Carter Aides Lament Research Decline

Key officials of the Carter Administration are concerned about downtrends in the level of support for basic research, but economic constraints may make it difficult to pump more money into the nation's laboratories.

Such was the gist of comments made by a number of Administration officials, congressional staffers, and close observers of the Washington scene at the second annual AAAS-sponsored colloquium on "Research & Development in the Federal Budget." Some 250 participants attended the conference, which was held at the Sheraton National Motor Hotel in Arlington, Va., on 15 and 16 June, with financial assistance from the Sloan Foundation.

Two of the Administration's top money managers—W. Bowman Cutter, executive associate director for budget in the Office of Management and Budget, and William D. Nordhaus, newly appointed member of the Council of Economic Advisers—gave speeches stressing the importance of investing in basic research to sustain economic growth. They lamented that federal expenditures for basic research have declined steadily in real terms (taking account of inflation) for the past decade or so. The drop was almost 22 percent between 1970 and 1976. They also suggested that this downtrend might be related to what Nordhaus called "an alarming rate" of decline in productivity growth—from 3.5 percent in the period 1948–1955 to only 1.9 percent in the period 1965–1976—although both acknowledged that the causal connection could not be proved.

But whether the Administration's concern over funding trends will lead to greater spending on basic research remains uncertain. Various speakers noted that President Carter has pledged to balance the federal budget by the end of his first term, an effort that is virtually certain to restrict spending on "controllable" budget items, of which research and development are prime examples.

Some speakers suggested that the President's determination to use "zero-base budgeting" procedures may prove harmful to research budgets. The gist of the zero-base budgeting approach—which was developed by the TRW company and applied in Georgia while Carter was governor there—is that *all* proposed expenditures for a given budget package are reviewed and challenged, not just the incremental changes that have been proposed as modifications in the previous budget levels. Thus, entire programs may find themselves challenged and perhaps abolished, whereas in previous years haggling focused on how much to increase or decrease those programs.

Budget official Cutter suggested that basic research and R & D are "particularly vulnerable to casualty in this kind of process" because one can "turn them on and switch them off" without noticing much immediate effect; the results become apparent only years later. But President Carter is sensitive to the need to view research in a "broad perspective," he added, and there is no reason to think that budget decisions will be arbitrary. Some participants viewed zero-base budgeting as a threat to research funding; others predicted it would have no particular impact on funding levels; and one suggested it was a threat only to research of low quality.

Participants came away with differing impressions of the prognosis for research funding. Robert Hirsch, a former government energy official who is now with Exxon Corp., found the message "pretty grim" for basic research in the immediate future. But William D. Carey, the AAAS executive officer, saw "a mixture of light and shadow" with encouraging signs that "basic research has won some powerful friends in high places."

The colloquium touched on, but did not discuss in depth, a proposal for new budgetary procedures developed under AAAS auspices by Willis H. Shapley, a former federal budget official and space agency administrator.* Carey said AAAS officials will explore these concepts further with the Carter Administration.—P.M.B.

*The proposal is set forth in *Research & Development in the Federal Budget: FY 1978*, by Willis H. Shapley, Don I. Phillips, and Herbert Roback, available from Department L, AAAS, 1515 Massachusetts Ave. NW, Washington, D.C. 20005, $5.50 (AAAS member price: $4.95). For instructions on ordering the previous year's report, or both reports at a special rate, see *Science*, 17 June, p. 1264.

tions satellite] technology and gain routine access to [it], the Senate and individual senators could schedule "town meetings" with groups of constituents on a reasonably frequent basis.

. . . Yesterday's experiment by the science subcommittee was limited to a closed circuit link between the Senate hearing room and the witnesses in Springfield. But the same technology can be used to direct public service broadcasts to local stations, allowing live or delayed telecasting of hearings or debate in any state or region which may be affected by a particular bill or committee investigation.

I believe this opens the prospect for a new era in representative democracy.

Videoconferences are, of course, already familiar to viewers of both commercial network and Public Broadcasting Service (PBS) news programs—for instance, a few months ago PBS reporters arranged a discussion of western drought problems between Secretary of Agriculture Bob Bergland in Washington and Governor Jerry Brown in California, with the reporters also participating. Such videoconferences, generally transmitted by commercial land lines, have entailed up to several thousand dollars an hour in transmission charges. But Wood says that transmission of videoconferences via one or more commercial satellite channels leased by the Congress on a continuing basis could be relatively cheap, perhaps averaging well under $100 for each hour a channel is actually used if a brisk demand for this service develops.

But the videoconference is still so new that development of a substantial congressional demand for this kind of communications service may have to await more pioneering effort and demonstration projects. According to Wood, more than a dozen senators and representatives—out of about 20 who were approached—were interested in participating in his project, but, given limitations of time and money and the complexity of scheduling the videoconferences, it has thus far been possible to arrange only the three already described. Once these have been completed and fully evaluated, it will then apparently be up to interested members of Congress such as Rose and Stevenson to try to bring about further congressional use of videoconferences.

Already Congress has put some of its old-fashioned ways behind it and become more receptive to the idea of applying modern communications technology to its activities. For instance, the House is just now winding up a test of closed-circuit television coverage of its floor proceedings, a test which has allowed members with offices in the new Rayburn House Office Building (which is