

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.

Publisher: Richard S. Nicholson

Editor: Daniel E. Koshland, Jr.

Deputy Editor: Ellis Rubinstein

Managing Editor: Monica M. Bradford

Deputy Editors: Philip H. Abelson (*Engineering and Applied Sciences*); John I. Brauman (*Physical Sciences*); Thomas R. Cech (*Biological Sciences*)

EDITORIAL STAFF

Senior Editors: Eleanore Butz, Martha Coleman, Barbara Jasny, Katrina L. Kelner, Phillip D. Szuroni, David F. Voss

Associate Editors: R. Brooks Hanson, Pamela J. Hines, Kelly LaMarco, Linda J. Miller

Letters Editor: Christine Gilbert

Book Reviews: Katherine Livingston, *editor*; Teresa Fryberger

Contributing Editor: Lawrence I. Grossman

Chief Production Editor: Ellen E. Murphy

Editing Department: Lois Schmitt, *head*; Julianne Hunt, Patricia L. Moe, Barbara P. Ordway

Copy Desk: Joi S. Granger, Margaret E. Gray, MaryBeth Sharple, Beverly Shields

Production Director: James Landry

Production Manager: Kathleen C. Fishback

Art Director: Yolanda M. Rook

Graphics and Production: Holly Bishop, Julie Cherry, Catherine S. Siskos

Systems Analyst: William Carter

NEWS STAFF

Managing News Editor: Colin Norman

Correspondent-at-Large: Barbara J. Culliton

Deputy News Editors: John M. Benditt, Jean Marx

News and Comment/Research News: Ann Gibbons, David P. Hamilton, Constance Holden, Richard A. Kerr, Eliot Marshall, Joseph Palca, Robert Pool, Leslie Roberts, M. Mitchell Waldrop

European Correspondent: Jeremy Cherfas

West Coast Correspondent: Marcia Barinaga

Contributing Correspondents: Barry A. Cipra, Robert Crease

BUSINESS STAFF

Marketing Director: Beth Rosner

Circulation Director: Michael Spinella

Fulfillment Manager: Marlene Zendell

Business Staff Manager: Deborah Rivera-Wienhold

Classified Advertising Supervisor: Amie Charlene King

ADVERTISING REPRESENTATIVES

Director: Earl J. Scherago

Traffic Manager: Donna Rivera

Traffic Manager (Recruitment): Gwen Canter

Advertising Sales Manager: Richard L. Charles

Marketing Manager: Herbert L. Burklund

Employment Sales Manager: Edward C. Keller

Sales: New York, NY 10036: J. Kevin Henebry, 1515 Broadway (212-730-1050); Scotch Plains, NJ 07076: C. Richard Callis, 12 Unami Lane (201-889-4873); Hoffman Estates, IL 60195: Jack Ryan, 525 W. Higgins Rd. (708-885-8675); San Jose, CA 95112: Bob Brindley, 310 S. 16th St. (408-998-4690); Dorset, VT 05251: Fred W. Dieffenbach, Kent Hill Rd. (802-867-5581); Damascus, MD 20872: Rick Sommer, 11318 Kings Valley Dr. (301-972-9270); U.K., Europe: Nick Jones, +44(0)64752918; Telex 42513; FAX (0647) 52053.

Information for contributors appears on page XI of the 29 June 1990 issue. Editorial correspondence, including requests for permission to reprint and reprint orders, should be sent to 1333 H Street, NW, Washington, DC 20005. Telephone: 202-326-6500. **Advertising correspondence** should be sent to Tenth Floor, 1515 Broadway, New York, NY 10036. Telephone 212-730-1050 or WU Telex 968082 SCHERAGO, or FAX 212-382-3725. **Subscription/Member Benefits Questions:** 202-326-6417.

Sound Bites Versus Sound Thinking

Scientists are well aware that their discoveries can bring great benefit when used wisely and great harm when misapplied. The computer, understanding of the atom, and television are three examples of advances that have brought many positive benefits, but some uses of computers and nuclear power have increased the destructiveness of modern war, and it could be argued that television has increased the superficiality with which it is analyzed.

The destructiveness of modern war necessitates objectivity and constructive debate about international conflicts. Television, with its need for visual reporting and images of immediacy, makes most print media look sophisticated and erudite. To be fair, some television programs combine insightful interviews with excellent economic background, but they are usually submerged by the massive emphasis on what television can do easily. For example, hostages and television anchors broadcasting from Baghdad are a lot easier to project than thoughtful analyses involving history and economics. Hostages and their families are, of course, a continuing source of poignant stories and moral symbols. Such coverage, however, is only peripherally related to the crucial issues of oil economics, the long-range implications of allowing one country to annex a neighbor, the extrapolations to a future in which many nations possess missiles and nuclear and chemical weapons, and the possibility of new technologies to lessen dependence on oil.

In a crisis, a chief executive must act quickly and decisively as the President did. In the long run, however, the support for a policy should depend on an informed electorate. This will require both a realization on the part of the public that it is worth considering policies in depth and also in demanding that the media provide some of the economic, geographic, scientific, and historical facts needed to make decisions. The incentive might come from a more scientific approach in which the advocates were willing to benefit or suffer according to the outcome of their preferred policies. Viewers might demand more content-filled programs from the media.

A beginning would be to get emotional slogans replaced by well thought out long-range policies. The so-called "warmongers" and "appeasers" could be identified by colors, such as "The Blues" and "The Oranges" (to avoid pejorative colors such as reds, yellows, and greens). The Blue position might be, "The United States can't leave the Middle East until Hussein's army is dismantled and his annexation of Kuwait annulled, or we will have to fight later under even less favorable conditions." The Orange position might be, "No war is ever worthwhile, and therefore we should get out, dismantle our military operations, and pay the added price of oil, whatever it is." Once the debate is formulated in these terms, the process of compiling facts and calculations for a more detailed position could be developed.

Thus, the Blues would develop a scenario for the potential cost of a war or a blockade in lives as well as the inflationary effect on oil and its products for the next 20 years. The Oranges would make a similar estimate based on their calculations of the future. Citizens would be allowed to vote by recording their choice on their income tax returns: Blue, Orange, or neutral. During the next 20 years, the neutrals would pay their income taxes based on a calculated average position, regardless of federal policy. If the scenario of the Blues were followed and their estimation turned out to be correct, they would receive a rebate based on the savings from their correct solution or be assessed an excess tax based on the added cost of their errors. The same would apply to the Oranges. An informed decision could be rewarded, a foolish one penalized. The kind of overstatement so characteristic of emotional debates would be tempered by the knowledge that one had to live with the consequences of one's advocacy.

The method is, of course, far too logical to be implemented, but contemplating it may reveal that hardened positions should not be based on soft thinking. If the Internal Revenue Service refused to go along with this brilliant proposal, television could perform a public service by offering to record the advance predictions of those who wished to do so. Later it would reveal these lists to show who was right, who was wrong, and who previously refused to commit themselves but are now loudly second guessing. —DANIEL E. KOSHLAND, JR.