Keyworth Gives First Policy Speech

Emphasizes need to choose well those areas that will be most scientifically productive

George A. Keyworth, II, science adviser–designate to the President, took the occasion of the AAAS's annual R & D Colloquium to outline his philosophy and give the scientific community its first chance to size him up. A nuclear physicist, he comes to Washington from the Los Alamos Scientific Laboratory, where he has worked since 1968.

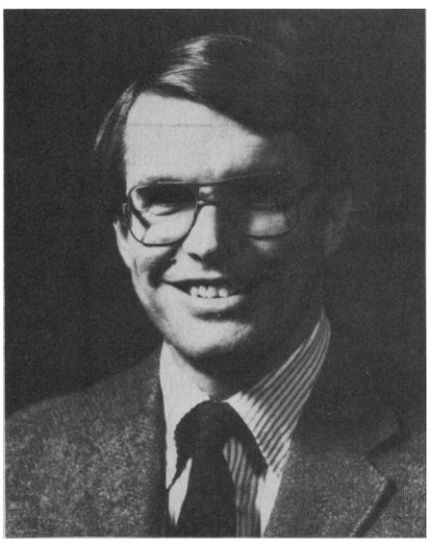
In his address and in an earlier interview with *Science*, Keyworth made it plain that he supports President Ronald Reagan's emphasis on "economic recovery" as the nation's number one priority, even if that means that federal research and development budgets will have to be constrained. Keyworth rejects the idea that a massive infusion of funds is, alone, the way to maintain a vital research base. Rather, he believes that the scientific enterprise can fluorish if he, along with advisers in the community at large, will make decisions about which disciplines should receive the greatest support and which more modest funding during this time of limited budgets. "I do not think that you can rank research areas 1 through 50," he told *Science*, "but you certainly can identify the top 10 and the bottom 10. Those areas that are most exciting and those most necessary to the economy or national defense should be supported at a higher level than areas that are dormant. I just don't go along with the idea that you can't make valid judgments in this."

Keyworth, whose appointment as White House science adviser and director of the Office of Science and Technology Policy (OSTP) has yet to be confirmed by the Senate, judiciously declined to name those fields he would rank among the bottom 10. But he did cite molecular biology and genetics, weak interaction physics, agricultural research, mathematics, and computer sciences as being among those disciplines that rank high on the list for federal support. "I don't think you want to cut off funding in any area because fields that are dormant now may be fertile in a few years," he said. "But I think it does make sense to give an extra 5 to 10 percent to areas that are particularly active scientifically or needed in the national interest."

Ranging over the whole spectrum of questions about science and science policy, Keyworth defined his job as that of adviser to the President, not as a lobbyist for science. ". . . Nowhere is it indicated that the OSTP or its director is to represent the interests of the scientific community as a constituency," he said, noting that to function as an "inside lobbyist" would only diminish his influence in the White House, where he is perfectly comfortable working as a "team player" with the President's other advisers. And, replying to a question, he said quite firmly that he had no intention of resurrecting a presidential advisory committee modeled on the old President's Scientific Advisory Committee (PSAC), of which the old guard seems to be so fond. Keyworth did say, however, that he intends to establish some kind of advisory mechanism for his office, "beyond just relying on friends within the scientific community." As yet, he has not decided what form he would like an advisory body to take.

Keyworth puts international cooperation high on the list of things he cares about and is not concerned that America is not first in everything. "Undoubtedly, our country has relinquished its preeminence in some scientific fields, while others are strongly threatened through efforts in Europe, Japan, or the Soviet Union. It is no longer within our economic capability, nor perhaps even desirable, to aspire to primacy across the spectrum of scientific disciplines," he said. He acknowledges that one can make an argument, for instance, for Soviet supremacy in plasma physics and European preeminence in high energy physics. Clearly in favor of collaboration in areas of expensive big science—building gigantic accelerators is an example—Keyworth admitted that our relations with other nations will depend on the steadfastness of our commitments. U.S. withdrawal from the long-planned solar-polar satellite mission is, he thinks, something that should not have happened. In the Office of Management and Budget (OMB), the "impact [of that cut] on our European colleagues was not fully appreciated," he remarked. The decision was made before the President got around to designating a science adviser. "In the future," Keyworth said optimistically, "I hope to work closely with OMB so that things like this will be revealed before they happen."

Keyworth also says he is working with OMB on cost and time accounting issues



George A. Keyworth

Science adviser, not lobbyist, in the White House

represented in what is known as OMB Circular A-21. Diplomatically saying that his sympathy lies "50-50 with each side," he predicted that OMB can be moved to compromise on the issue if only the academic community will do the same. Referring to the particularly galling provision in the circular that requires scientists to account for every moment of their time, Keyworth said that as a scientist, he "rebels at the thought of punching a time clock."

Inevitable questions about his stand on social and behavioral sciences elicited a plea for patience from Keyworth on grounds of being new to town and generally unfamiliar with those areas of research. He did note, somewhat pointedly, however, that what he is interested in is learning about the "real impact of these cuts," not just that they are disproportionate with respect to the physical and biological sciences.

No science adviser could meet the press these days without being asked

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about creationism and the "human life bill" that is now being debated in Congress. On the former, Keyworth says simply, "Creationism is not a scientific theory but one based on faith." Ducking any statement about the political implications of that view, he said only, "Whether it should be taught in the schools is a question beyond the scope of this office." Likewise on human life, "The question of just when life begins is a moral, not a scientific issue," he affirms.

Still regarded as very much an outsider by the science policy establishment, which is used to knowing the scientist in the White House before he comes to Washington, Keyworth is devoting hours to meetings and dinners that will remedy this perceived deficiency. In this regard, it is worth noting that, in 1980, that very establishment included him in its ranks when he was elected to the Cosmos Club. That ought to count for something.—BARBARA J. CULLITON

Reagan Officials Discuss Science Budget

But they avoid answering questions about some controversial cuts in education, social sciences, and international programs

The broad themes of the Reagan Administration science budget were explained at the recent AAAS colloquium on federally funded research. Murray Weidenbaum, chairman of the Council of Economic Advisers, told an audience of several hundred scientists from government, industry, and academia that basic and applied research efforts will continue to receive the Administration's support in future years, but that a sharp line will be drawn at funds for commercial development of new inventions.

"Commercialization can best be done commercially," Weidenbaum said. He said he thought industry should assume a greater responsibility for research and development in the future, and noted that the federal share of R & D spending has dropped from 56 percent in 1972 to 47 percent in 1981, while industry's contribution has risen from 41 percent to 49 percent. "That is a trend that I and my colleagues in the White House would like to see continued," he said.

Weidenbaum and Glenn Schleede, associate director of the Office of Management and Budget, also explained how the scientific community might benefit from portions of the Administration's recent tax proposal. The bill, which is still under debate in Congress, would permit accelerated depreciation of equipment used in research and development, and would also allow a tax credit for firms that hire more scientists than are now employed. Schleede also noted that scientists will share in the economic benefits from a lower rate of inflation, magnifying the effects of the small budget increases for a few areas of research.

At one point, Weidenbaum declared that "good budgeting is a uniform distribution of dissatisfaction." Evidence that the policy had met with success was plentiful at the colloquium, where researchers queued in long lines at a microphone to assail the Administration for some of its budgetary cuts.

The Washington audience was clearly concerned about the Administration's plans to cut $100 million from the education, social sciences, and international budgets of the National Science Foundation and other agencies during fiscal year 1982. Scientists from several fields made forceful arguments about the contribution of education to the nation's future productivity, and about the importance of maintaining ties with researchers outside the United States. "Someone has described the cutbacks in economic research and development as vindictive, arrogant, and ignorant. Would you care to comment on that?" an economist asked Weidenbaum. He smiled and replied that the cuts were neither arrogant nor vindictive, and said he had not been involved in the decision. He also said he is doing nothing to discourage his professional colleagues from writing their congressmen.

> "Good budgeting is a uniform distribution of dissatisfaction," said Murray Weidenbaum, chairman of the Council of Economic Advisers.

For many in the audience, it was the first opportunity to voice their discontent. For the officials, it was an opportunity to see the depth of the research community's concern.

Both Weidenbaum and Schleede avoided saying exactly why the cuts were made, and at whose specific direction. Schleede remarked simply that "it was the judgment that these were of lower priority than continued funding for basic research in the physical sciences," which will receive a modest budget increase. Both officials said that the need to prepare the budget in haste after Reagan's inauguration had limited discussion. Michael Telsin, an aide to Representative Jim Jones (D–Okla.), chairman of the budget committee, told the scientists that in his view political priorities—and not principled decision-making—were behind the science cuts.

Several in the audience were skeptical about the importance of the Administration's tax proposals. Robert Shriner, director of Washington operations for Chase Econometric, says that interest rates have more influence on private spending for research than taxes do, and that as long as interest rates remain high, research will remain an unattractive investment. Several scientists noted that in any event the President's tax credit proposal will not be available to firms that hire social scientists and behavioral researchers, and thus it does nothing to mitigate the impact on that group of the budget curtailment.

No one was cheered by the prediction of Elmer Staats, former controller general of the United States, that fiscal pressures on scientific research will only increase in coming years. Staats noted that the Administration intends to continue its buildup of defense and sustain the reduction in taxes, while also striving

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