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## On-again, Off-again Funding of Academic Science

Professors on campuses throughout the country are expressing justifiable concern over serious and severe limitations on expenditures of "their" grant funds from federal sources. Local university officials and agency program officers are being unjustly criticized for taking actions that were forced on them by the Bureau of the Budget (or, if you prefer, by the President)—whose actions, in turn, resulted from the congressional mandate to the Executive Branch to reduce fiscal year 1969 expenditures by \$6 billion.

No amount of fault-finding or blame-placing will cure the present circumstance, but it would be useful to consider the kinds of arguments and pleas one might present to the key decision-makers of the federal establishment to insure against continued or repeated slashes of funds for academic science. The national leadership can and must be convinced that on-again, off-again funding of scientific activities in our colleges and universities is a bad policy—one that is both expensive and dangerous.

Those responsible for making appropriations decisions probably will never again allow large annual increments of federal support comparable to those that sparked and fueled the growth of scientific activities on U.S. campuses in the late 1950's. But it is relatively easy to show that a series of feast-famine cycles in the support of research and education in our colleges and universities can only lead to enormously costly discontinuities and lost opportunities. A determined effort to demonstrate this is possible and timely; *Science* and other journals have already called attention to some of the more unfortunate cases of difficulties now being faced by many universities.

The relationship between the federal government and our institutions of higher education has been far more successful and mutually rewarding than was predicted by most of the backers of such innovations as the National Science Foundation. The early worry concerning the possibility that unhealthy degrees of control or influence might accompany federal financial aid has, happily, proved to be largely unjustified. But the question of continuity, with reasonable levels of growth, has come up repeatedly—and currently looms as a major issue.

The funds made available by federal agencies to colleges and universities for strengthening their research and educational programs have without question strengthened U.S. science and technology; but they have also created a condition of dependence. The notion that federal funds can be held back or withdrawn—temporarily or permanently—without damaging the research and educational programs of the universities is dangerously in error. More important, all such discontinuities in funding will damage the national research and development effort, both in the immediate future and in the longer period affected by the lessened production of Ph.D.'s in science.

Congressional leaders (and others) have long decried the absence of clear-cut and unambiguous policies to guide national programs for the support of science. Perhaps the search for such policies has become too complicated. A guide to action that would seem, on the evidence, to be axiomatic, yet one which neither the Congress nor the Executive Branch has fully embraced, is this: avoid discontinuities in the federal support of academic science.—BOWEN C. DEES, *University of Arizona*