

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

1972

ALFRED BROWN	FRANK PRESS
JAMES F. CROW	FRANK W. PUTNAM
THOMAS KUHN	WALTER O. ROBERTS
ELLIOTT W. MONTROLL	

1973

H. S. GUTOWSKY	GARDNER LINDZEY
ARTHUR D. HASLER	RAYMOND H. THOMPSON
RUDOLF KOMPFFNER	EDWARD O. WILSON
DANIEL E. KOSHLAND, JR.	

Editorial Staff

Editor

PHILIP H. ABELSON

Publisher

WILLIAM BEVAN

Business Manager

HANS NUSSBAUM

Managing Editor: ROBERT V. ORMES

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

Assistant to the Editor: NANCY TEIMOURIAN

New and Comment: JOHN WALSH, DEBORAH SHAPLEY, ROBERT GILLETTE, NICHOLAS WADE, CONSTANCE HOLDEN, SCHERRAINE MACK

Research Topics: ALLEN L. HAMMOND, WILLIAM D. METZ

Book Reviews: SYLVIA EBERHART, KATHERINE LIVINGSTON, KATHRYN MOUTON

Cover Editor: GRAYCE FINGER

Editorial Assistants: MARGARET ALLEN, ISABELLA BOULDIN, BLAIR BURNS, ELEANORE BUTZ, RONNA CLINE, MARY DORFMAN, JUDITH GIVELBER, MARLENE GLASER, CORRINE HARRIS, OLIVER HEATWOLE, CHRISTINE KARLIK, MARSHALL KATHAN, MARGARET LLOYD, JANE MINOR, DANIEL RABOVSKY, PATRICIA ROWE, LEAH RYAN, LOIS SCHMITT, RICHARD SOMMER, YA LI SWIGART, ALICE THEILE

Membership Recruitment: LEONARD WRAY; Subscriptions: BETTE SEEMUND; Addressing: THOMAS BAZAN

Advertising Staff

Director

EARL J. SCHERAGO

Production Manager

BONNIE SEMEL

Advertising Sales Manager: RICHARD L. CHARLES

Sales: New York, N.Y. 10036: Herbert L. Burklund, 11 W. 42 St. (212-PE-6-1858); Scotch Plains, N.J. 07076: C. Richard Callis, 12 Unami Lane (201-889-4873); Medfield, Mass. 02052: Richard M. Ezequille, 4 Rolling Lane (617-444-1439); Chicago, Ill. 60611: John P. Cahill, Room 2107, 919 N. Michigan Ave. (312-DE-7-4973); Beverly Hills, Calif. 90211: Winn Nance, 111 N. La Cienega Blvd. (213-657-2772)

EDITORIAL CORRESPONDENCE: 1515 Massachusetts Ave., NW, Washington, D.C. 20005. Phones: (Area code 202) Central office: 467-4350; Book Reviews: 467-4367; Business Office: 467-4411; Circulation: 467-4417; Guide to Scientific Instruments: 467-4480; News and Comment: 467-4430; Reprints and Permissions: 467-4483; Research Topics: 467-4455; Reviewing: 467-4440. Cable: Advancesci, Washington. Copies of "Instructions for Contributors" can be obtained from the editorial office. See also page xv, *Science*, 24 September 1971. ADVERTISING CORRESPONDENCE: Room 1740, 11 W. 42 St., New York, N.Y. 10036. Phone: 212-PE-6-1858.

NSF: A Look Ahead

One cannot long occupy the director's chair at the National Science Foundation without being struck by the fact that creative science in the United States is in a state of transition. And much of the feedback associated with this fermentation is focused on NSF, which in this country is often equated with creative science and scientists.

Science, as one of man's highest and greatest intellectual achievements, has had a pervasive and protracted influence on man, his way of life, and his environment. And nowhere has its power for change been so dramatic as in the United States. Most scientists hold that the destructive forces let loose by science can be properly focused and wisely used. Accomplishing these ends necessitates a major effort on the part of science and scientists—an effort dedicated to serving all of society and all of man. And while few can agree on the exact details, all concerned believe that science is indispensable for a future in which man is in reasonable harmony with his physical and social environment.

Historically, the National Science Foundation has devoted a large proportion of its resources to the pursuit of disciplinary science—research and science education motivated solely by the intrinsic needs of a discipline or the creative needs of individual scientists. This kind of programming has been highly successful and must continue, for it is the bedrock of all scientific enterprise. However, there must also be a heightened awareness of the requirements placed on all science, and for this reason a significant share of the total resources available to NSF in the future must be devoted to the social and technological needs of the nation. This, however, does not mean that the Foundation should be diverted from its earlier and historical purpose; in fact, this diversification should be construed as a means of strengthening that purpose.

To ensure success, this additional objective must have the cooperation of academic scientists, because a large number of the more creative scientists reside in academic institutions, and also because society and the nation have great need of broadly trained scientists who are highly motivated and capable of pursuing careers associated with the public interest.

To bring the best of science to bear on the social and technological problems of society requires at least three steps. A larger number of the most creative members of the scientific community must be encouraged to associate themselves with the great problems of man and society; for even though not all of the world's ills have a scientific or technological base, the thought patterns of science and its intellectual-material accomplishments are proof that science has much to offer society. The research and training institutions associated with creative science and the mechanisms used to support science must be more clearly focused and receptive to both the immediate and long-term interests of man and society. The National Science Foundation, as one of the most important federal institutions to promote the progress of science, must focus a larger portion of its resources on all of science—not just on academic science.

The social milieu within which the NSF finds itself has changed so markedly and so rapidly that we must not fail to accept the challenges offered by these new and pressing opportunities. We should recognize that, although science is one of the great cultural accomplishments of man, public support on the scale required for man's survival can be justified only as the needs of the larger society are recognized.

—W. D. McELROY, Director, National Science Foundation

On 1 February 1972, Dr. McElroy will become chancellor of the University of California at San Diego.