

353-0336.2

012

AMERICAN ASSOCIATION FOR
THE ADVANCEMENT OF SCIENCE

Science serves its readers as a forum for the presentation and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by publishing only material on which a consensus has been reached. Accordingly, all articles published in *Science*—including editorials, news and comment, and book reviews—are signed and reflect the individual views of the authors and not official points of view adopted by the AAAS or the institutions with which the authors are affiliated.

Editorial Board

ROBERT L. BOWMAN	WILLARD F. LIBBY
MELVIN CALVIN	GORDON J. F. MACDONALD
JOSEPH W. CHAMBERLAIN	EVERETT I. MENDELSON
FARRINGTON DANIELS	NEAL E. MILLER
JOHN T. EDSALL	JOHN R. PIERCE
DAVID R. GODDARD	COLIN S. PITTENDRIGH
EMIL HAURY	KENNETH S. PITZER
ALEXANDER HOLLAENDER	ALEXANDER RICH
ROBERT JASTROW	DEWITT STETTEN, JR.
EDWIN M. LERNER, II	EDWARD L. TATUM
CLARENCE M. ZENER	

Editorial Staff

Editor

PHILIP H. ABELSON

<i>Publisher</i>	<i>Business Manager</i>
DAEL WOLFLE	HANS NUSSBAUM

Managing Editor: ROBERT V. ORMES*Assistant Editors*: ELLEN E. MURPHY, JOHN E. RINGLE*Assistant to the Editor*: NANCY TEIMOURIAN*News and Comment*: DANIEL S. GREENBERG, JOHN WALSH, ELINOR LANGER, MARION ZEIGER, ROSEMARY GALLI*Europe*: VICTOR K. McELHENY, Flat 3, 18 Kensington Court Place, London, W.8, England (Western 5360)*Book Reviews*: SARAH S. DEES*Editorial Assistants*: ISABELLA BOULDIN, ELEANORE BUTZ, BEN CARLIN, SYLVIA EBERHART, GRAYCE FINGER, NANCY HAMILTON, OLIVER HEATWOLE, ANNE HOLDSWORTH, MARCIA JODLBAUER, RUTH KINGERLEE, KATHERINE LIVINGSTON

Advertising Staff

<i>Director</i>	<i>Production Manager</i>
EARL J. SCHERAGO	RAYMONDE SALAMA

Sales: New York, N.Y., 11 W. 42 St. (212-PE-6-1858): RICHARD L. CHARLES, ROBERT S. BUGBEE
Scotch Plains, N.J., 12 Unami Lane (201-889-4873): C. RICHARD CALLIS

Chicago, Ill., 6 W. Ontario St. (312-DE-7-4973): HERBERT BURKLAND

Los Angeles 45, Calif., 8255 Beverly Blvd. (213-653-9817): WINN NANCE

EDITORIAL CORRESPONDENCE: 1515 Massachusetts Ave., NW, Washington, D.C. 20005. Phone: 202-387-7171. Cable: *Advancesci*, Washington. Copies of "Instructions for Contributors" can be obtained from the editorial office. ADVERTISING CORRESPONDENCE: Rm. 1740, 11 W. 42 St., New York, N.Y. 10036. Phone: 212-PE 6-1858.

An Adequate Rate of Growth

In the federal budget that is now under review by Congress, the President has asked that \$191 million be appropriated to the National Science Foundation for basic research project grants, an increase of \$70 million above the level of fiscal year 1965. Behind this substantial increase lies an important policy decision: federal funds to support research in academic institutions should continue to increase at a fairly steady rate. There is a corollary decision: if the budgets of other agencies do not provide the desired growth rate, the National Science Foundation budget should be increased to do so.

In the past decade, federal grant and contract funds to academic institutions have grown substantially, but sometimes irregularly. Annual increases have been as small as 7 percent and as large as 28 percent, with some years bringing larger and others bringing smaller increases than the year before. The administration hopes that future growth can be more regular, and, at least for the present, has selected the National Science Foundation as the regulator. When the funds likely to be used by other agencies to support academic research in fiscal year 1966 were found not sufficient to provide a satisfactory growth rate, the NSF budget was raised sufficiently to bring the total expected federal support of academic research up about 15 percent above the level of fiscal year 1965.

Note that these decisions, which were made at top government levels, do not apply to the whole research and development budget. They express a specific and special concern for research, either basic or applied, that is conducted in universities and colleges. Because most NSF research grants go to institutions of higher education, increasing its research funds provides a quite direct way of assuring greater support for academic research.

Annual increases are necessary to keep pace with the growth of the academic scientific base and with the increasing costs of doing research. Enrollment and faculty size have been increasing and will continue to do so for a number of years; birth-rate and educational statistics leave no room for doubt on this point. Thus the number of faculty members and advanced students qualified and eager to carry out research studies will continue to increase. Moreover, research costs go up. Instruments necessary for work at the advancing frontiers become more expensive as they become more powerful. Each time a major new laboratory, observatory, research vessel, accelerator, or other research facility is constructed, there is a lasting commitment to support the research for which it was designed. These built-in cost increases could be avoided only by reducing the amount of research done elsewhere.

The most important meaning of these decisions is that they constitute a step toward the solution of a policy issue. The primary, immediate objective of most of the federal agencies has been—and will continue to be—the accomplishment of their own missions rather than the welfare of the universities. But while this point has been clear, government officials have been bedeviled by the knowledge that they should be giving more attention to the longer-range growth and welfare of the universities upon which the government depends for much research. These new budgetary decisions express the conviction that it is necessary "to maintain an adequate rate of growth in Federal support for research in colleges and universities."—DAEL WOLFLE