

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

1968	1969
ROBERT L. BOWMAN	EMIL HAURY
JOSEPH W. CHAMBERLAIN	WILLARD F. LIBBY
JOHN T. EDSALL	EVERETT I. MENDELSON
ALEXANDER HOLLAENDER	JOHN R. PIERCE
GORDON J. F. MACDONALD	KENNETH S. PITZER
NEAL E. MILLER	ALEXANDER RICH
DE WITT STETTIN, JR.	CLARENCE M. ZENER

1970

GUSTAF O. ARRHENIUS	RICHARD C. LEWONTIN
FRED R. EGGAN	ALFRED O. C. NIER
HARRY F. HARLOW	FRANK W. PUTNAM
MILTON HARRIS	

Editorial Staff

Editor

PHILIP H. ABELSON

Publisher

DAEL WOLFE

Business Manager

HANS NUSSBAUM

Managing Editor: ROBERT V. ORMES

Assistant Editors: ELLEN E. MURPHY, JOHN E. RINGLE

Assistant to the Editor: NANCY TEIMOURIAN

News Editor: JOHN WALSH

Foreign Editor: DANIEL S. GREENBERG*

News and Comment: LUTHER J. CARTER, BRYCE NELSON, PHILIP M. BOFFEY, PETER THOMPSON, MARIT MUELLER, ANNE H. LARUS

Book Reviews: SYLVIA EBERHART

Editorial Assistants: SUSAN AXELRAD, JOANNE BELK, ISABELLA BOULDIN, ELEANORE BUTZ, HELEN CARTER, GRACEY FINGER, NANCY HAMILTON, OLIVER HEATWOLE, ANNE HOLDSWORTH, PAULA LECKY, KATHERINE LIVINGSTON, LEAH RYAN, LOIS SCHMITT, BARBARA SHEFFER, RICHARD SOMMER, YA LI SWIGART, ALICE THEILE

* European Office: 22 Mulberry Walk, London, S.W. 3, England (Telephone: 352-9749)

Advertising Staff

Director

EARL J. SCHERAGO

Production Manager

KAY GOLDSTEIN

Advertising Sales Manager: RICHARD L. CHARLES

Sales: New York, N.Y., 11 W. 42 St. (212-PE-6-1858), ROBERT S. BUGBEE; Scotch Plains, N.J., 12 Unami Lane (201-889-4873), C. RICHARD CALLIS; Medfield, Mass. 02052, 4 Rolling Lane (617-359-2370), RICHARD M. EZEQUELE; Chicago, Ill. 60611, 919 N. Michigan Ave., Room 426 (312-DE-7-4973), HERBERT L. 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. See also page 1709, *Science*, 29 December 1967. ADVERTISING CORRESPONDENCE: Rm. 1740, 11 W. 42 St., New York, N.Y. 10036. Phone: 212-PE-6-1858.

The Need for Priorities

If public policies are to be durable and survive the rigors of changing times, they must grow out of the deeply-held beliefs and values of the society. So with public policy toward science. If it is to be strong, it must first be relevant and it must be *shown* to have relevance.

If R and D is necessary to acceptable national security, or to better health care, or to control crime and violence, or to enrich education and learning, and if these are the central concerns of our society, then science and its advocates must learn to shape R and D accordingly and give it relevance. I suggest that here we find the source of today's support gap.

The Federal Government is at the point where very tough policy choices must be made about R and D. Our opportunities are sadly out of phase with our pocketbook, and it would be hard to think of another area of public action where the problems of choice confronting the Government are more baffling. Is it right, in the sense of good social policy, to underfund programs in education, environmental health, and Model Cities so that we can seize our opportunities in science and technology? Should we require that public investments in R and D meet some reasonable test of social return commensurate with the cost of investment and equal to or higher than the return on different uses of the same money and creativity? I am one who thinks we should. It is not good enough in a rational but troubled age to run a country on the double standard of prudence in private investment and simple incrementalism in public investment. This is precisely why we have been working at top speed to change and upgrade the Government's decision-making process and to inject better methods into the way Government works out problems of choice and makes up its mind what to do next. And I see no reason why R and D should have immunity from all this.

For the short run, it is going to be very hard to persuade the country and the Congress that R and D is being maintained at a poverty level. The likelihood of a fiscal miracle to extricate R and D from its present plateau is remote.

But if more money is going to be scarce for R and D, there may be some things that we can do to correct some of the deficiencies in the way Government deals with these matters. I think first of the Government's administrative and policy structure for science and technology. If our policies and strategies for R and D are hard to fathom, perhaps it is because we are not well-organized. R and D is decentralized through the Federal Government. It is managed as a network which is held together loosely by the White House science office. It does not have a prime mover. Its decision-making patterns are pluralistic. As an institutional process it is not responsive to standards of balance, purpose, or priorities. Its component elements serve as mission-related conduits for funding research, development, training, and academic science; but it does not function as a system because it wasn't a system to begin with. It seems to me that we need something better, something capable of shaping science goals and strategies with depth and range and visibility. We need answers; we already know the questions.

—WILLIAM D. CAREY, Assistant Director, Bureau of the Budget