist for his opinion, you make sure that you have found a way to rule out political factors, because, as you and Secretary Laird noted at our last hearing, the scientist doesn't have special competence in that area.³⁵

Here Foster appeared to be claiming that the Senators had not been

successful in forcing the scientists who had testified before them to keep their political beliefs from biasing their technical presentations. He also indicated his belief that he, an expert himself, had succeeded where the Senators had failed and that, when separated from politics, the technical considerations had turned out to favor the Safeguard system.

When asked to name the members of the ad hoc committee, Foster could not remember all of the names. Among those he mentioned, however, were Drs. Marvin Goldberger and Sidney Drell.³⁶ These scientists had in turn succeeded Panofsky as chairman of PSAC's Strategic Weapons Panel.

When the Senators asked to see the ad hoc committee report, they were told that it was confidential. Matters did not end here, however, because both Drell and Goldberger wrote to Senator Gore about Foster's representation of the conclusions of the ad hoc committee report (commonly identified as the O'Neill Report after the committee's chairman, Dr. Lawrence O'Neill, president of the Riverside Research Institute, an ABM contractor). Goldberger wrote:

I can only presume that the implication [was] that our panel supported the arguments presented by Dr. Foster and the Department of Defense in justifying the next phase of Safeguard to your committee.

*The report took no such position. [Emphasis in original.]*³⁷

Drell similarly wrote that "Dr. Foster's remarks indicate that we made recommendations that in fact we did not make."³⁸

Senator Gore of course invited both men to testify before his subcommittee. A few excerpts will give the flavor of their opinion of the Safeguard ABM system.

DR. GOLDBERGER: ... I assert that the original Safeguard deployment and the proposed expanded deployment is spherically senseless. It makes no sense no matter how you look at it.³⁹

... If there are enough highly accurate, large payload Soviet missiles to threaten Minuteman without any defense ... Safeguard is irrelevant.⁴⁰

... The Chinese will be designing their offensive missile force in the face of our emplaced system whose operating characteristics will be precisely known. Since they are not noted for their stupidity, they will in all probability take steps to counter the defense by the use of penetration aids, or circumvent it entirely by, say, attacking Hawaii if they just want to kill people or using aircraft or ships to attack West Coast cities with nuclear weapons.⁴¹

DR. DRELL: ... [Safeguard] simply fails to respond to the threats postulated by the Pentagon, and furthermore it is not cost effective.⁴²

SENATOR [CLIFFORD] CASE [D.-N.J.]: ... Your whole opposition to Safeguard is not in any way based upon any contempt or downgrading of ... Soviet capability?

DR. DRELL: No sir. It is merely a contempt for the capability of Safeguard.⁴³

This, then, was a sample of the anti-ABM opinion on PSAC which the Nixon

administration had chosen to conceal behind a wall of confidentiality in 1969 while offering Congress instead the ambivalent endorsement of Dr. MacDonald.

Release of the O'Neill Committee Report

After the devastating testimony of Drell and Goldberger, the Defense Department had little to gain by keeping the O'Neill report secret. The report was released a month later, on July 24, 1970.⁴⁴ It addressed the question of how well the Safeguard system would fulfill the missions that President Nixon had assigned it: (1) defense of the U.S. Minuteman strategic missile bases against a Soviet surprise attack (the mission to which the Nixon administration had given the greatest emphasis); (2) defense of the U.S. population against a nuclear attack launched from China (the mission which had originally been given to the system by Secretary McNamara); and (3) "protection against the possibility of accidental attacks from any source"⁴⁵ (a mission so ill-defined that it was hardly even discussed).

As to the first mission, the panel concluded:

The group believes that a more cost effective system for the active terminal defense of Minuteman than Phase IIA of Safeguard can be devised.⁴⁶

Regarding the second mission the panel reported a lack of consensus.⁴⁷

When Senator Fulbright put the O'Neill report into the *Congressional Record*, he commented:

[This] is not a ringing endorsement of the Safeguard system. . . .

We have had, in the past, a missile gap. More recently, we have experienced a credibility gap. We seem now to be combining the two in a missile credibility gap which emerges clearly from the record of the Defense Department in attempting to support claims that it has submitted the Safeguard system to independent outside review. The missile credibility gap was opened last year by Mr. Packard's implication that Dr. Panofsky had supported the Safeguard system. It was widened this year by Dr. Foster's assertion that the O'Neill panel had concluded that Safeguard could meet certain objectives. Two members of the O'Neill panel do not agree and surely they must know what they decided and recommended. One of the members of the O'Neill panel, Dr. Drell, went even further and said:

"All analyses of which I am aware make it clear that, if defense of Minuteman is the principal or sole mission of Safeguard, its further deployment cannot be justified."

For we who must rely on the informed judgements of others, as far as technical matters are concerned, Dr. Drell's statement stands as a severe indictment of the Safeguard system and calls into question the tactics employed by the Defense Department in seeking to make it appear that the scientific community supports the Safeguard system as an effective defense of our deterrent missile force.⁴⁸

The Invisible, Inaudible Authorities

We have seen in this chapter how executive branch spokesmen in an important national debate cited the experts while suppressing their reports. The evidence indicates very clearly that for the public to accept such statements at face value is an invitation to governmental corruption of the truth.

In science, the invocation of authority as a substitute for evidence was discredited in the Renaissance. Yet here we find government officials trying to revive this tactic in an effort to deceive the public. It is distressing to see how little criticism of this dangerous tendency has been offered by the scientific community.

Even if the abuses which we have described had not occurred, it would still be against the public interest to conceal the technical bases of public policy. The ABM debate shows that even the general capabilities of advanced strategic systems can be publicly debated without the disclosure of classified details of hardware or tactics. It is characteristic of scientific research that its practitioners are continually testing even the most well-established theories. No scientific statement is protected from question by the eminence of the researcher who has put it forward. Indeed, scientists often gain fame by finding unsuspected imperfections in the edifices raised by their revered predecessors. The technical information which forms the basis for public policy should certainly not be immune from similar reexamination. Although we have in this chapter considered instances where the federal executive branch appears to have had available technically competent advice—even though it did not want to hear it—there are many other instances in which government agencies have received dangerously inadequate or faulty advice. In these cases, some of which will be presented below, it has only been as a result of members of the larger scientific community “raising a ruckus” that government officials have become aware of the inadequacies in their information.

NOTES

1. Jerome Wiesner and Abram Chayes, eds., “Chronology of U.S. ABM Deployment Decisions, 1955-1969.” *ABM: An Evaluation of the Decision to Deploy an Antiballistic Missile System* (New York: New American Library, 1969), p. 227.
2. *New York Times*, November 20, 1957, p. 1; November 21, 1957, p. 1; November 30, 1957, p. 1.
3. *Ibid.*, January 24, 1958, p. 1; January 24, 1958, p. 6; July 26, 1958, p. 5.
4. *Ibid.*, October 19, 1960, p. 39.
5. *Ibid.*, November 19, 1960, p. 5; July 11, 1960, p. 4; July 17, 1960, p. 1; December 18, 1960, p. 1.
6. *Ibid.*, September 6, 1961, p. 3; October 31, 1961, p. 15.

The Antiballistic Missile Debate

7. *Ibid.*, January 6, 1962, p. 4.
8. *Ibid.*, April 19, 1962, p. 22.
9. *Ibid.*, March 30, 1963, p. 4.
10. *Ibid.*, November 9, 1963, p. 1; December 18, 1963, p. 50.
11. *Ibid.*, January 10, 1964, p. 1; January 11, 1964, p. 1; January 16, 1964, p. 1.
12. *Ibid.*, November 24, 1965, p. 1; December 1, 1965, p. 1.
13. *Ibid.*, April 29, 1966, p. 1; November 11, 1966, pp. 1, 18; December 8, 1966, p. 1; February 23, 1967, p. 10.
14. *Ibid.*, January 25, 1967; pp. 17, 20-21.
15. *Ibid.*, February 27, 1967, p. 7; May 4, 1967, p. 1.
16. Elinor Langer, “After the Pentagon Papers: Talk with Kistiakowsky, Wiesner,” *Science* 174 (1971): 923 ff; Anne H. Cahn, *Eggheads and Warheads: Scientists and the ABM* (Ph.D. thesis, MIT, 1971), pp. 37, 242.
17. *New York Times*, August 6, 1967, p. 17.
18. *Ibid.*, September 10, 1967, p. 1.
19. *Ibid.*, September 15, 1967, p. 1.
20. *Ibid.*, September 19, 1967. MacNamara’s speech is reprinted on p. 18.
21. *Ibid.*
22. U.S. Congress, Senate, Subcommittee on International Organization and Disarmament Affairs of the Committee on Foreign Relations, *The Strategic and Foreign Policy Implications of Antiballistic Missile Systems*, 91st Congress, 1st Session, March 21, 1969, pp. 204-205. This reference will hereafter be referred to as *ABM Systems*.
23. *Ibid.*, May 21, 1969, p. 561.
24. *Ibid.* Teller’s statement was on May 14, 1969 and begins on p. 501 and Wigners was on May 21 and begins on p. 551.
25. President Nixon’s announcement of the Safeguard ABM decision is reprinted in the *New York Times*, March 15, 1969, p. 16.
26. *ABM Systems*, May 21, 1969, p. 543.
27. *Ibid.*, p. 550.
28. *Ibid.*, March 26, 1969, pp. 306 ff.
29. *Ibid.*, March 28, 1969, pp. 327 ff.
30. *Ibid.*, p. 334.
31. *Ibid.*, March 26, 1969, p. 308.
32. *Ibid.*, letter from Packard dated April 15, 1969, reprinted on pp. 612-613.
33. U.S. Congress, Senate, Subcommittee on Arms Control, International Law and Organization of the Committee on Foreign Relations, *ABM, MIRV and the Nuclear Arms Race*, 91st Congress, 2nd Session, June 4, 1970, pp. 441 ff.
34. *Ibid.*, p. 442.
35. *Ibid.*
36. *Ibid.*, p. 501.
37. *Ibid.*, letter dated June 11, 1970, p. 522.
38. *Ibid.*, letter dated June 5, 1970, pp. 522-524.
39. *Ibid.*, June 29, 1970, p. 528.
40. *Ibid.*, p. 529
41. *Ibid.*, p. 531.
42. *Ibid.*, p. 554.
43. *Ibid.*, p. 578.
44. The O’Neill Report and correspondence related to its release are reprinted along with Senator Fulbright’s comments in *Congressional Record* 116 (1970): 27723-27728.
45. *Ibid.*, p. 27726.
46. *Ibid.*
47. *Ibid.*, p. 27727.
48. *Ibid.*, p. 27725.