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## A Policy-Oriented R & D Budget

Human nature being what it is, the annual appearance of the President's budget tends to rivet attention on the bottom line. That is fair enough but hardly good enough. What counts is understanding the reasoning behind the numbers for what can be gleaned about the quality of the decision-making that led to the results.

Mr. Carter's budget for fiscal 1979 shows his striking willingness to get on with shaping public policies for government's role in scientific research and development. Federal commitments to R & D will go up in 1979. Congress willing, but not just because more is better, nor simply to pump up the country's relative share of the gross national product assigned to R & D. Those arguments have never had much force, and it is well to lay them aside.

It is not often that White House speech writers will let a President use the State of the Union Message to single out science and technology as strategic goals of national policy. Such words do not excite the needles on the applause meters. The President had to mean it when he went out of his way to place priority on strengthening the nation's research centers and encouraging a "new surge of technological innovation by American industry." The implicit judgment behind the words is that not all is going well with the vitality and enterprise of our scientific and technological effort, and that the Administration has come to see value in a convergence of science policy with economic growth policy. This is no trivial breakthrough.

No less striking, in terms of reorienting science and technology policy, is the appearance of the term "investments" in the jargon of the budget documents explaining R & D decisions. This has been a long time in coming and we hope it is here to stay. The implication is that government outlays for R & D now are to be viewed not merely as year-to-year expenses but instead as allocating resources to produce long-term returns. The purchasing philosophy that has for so long dominated the government's R & D funding will, one hopes, be overtaken by an investment mentality in which scientific discovery and development are recognized (and evaluated on the proper scale) as growth enterprises requiring long perspectives, confidence, and stability. If this is to be the new departure in federally funded R & D, new funding methods may need to be devised and tested as replacements for the "procurement" approach in supporting R & D.

The Carter budget for R & D also helps to reveal the workings of zero-based budgeting for resource allocation under tight constraints. Zero-based budgeting has not turned out to be a blunt instrument. If anything, it appears to have brought something to the clarification of government's views toward support of R & D in the civilian sector. Public policy has been ambivalent about where the line is to be drawn between government and the private sector in research, development, and demonstration. The decisions in the 1979 budget may go a long way toward settling that question. The appropriate role of government, we are told, is to emphasize longer-term research for the future and new technology options, rather than major commercial scale demonstrations. It is a logical position, assuming that government also understands that the market economy's abilities to supply risk capital will require both incentives and the removal of barriers whose continued presence can reduce such a sensible proposition to ideology without substance.

The 1979 budget for R & D will take close study and inspection before we can arrive at judgments about the merits of particular choices and decisions. This is one of the uses of the annual AAAS analysis of the R & D budget and the June Science Policy Colloquium. But while the Budget Message is still fresh there is value in searching it for signs of new directions in national policy for science and technology. Viewed from here, it rates excellent marks.—WILLIAM D. CAREY

# Science

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WILLIAM D. CAREY

*Science* **199** (4330), 733.

DOI: 10.1126/science.199.4330.733

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