

tional system" as a result of previous budget stringencies. For the first time, Bennett said in an interview with *Science*, attention has been focused on "getting funds into universities so they can operate as universities," rather than "just to get new knowledge." This attitude is particularly well reflected in the Defense Department budget, which is expected to boost support of academic research from \$240 million to \$295 million, thus wiping out declines in the 2 preceding years. According to Bennett, the Defense budget is making "a deliberate attempt to help the engineering and physical sciences" because "it's becoming obvious right now that fairly important groups in universities will get sawed off because funds are not available." The outstretched hand of the De-

fense Department may offend some academics, but in a tight budget year the military agency may well prove the easiest vehicle for channeling funds into the nation's universities.

Even though the new budget would heal some of the wounds suffered by academic institutions, it provides no cause for unrestrained joy in university laboratories. Part of the academic boost will go for nonscientific activities such as educational research and vocational rehabilitation work; part represents a restoration of advanced funding that was cut back last year, rather than an actual increase in project activity; and, coming on the heels of a miniscule 2-percent increase last year, there is some doubt that the proposed 13 percent boost in academic support will be

enough to catch up with burgeoning graduate enrollments. "The academic research situation is tight and will remain tight," says Hornig.

Following are some highlights from the proposed budget.

Fellowships and traineeships. An analysis prepared by the Office of Science and Technology indicates that the budget proposes to restore the number of new predoctoral fellowships and traineeships to the level of 1967, thus reversing a sharp decline in the current year. The analysis reveals that five major agencies hope to offer about 15,400 new awards in 1969, up from 12,500 this year and about even with the 15,300 awarded in 1967. The 2800 drop between 1967 and 1968, though steep, was less than the 5000 drop that some analysts had predicted last fall.

National Science Foundation. Director Leland J. Haworth told a press conference that NSF had asked for "significantly more" than is proposed in the President's budget. The budget calls for increasing NSF's program obligations from \$506 million in 1968 (including \$21 million recovered from Project Mohole) to \$527 million next year (including \$27 million from funds that were frozen in reserve this year). The budget proposes steep drops in institutional support of science, from \$85 million to \$69 million, and in new commitments for research facilities. It would boost the number of grants for support of basic research projects from 3722 to 3995, thus reversing a slight decline in the current year. An administration analysis says the NSF budget provides a "significant increase" in support of basic research in physics, partly in order to assume projects previously supported by the Defense Department, and continues to emphasize programs in oceanography, atmospheric sciences, chemistry, and social sciences.

National Aeronautics and Space Administration. The space agency, which suffered the deepest cuts of any research-oriented agency in 1968, comes in for further gouging in the new budget. NASA's total budget plan would be cut to about \$4.4 billion, a drop of about \$280 million from the current level. The reduction, according to the Administration, primarily reflects the fact that the Apollo manned lunar mission has progressed from the costly development phase to operational use of the systems. The budget proposes small increases—but less than originally planned—for development of a nuclear rocket engine and for the

Budget Cuts: Study Finds Effects Yet To Be Felt

Universities are yet to feel the full impact of the sizable reductions that the Department of Defense (DoD) and NASA made this year in support of academic activities, according to a survey that DoD conducted in 33 universities.

A DoD staff memorandum based on the survey states that Defense and NASA funding in universities during the current fiscal year will be down by 24 percent from the previous year. But the memorandum, dated 21 December, notes that the effects of these cuts are just now beginning to be felt in the universities. "They realize it is going to get worse, will probably peak next spring," the memorandum states. "There is much more concern at the professorial level than at the executive level. Professors are in constant contact with their project officers who, in many cases, are very skeptical about renewal of programs. The executives, in general, actually look at the cash flow which hasn't changed much yet." To which is added, "Because impacts haven't hit yet, no firm plan of how to deal with them has evolved at any institution interviewed."

The memorandum states that despite the lack of planning, there is, among the universities, "general agreement on priorities:

"a. Post-doctoral fellowship in-take in School Year 1968 will be reduced, while maintaining their present commitments to their on-going fellows.

"b. No investment will be made in major pieces of equipment and technicians will be let go; in fact, at some schools, both these actions are presently in force.

"c. The number of graduate students admitted will be down this year.

"d. Some faculty members' summer salaries will not be covered as in the past by grants and contracts."

The memorandum notes that the reduction in support of post-doctoral support might not be altogether bad for DoD's interests: "In the short term, the impact on DoD will probably be lower quality research, while in the long term, these will get a larger trained manpower pool available to work on DoD problems in the years to come."

Finally, the memorandum concluded that poorly endowed private universities will probably be hurt most by the reductions. "The more affluent universities who believe that the trend will change in 1969 will commit some of their own private resources to tide them over during this period."—D.S.G.