

AMERICAN ASSOCIATION
FOR THE
ADVANCEMENT OF SCIENCE

Board of Directors

CHAUNCEY D. LEAKE, *President*
THOMAS PARK, *President Elect*
PAUL E. KLOPSTEG, *Retiring President*
HARRISON BROWN
H. BENTLEY GLASS
MARGARET MEAD
DON K. PRICE
MINA REES
ALFRED S. ROMER
WILLIAM W. RUBEY
ALAN T. WATERMAN
PAUL A. SCHERER, *Treasurer*
DAEL WOLFE, *Executive Officer*

Editorial Board

DONALD J. HUGHES H. BURR STEINBACH
KONRAD B. KRAUSKOPF WILLIAM L. STRAUS, JR.
EDWIN M. LERNER EDWARD L. TATUM

Editorial Staff

DAEL WOLFE, *Executive Officer*
GRAHAM DUSHANE, *Editor*
JOSEPH TURNER, *Assistant Editor*
ROBERT V. ORMES, *Assistant Editor*

CHARLOTTE F. CHAMBERS, SARAH S. DEES, NANCY
S. HAMILTON, OLIVER W. HEATWOLE, YUKIE
KOZAI, ELLEN E. MURPHY, ELEANOR D. O'HARA,
BETHSABE PEDERSEN, NANCY L. TEIMOURIAN, LOIS
W. WOODWORTH

EARL J. SCHERAGO, *Advertising Representative*



SCIENCE, which is now combined with THE SCIENTIFIC MONTHLY, is published each Friday by the American Association for the Advancement of Science at National Publishing Company, Washington, D.C. The joint journal is published in the SCIENCE format. SCIENCE is indexed in the *Reader's Guide to Periodical Literature*.

Editorial and personnel-placement correspondence should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts or for the opinions expressed by contributors. For detailed suggestions on the preparation of manuscripts and illustrations, see *Science* 125, 16 (4 Jan. 1957).

Display-advertising correspondence should be addressed to SCIENCE, Room 740, 11 West 42 St., New York 36, N.Y.

Change of address notification should be sent to 1515 Massachusetts Ave., NW, Washington 5, D.C., 4 weeks in advance. If possible, furnish an address label from a recent issue. Give both old and new addresses, including zone numbers, if any.

Annual subscriptions: \$8.50; foreign postage, \$1.50; Canadian postage, 75¢. Single copies, 35¢. Cable address: Advancesci, Washington.

Copyright 1960 by the American Association for the Advancement of Science.

Military, Space, and Other Research, 1961

If Congress approves the President's budget—which it never does without some change—research and development funds of the federal government will total \$8.391 billion for the fiscal year 1961, a sum 6 percent above 1960 and 25 percent above 1959. Eighty-three percent of the total is intended primarily for national security needs, 70 percent for the Department of Defense and 13 percent for the Atomic Energy Commission. The other 17 percent is budgeted for nonmilitary purposes.

Individual agencies will fare quite differently in the over-all increase. In percentage terms, the Bureau of Reclamation will experience the largest jump, from \$269,000 to \$1,484,000. The Coast and Geodetic Survey and the Office of Saline Water will have approximately twice their 1960 amounts. Among the larger agencies, NASA will have the biggest increase, from \$325 to \$600 million. The President has asked Congress to increase Public Health Service research funds from \$305 to \$350 million, and National Science Foundation research funds from \$71 to \$101 million. (The latter two agencies will have other funds for fellowships and other aids to science education.) Other agencies will remain at about their 1960 levels or will have more modest increases. In size, they vary from the Department of Defense, which is slated to have a miniscule \$2 million reduction in a budget totaling close to \$6 billion, to the Bureau of Public Assistance, for which the President has requested a \$1000 increase over its 1960 research budget of \$122,000.

The budget includes \$600 million for basic research (\$100 million above 1960) and \$515 million for research and development facilities (\$55 million above 1960). The great bulk of the facilities funds will go to the Atomic Energy Commission, the Department of Defense, and the National Aeronautics and Space Administration, but three smaller amounts, for constructing or improving research facilities, are of particular interest: \$36 million for the Public Health Service, \$22 million for the National Science Foundation, and \$11 million for the National Bureau of Standards.

Also in the budget, but not in the research and development category, are funds for fellowships, training grants, and a variety of other aids to science teaching and science education: \$90 million for the National Institutes of Health, \$69 million for the National Science Foundation, and \$64 million for the U.S. Office of Education. This latter figure includes aid to other fields of education.

If there is a pattern in these figures, the clearest factor is the continuation of an upward trend. Not since 1948 has the amount been smaller than it was the year before. The 1961 total is over 100 times the 1940 figure. A second factor is the greater relative growth of the nondefense segment. In the national security area (Department of Defense and Atomic Energy Commission) the 1961 total is 2 percent above 1960 and 16 percent above 1959. For all the rest of the agencies, the 1961 total is 38 percent above 1960 and 94 percent above 1959. But much of this increase is for the rapidly growing National Aeronautics and Space Administration. Its budgets for 1959, 1960, and 1961 account for 19, 31, and 42 percent, respectively, of nondefense research and development figures. To a conservative, geo-centered observer it seems good that we are still devoting more than half of this total to research on earthly problems. But 1961 may be the last such year; the trend suggests that 1962 will see the fiscal center of gravity of our nondefense R & D expenditures somewhere out in space.—D.W.