

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. PITENDRIGH
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

## Publisher

DAEL WOLFLE

## Business Manager

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, JANE AYRES

Europe: VICTOR K. McELHENY, Flat 3, 18 Kensington Court Place, London, W.8, England (Western 5360)

Book Reviews: SARAH S. DEES

Editorial Assistants: JAMES BLESSING, ISABELLA BOULDIN, ELEANORE BUTZ, BEN CARLIN, SYLVIA EBERHART, GRAYCE FINGER, NANCY HAMILTON, OLIVER HEATWOLE, ANNE HOLDSWORTH, MARCIA JODLBAUER, RUTH KINGERLEE, KATHERINE LIVINGSTON, ELLEN SALTZ

## Advertising Staff

## Director

EARL J. SCHERAGO

## Production Manager

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 BURKLUND

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.

## The Research and Development Pork Barrel

Distribution of research and development funds is becoming a major political issue. One reason is that present distribution is very uneven. In 1963 one-half of the 50 states received 96.8 percent of all federal R&D funds while the other 25 divided the remaining 3.2 percent. The 50 senators from the have-not states may be expected to attempt to improve their states' share. This tendency will be reinforced by a growing general awareness of the role of science and technology in our changing civilization.

The extent of the beneficial effects of federal funds is not clear, though in some instances the economic stimulus has seemed disproportionately large. In other instances benefits were nominal. However, many of the states whose economies have grown rapidly are recipients of large sums of federal R&D funds. In contrast, some regions of this country not receiving large R&D contracts seem on the road to becoming new Appalachias.

In a recent speech at a Midwest Governors' conference, Charles Kimball, president of the Midwest Research Institute, outlined problems of one such area. His institute had made a study of a six-state region, including Arkansas, Iowa, Kansas, Missouri, Nebraska, and Oklahoma. During the decade 1950-60 the number of jobs in the area had increased only 2.3 percent as against 14.5 percent for the nation. The average family income is now much below the national figure. At the same time more than a million people moved to other parts of the country. Although total population increased slightly, the increase was much less than the national average.

Contributing to discontent over uneven distribution of R&D funds is growing frustration over a Middle West "brain drain." For instance, in Iowa the two major universities estimate that from 55 to 75 percent of the graduates leave the state for their first jobs. The states in which the "Big Ten" universities are located produce about 40 percent of all scientists and engineers with advanced degrees, but this region receives only a small fraction of federal R&D funds. To apply their training many of the scientists must migrate; their migration represents an economic loss to a region which yearly spends huge sums on higher education.

Some of the frustration felt in the Midwest was expressed recently by President Harrington of the University of Wisconsin, who said:

"Failure to provide for geographical spread of federal defense and space contracts has brought our nation face-to-face with a most serious kind of over-concentration:

"Over-concentration of our working scientists and engineers by region;

"Over-concentration of our industrial and defense strengths by region.

"If these tendencies continue in the award of federal research, development, and production contracts, we are on the road to manpower chaos, economic chaos, social chaos, defense chaos."

The feelings expressed by President Harrington are not unrelated to pressures now evident with respect to the proposed new 200-Bev accelerator (*Science*, 18 June, p. 1571). Major midwestern universities have agreed to support whatever midwestern site appears to be most in the running after initial screenings. If the region exerts its maximum potential pressure, Washington will find it difficult to place the facility elsewhere. Whatever the outcome, politics is destined to be a crucial factor, and an important precedent will be established. The influence of political and geographical considerations on the allocation of research funds is certain to increase.—PHILIP H. ABELSON