News and Comment

Reaction to Snow: Scientists' Role in Public Affairs Draws Increasingly Heavy Criticisms

Ever since C. P. Snow told the world that scientists are smarter than other people and, therefore, should be entrusted with greater political power, an angry dissent has been developing.

This reaction would probably have come along even without Snow's provocative assertion, since a number of eminent scientists behave as though political infallibility is an unavoidable by-product of their professional training. In addition, since World War II, scientists, alone of all professionals, have organized on an extracurricular basis to volunteer their views on public affairs. Thus, it was inevitable that the question should arise, "Who are these people and what do they know?" But Snow is the one who stated the case for scientific primacy in public affairs, and he thereby made it easy for a lot of ancillary noise to become confused with an extremely difficult and poorly understood problem—namely, How can scientific knowledge best be brought into the formulation of national policy, just as, traditionally, military, economic, and legal knowledge has been brought into national policy formulations? This problem is worthy of all the attention it can get, for, unquestionably, it is extremely difficult to relate science to public policy, and no one is claiming satisfaction with the existing processes.

But under the impact of the Snow thesis and the influence that it has come to exert over much thinking about science and government, discussion easily slips into what amounts to the nonsensical question of whether we should permit ourselves to be ruled by scientist-kings. Maybe we should and maybe we shouldn't, but the day when this could conceivably happen is so remote that, as a subject of immediate concern, it qualifies with the eventual freezing of the earth. Nevertheless, it is easy to get hot and bothered about Snow's prescription, and, in addressing themselves to the grand issues of science and government, a number of commentators, directly or indirectly, have lately been wreaking immense verbal damage on Snow's windmill.

Just recently, for example, Robert M. Hutchins, former president of the University of Chicago, addressed himself to "Science, Scientists, and Politics," as a contributor to a series of papers published by the Center for the Study of Democratic Institutions. Whereas Snow offers us the dubious proposition that scientists are superior to the rest of mankind, Hutchins offers us the equally dubious proposition that they actually are inferior. Writes Hutchins: "I wish at the outset to repudiate C. P. Snow, who intimates in one of his books that scientists should be entrusted with the world because they are a little better than other people. My view, based on long and painful observation, is that professors are somewhat worse than other people, and that scientists are somewhat worse than other professors. . . . A professor's reputation depends entirely upon his books and his articles in learned journals. The narrower the field in which a man must tell the truth, the wider the area in which he is free to lie. This is one of the advantages of specialization. C. P. Snow was right about the morality of the man of science within his profession. There have been few scientific frauds. This is because a scientist would be a fool to commit a scientific fraud when he can commit frauds every day on his wife, his associates, the president of the university, and the grocer. Administrators, politicians (not campaigning), and butchers are all likely to be more virtuous than professors, not because they want to be, but because they have to be."

(Hutchins then goes on to state that a solution to the problems of science and society may well come from organizations such as the Center for the Study of Democratic Institutions, an offshoot of the Fund for the Republic, of which he is president.)

Now, Hutchins's contribution to the debate is quite witty and, in his days at Chicago he no doubt had to live with a number of problems that would cause anyone to rethink his attitude toward professors and scientists. But, when scientists get involved in public affairs—whether at the summons of the government or on their own initiative—it is plain that, in terms of morality, competence, and devotion to the public interest, they are no better or worse as a group than lawyers, admirals, architects, or even university presidents. The often referred to "scientific community" is not a monolith. After all, a lot of scientists wanted to drop the atom bomb on Japan and a lot of scientists didn't want to, and it is useful to keep in mind that Teller and Pauling both spring from the scientific community, which, incidentally, is composed of scores of thousands of persons who are revolted by the twisting of scientific evidence to suit political conceptions.

Social Responsibility

A companion piece to Hutchins's, written by Scott Buchanan, former dean of St. John's College, belabors science for its lack of social responsibility, and asserts that "the heaviest responsibility of the scientist to society may be to refuse to make himself useful." But it doesn't go into the question of responsibility to which concept of society. It is painless to declare that scientists should perform only socially useful work. But whose criteria should apply? When a few primitive radar masts made the difference between survival and destruction for Great Britain, it was politically, morally, and socially desirable for electronics specialists to put themselves into the war effort. When rocketry evolved into an effective means of warfare, was it any less desirable for these same people to put themselves into the missile program? Klaus Fuchs demonstrated one concept of social and political responsibility; thousands chose another concept, and it would be difficult to demonstrate that in producing atomic weaponry they were all utterly oblivious of the moral implications of their work. If there is any professional

group that is agonized by such implications, it is the nuclear scientists. After World War II, the engineers who produced the bomber fleets that pulverized Germany did not publicly display any troubled conscience; nor did the men who directed the nation's military forces. On the other hand, the public writhing of thousands of scientists speaks for itself, and if these people have so far been unable to resolve the great moral issue of individual responsibility versus the demands of organized society, they are in company that goes back at least as far as the Greek dramatists.

Another assault on the scientist in public life came this week from David E. Lilienthal, in a New York *Times Magazine* article titled "Skeptical Look at 'Scientific Experts.'" Lilienthal, who was the first chairman of the Atomic Energy Commission, writes that "we are in the midst of a crisis in the scientific community, and of a period of bewilderment, disagreement and anxiety about the role of science and the scientific method. . . . The crisis of confidence has its roots in concern that scientists and other experts and specialists have more and more been seeking to use methods applicable to the physical world in areas of the world of men that are beyond the reach of such methods: human goals and purposes, human priorities, motivations and conflicts.

"Many of the most noted of these experts and specialists," he continues, "have departed from their own fields of competence with a cocksure confidence that they can find answers—out of their scientific or technical knowledge or intuition—to what cannot be finally and firmly answered at all: the unimaginably complex and shifting *human* problems involved in the threat of nuclear warfare."

Strategic Theorists

Lilienthal then goes on to identify these persons as "physical scientists" who have sought a "Single Solution to the threat of nuclear war in arms control or world government," and "methodologists" and "policy analysts" who "believe they have evolved a method for determining the right policies for our Government to forestall nuclear war, or, if war should come, to win it."

To the extent that these groups do exist within the scientific community, Lilienthal is correct in asserting that, for better or worse, they do exert considerable influence. But, again, we are offered a theory that assumes the scientific community to be a monolith. Lilienthal, for example, would burden the whole scientific community with responsibility for the theory "that the H-bomb would meet all of our conceivable military needs; that general disarmament 'now' must have priority over every other issue on the road to peace. . . ." The fact is, however, that dependence on the H-bomb as a comprehensive military doctrine was an Air Force concept that was worn down by arguments that, in large part, originated within the scientific community. Furthermore, while many scientists have been addicted to instant disarmament, many more have advocated the view that realism calls for the slow development of so-called confidence-building measures before major steps could be taken.

Defense Policies

As for the "methodologists"—derogatorily referred to as McNamara's "whiz kids" when the setting is the Defense Department—seemingly absurd examples of game theory can be adduced to ridicule their efforts, and Lilienthal manages to come up with a couple of very good ones. But the basic issue isn't whether a bit of foolishness creeps into the system; rather, it is whether traditional military thinking is to determine our policies for the unprecedented problems of the nuclear age, and whether the selfish and narrow orientation of the individual military services is to be dominant when national resources are allocated for defense purposes, or whether some attempt is to be made to introduce rationality into handling the problem of who gets what and how much. What case can be made for two services building duplicate missile systems at enormous expense? If the aircraft carrier, which costs a quarter of a billion dollars to build, is actually obsolete, wouldn't it be better to find this out as soon as possible? And are the aircraft carrier admirals the best judges of the issue? It's worth recalling that, if cerebration rather than tradition had dictated the matter, the fate of the cavalry wouldn't have had to be decided upon the battlefields of World War I.

Lilienthal and others are right when they point out that scientists in public affairs can be just as idiotic as the next fellow. But the significance of this observation is easily lost between Snow's demand for enthronement of the scientist and the informed layman's justifiable outrage when a scientific reputation is exploited to exert influence in a nonscientific field. This neither means that the Academy should nominate the next President nor that anyone who knows which end of a test tube is up should be run out of government. And it certainly doesn't mean that the scientist should be held to a stricter standard of morality than, let us say, the economists who advise government. What the situation does call for is the realization that scientific knowledge, properly used, can be immensely useful to the processes of government and the national well-being; that no scientist can bat 1000 in advising the government; that the extracurricular kibitzers advising government from within the scientific community should be judged on the merit of their advice, and that when they fall on their faces (which they often do) it's not a signal for everything scientific to be ousted from the councils of government. After all, if this harsh standard applied to the legal profession, three-quarters of the Congress and half of the executive agencies would be sent packing from Washington tomorrow. Instead of employing their considerable talents to decry the presence of science in government, the critics might address themselves to the real issue, which is how a democracy can incorporate into its political processes a body of knowledge that is largely beyond its comprehension.—D. S. GREENBERG

NASA: Talk of Togetherness with Soviets Further Complicates Space Politics for the Agency

The National Aeronautics and Space Administration this week marked the fifth anniversary of its establishment, and in some respects it was not the happiest possible birthday for NASA. Congress, which until this year had acted the indulgent parent, has taken a much firmer grip on the purse strings and has begun demanding a stricter accounting from the agency. In recent months a somewhat belated debate on the pace and pattern of the national space effort has flared up within the scientific community, with criticism centering on plans for a manned landing on the moon in this decade. And President Kennedy's recent gambit