

SCIENCE

Published by the **American Association for the Advancement of Science (AAAS)**, *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.

Membership/Circulation

Director: Michael Spinella
Fulfillment: Marlene Zendell, *Manager*; Gwen Huddle, *Assistant Manager*; Mary Curry, *Member Service Supervisor*; Pat Butler, Helen Williams, Laurie Baker, *Member Service Representatives*
Promotions: Dee Valencia, *Manager*; Hilary Baar, Angela Mumeka, *Coordinators*
Research: Kathleen Markey, *Manager*; Robert Smariga, *Assistant*
Financial Analyst: Jacquelyn Roberts
Administrative Assistant: Nina Araujo de Kobes
Science Member Services
Marion, Ohio: 800-347-6969;
Washington, D.C.: 202-326-6417

Advertising and Finance

Associate Publisher: Beth Rosner
Advertising Sales Manager: Susan A. Meredith
Recruitment Advertising Manager: Janis Crowley
Advertising Business Manager: Deborah Rivera-Wienhold
Financial: Julie Eastland, *Manager*; Andrew Joyce, *Analyst*
Marketing Manager: Laurie Hallowell
Traffic Manager: Tina Turano
Recruitment: Michele Pearl, *Operations Manager*; Dan Moran, *Traffic Manager*; Debbie Cummings, Millie Muñoz-Cumming, Angela Wheeler, *Sales*
Reprints Manager: Corrine Harris
Permissions Manager: Arlene Ennis
Marketing Associate: Allison Pritchard
Sales Associate: Carol Maddox
Send materials to *Science* Advertising, 1333 H Street, NW, Washington, DC 20005, or FAX 202-682-0816.

ADVERTISING SALES: **East Coast/E. Canada:** Richard Teeling, 201-904-9774, FAX 201-904-9701 • **South-east:** Mark Anderson, 305-856-8567, FAX 305-856-1056 • **Midwest:** Donald Holbrook, 708-386-6921, FAX 708-386-6950 • **West Coast/W. Canada:** Neil Boylan, 415-673-9265, FAX 415-673-9267 • **Germany/Switzerland/Austria:** Ric Bessford, World Media Services, Germany; +49-089-39-00-55, FAX +49-089-39-00-15 • **Japan and Far East:** Mashy Yoshikawa, Orient Echo, Inc., Japan; +3 3235-5961, FAX +3 3235-5852 • **UK, Scandinavia, France, Italy, Belgium, The Netherlands:** Andrew Davies, Great Britain; +44-457-838-519, FAX +44-457-838-898
European Recruitment: AnneMarie Vis; +44-223-424-695, FAX +44-223-424-695 • **Other:** For recruitment advertising inquiries contact *Science* Advertising: 202-326-6555; For product advertising inquiries contact 202-326-6544, FAX 202-682-0816.

Information for Contributors appears on pages 600-602 of the 31 July 1992 issue. Editorial correspondence, including requests for permission to reprint and reprint orders, should be sent to 1333 H Street, NW, Washington, DC 20005. **Science Telephone:** 202-326-6500, TDD 202-408-7770. London office: 071-435-4291. **Other AAAS Programs:** 202-326-6400.

LETTERS

Conflicts of Interest

In his article "When does intellectual passion become conflict of interest?" (Special News Report, 31 July, p. 620), Eliot Marshall wrongly focuses on individual passion. Shared intellectual passions generate much more powerful conflicts of interest and are a greater threat to scientific progress. Enthusiasts for widely held ideas are in a strong position to promote their interests by advancing cherished, but flawed, theories. Consensus among many scientists is no guarantee against major errors in thinking. Lone thinkers have only the strength of their arguments behind them, yet sometimes their arguments prevail and lead to major advances.

Proposals to censor disfavored ideas by invoking legalisms such as "conflict of interest" are alarming. Suppression of the opinions of scientists with strongly held, idiosyncratic points of view is profoundly antiscientific. Individual intellectual passion remains essential for scientific progress.

Jerome L. Sullivan
Veterans Affairs Medical Center,
Charleston, SC 29401-5799

There is an additional source of conflict of interest that is contributed by influential journals such as *Science*. News articles in these journals are good publicity. They often include quotes and unpublished data from academics with commercial conflicts. A quick review of *Science* pages over the past 5 years illustrates the degree to which such publicity has appeared and may have affected the worth of companies, not to mention scientific review and publication.

Allen D. Roses
Division of Neurology,
Duke University Medical Center,
Durham, NC 27710

We who work for the pharmaceutical industry are earning our salaries from the revenues made by company sales, yet 95% or more of the scientists in industry are top-class in their field. Who else but the most scientifically qualified, in a particular field, should be heading the (mostly biotech) companies appearing every day on the scene? And why not own stock in the company for which you work? Not having a financial interest could also be interpreted as a vote of "no-confidence."

Hildur E. Blythman
Department of Clinical Research,
Sandoz Pharma Ltd.,
4002 Basel, Switzerland

It is particularly easy for an astronomer to be, and feel, quite "pure" about commercial conflicts of interest, as opportunities for commercial involvement are rare. However, I was made aware of conflict-of-interest issues when serving as a program director for the National Science Foundation. Since then, I have often been surprised by the lack of awareness of the importance of conflict of interest among my academic colleagues.

I am not in favor of disclosing intellectual conflicts of interest because I think they are fundamentally different from commercial ones. It is impossible to be sentient, conscious, and unbiased. Our very choice of research topics and our way of approaching them are biased by our background, taste, and interests. Thus I always expect an intellectual bias in any scientific work and anticipate that eventually some balanced view will result through the normal duplication, questioning, and testing for consistency that naturally occur in science. What is different about a commercial bias is that it is not inevitable, and hence I do not expect it unless I am alerted to its possible presence.

Peter Pesch
Department of Astronomy,
Case Western Reserve University,
Cleveland, OH 44106

Reviewers who have a conflict of interest should disclose this and decline to review a paper. However, disclosure and publication of a researcher's conflict of interest are likely to open a Pandora's box of claims and counterclaims that will have nothing to do with the scientific method. We have already witnessed this happening in areas of politically charged research, such as fetal cell transplantation, where emotion can replace scientific rigor. There are many examples in history where a side, private interest in research has not decreased the validity of the results; take the work of Alexander Graham Bell and Thomas Edison, for example.

Michael A. Amaral
St. Cloud Neurological Surgery,
48 North 29th Avenue,
St. Cloud, MN 56303