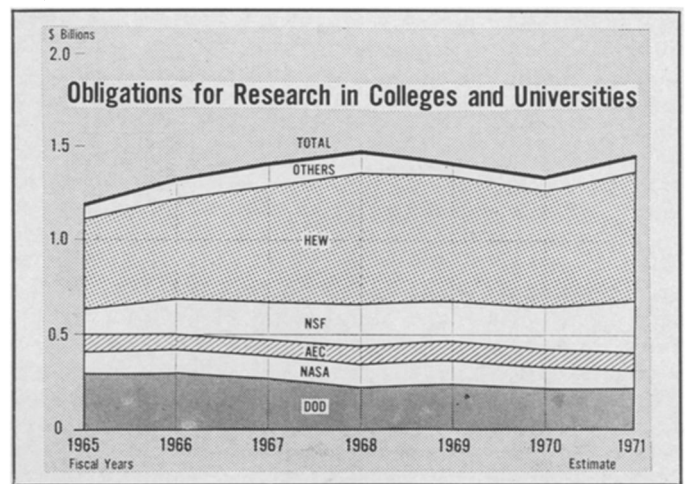


## Shifting priorities in Nixon's first budget

The first independent budget of the Nixon Administration leans on the environment, respects research selectively



When President Nixon in New York in 1968 delivered his policy statement on science, as a candidate for the presidency, he was most concerned with the nation's level of military preparedness and the need for expanded research in support of the nation's defense establishment.

And when last spring he issued the first budget of his Administration (SN: 4/26, p. 399), he had had little time and freedom to do more than some minor fiddling with the priorities and programs established by the Johnson Administration.

Since then, several things have happened. The still-Democratically controlled Congress has forced on the Administration the realization that priorities, in science and technology as well as elsewhere, must be reassigned.

**Congress** not only imposed a massive review of once-sacrosanct Defense Department budgets, requiring that Defense divest itself of basic research not directly related to national security (SN: 12/13, p. 550), but also rammed through in the face of a promised veto a fatter appropriation for health and education than the President had any intention of spending (SN: 1/31, p. 121) and forced on a then-reluctant Administration an extra \$546 million

for pollution control (SN: 11/15, p. 448).

This was more than what might simplistically be called a battle between a liberal Congress and a conservative President; more likely it was the Congress being more responsive to popular voices than the more insular Administration.

But concern for domestic problems—magnified by the erupting concern over environmental questions of all kinds in all levels of society—was being heard in the land.

**And this week**, when President Nixon delivered his first fully independent budget to the Congress for fiscal 1971, it became clear that the message had come across, loud and clear. Gestures, inclinations, some diversion of funds and some inexpensive starts on what could later become major efforts in domestic problem areas, were evident. And science and technology, especially where they are relevant to such concerns, were singled out for support.

In a \$200 billion, hopefully anti-inflationary, budget, in which programs were cut or held to a minimum on many levels, President Nixon found room, particularly in the Government's science and technology programs, to

make good on his promises of environmental concern. He has apparently laid a base, of seed money at least, to provide the research and the research arsenal needed to make an intelligent attack on problems of environmental quality, health, population, urban glut, transportation and a range of other domestic problems. There are tradeoffs. Science education, for instance, is being held back for what is felt to be a long-needed review of funding techniques and needs.

**But on balance**, it is apparently a budget designed to do as little harm as possible to the nation's research base. The gross totals, \$15.8 billion for research and development in the fiscal year starting next July 1 compared to \$16.4 billion for the current year, are changed relatively little.

But it is a budget in which a massive shuffling of priorities is evident. Gross spending for the conduct of research, for instance, absorbs healthy chunks of funds made available by the tailing off of major development programs of the Department of Defense, the National Aeronautics and Space Administration and the other big-spending R&D agencies.

And though the total may be relatively insignificant compared to the

gross R&D totals, funds that go to support research in colleges and universities show the sharpest proposed increase of all the categories of R&D spending. Realization of the growth, however, may be a year off.

**Fiscal 1971's** spending on development programs by all Federal agencies is off only \$335 million from this year's \$9.47 billion. But for the future, the new spending authority the President seeks for development projects is down twice as far to \$9.4 billion, compared to this year's \$10.1 billion and 1969's \$10.3 billion.

And in the overall support and conduct of research, as distinct from development, the proposed spending level for fiscal 1971, at \$5.574 billion, is up \$124 million. But the new research authority Mr. Nixon is requesting for the Congress would double that growth, going to a \$5.8 billion level from this year's \$5.5 billion.

Even that is only a 5.5 percent jump, barely enough to keep up with the estimated 5 percent annual increase in the cost of doing research.

It is in the university research area that the increase exceeds, even if only slightly, the inflationary climb in expenses, bringing the authorization request back up to the 1968 level.

This is not an effect that will be felt during the budget year starting July 1. Spending for the year will be held to \$1.475 billion, just a bit above this year's \$1.45 billion.

Where the jump comes is in the request for authority to spend beyond that in future years; there the President is seeking a 7 percent increase from this year's \$1.4 billion to \$1.5 billion.

The slightly more than \$100 million in new money will not be evenly distributed. It will be felt most in the areas being given the highest priority: almost \$60 million for researchers doing work for the Department of Health, Education and Welfare, with the emphasis on health, and \$35 million more for the National Science Foundation, which fares best of all research agencies on a percentage basis. NSF is being given a sharp, new twist in the direction of support for interdisciplinary research in ecological and environmental problem areas. This is where a need is being sharply felt for such an innovative funding approach (SN: 1/10, p. 44).

**Atomic Energy Commission** and NASA university-support programs have both come in for cuts, while such other problem-oriented agencies as the Departments of Agriculture, Interior and Justice are expecting to be spending more money with universities in such areas as pest-, pollution- and crime-control research. Defense Department cuts in support of university research

are minimal: a bare \$81 million in 1971 spending and \$3 million in authorized funds. But Defense had already trimmed both categories back some \$25 million to accommodate to Congressional demands.

Presidential Science Adviser Dr. Lee A. DuBridge says that in the last days of the budget-writing process, when all

agencies were taking what Budget Bureau Director Robert P. Mayo called "one last turn of the screw," the important research programs were relatively unaffected.

In the succeeding stories, the editors of Science News will review significant aspects of the first Nixon budget proposal in greater detail. □

## SCIENCE FOUNDATION

### Interdisciplinary research mechanism

During the years since its founding in 1952, the existence of the National Science Foundation has come to be justified in a number of ways. It has been called the flywheel agency, supporting good basic science that could not be justified in the budgets of more mission-oriented agencies. It has also been called a pilot agency, developing for university-based research support techniques, which, if they work, would be adopted by other, fatter agencies.

The problem has been one of justifying the existence of an agency with no function other than the support of basic research in a Government lacking a coherent science policy beyond the exploitation of science's role in the fulfillment of a Government mission.

**This year** the Science Foundation seems to be coming into its own, developing its own justifications. But the change has been accomplished because the Foundation has learned to live by the rules of an applications-oriented Government, rather than because the Foundation has taught the Government to live by the somewhat ephemeral rules of basic science.

Consequently, in the budget President Nixon sent to Congress this week, the Science Foundation was singled out among Government agencies for an increase—from \$440 million this year to \$513 next—which, while not large in absolute dollars, more than holds the line for university scientists with shrinking alternative sources of Federal funds.

The effects will not be felt immediately.

President Nixon has ordered the Foundation not to spend any more during the year that starts July 1—fiscal 1971—than it is expected to spend during the present 1970 fiscal year: \$489 million.

But he is seeking authority to expand the Foundation's general spending base to the \$513 million level. The difference is that for many of its programs the Foundation is not required to spend its entire authorization figure in a single year.

Thus the growth from one budget to the next in authorized funding should be seen as more significant for the longer haul than as an index of the

PROGRAMS	Actual FY 1969	Esti- mate FY 1970	Esti- mate FY 1971
Scientific Research and Facilities Support ..	\$183.2	\$181.0	\$196.2
National and Special Research Programs ..	49.0	68.0	102.2
National Research Centers .....	28.6	27.2	37.1
Institutional Support for Science .....	37.7	41.5	55.5
Science Education Support .....	115.3	121.7	96.9
Program Development and Management ..	18.8	22.0	23.4
Subtotals .....	432.6	461.4	511.3
Misc. Adjustments ..	— 32.6	— 23.4	— 0.3
Total Salaries and Expenses .....	400.0	438.0	511.0
Foreign Currency Appropriation .....	0	2.0	2.0
<b>Total NSF Programs ..</b>	<b>400.0</b>	<b>440.0</b>	<b>513.0</b>

NSF

### Science Foundation: Generally up . . .

Major Program Increases	
<b>Scientific Research Project Support</b>	
Increased Proposal Pressure .....	\$10.0
Problem-Oriented Research .....	5.0
<b>National and Special Research Programs</b>	
New Programs	
International Decade of Ocean Exploration ..	15.0
Arctic Research Program .....	2.0
Earthquake Engineering .....	2.0
Ongoing Programs	
Interdisciplinary Research on Problems of Society .....	
National Sea Grant Program .....	3.0
International Biological Program .....	3.0
Global Atmospheric Research Program ..	0.5
<b>National Research Centers</b>	
ARECIBO (First Full Year NSF Funding— Resurfacing of Telescope) .....	4.4
National Center for Atmospheric Research (Computer Acquisition) .....	2.5
<b>Institutional Support for Science .....</b>	<b>14.0</b>
<b>Program Decreases</b>	
Supplementary Training for Secondary School Teachers of Science and Mathematics ..	
Graduate Traineeships .....	— 9.4

NSF

### . . . at the expense of education.

actual dollars to be made immediately available to scientists. And in a time of declining research support the increase in new obligational authority can be seen as an important omen of things to come.

Within those limitations, consequently, the President's request is significant for the future of the National Science Foundation, a significance that may assure the agency a more friendly reception before Congress than it has received in recent years.

**Of the \$73 million** in increased spending authority the President is seeking for NSF, says Director William D. McElroy, somewhere between \$55 million and \$60 million is expected to be spent on and in support of a new