## Science

13 JULY 1990 VOLUME 249 NUMBER 4965

## 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 advance ment of science, including the presentation of minority or con-flicting 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, Ji

News Editor: Fllis Rubinstein

Managing Editor: Patricia A. Morgan

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

## EDITORIAL STAFF

Assistant Managing Editor: Monica M Bradford Senior Editors: Eleanore Butz, Martha Coleman, Barbara Jasny, Katrina L Kelner, Phillip D. Szuromi, 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 | Grossman Chief Production Editor: Ellen E Murphy

Editing Department: Lois Schmitt, head, Patricia L Moe, Barbara P Ordway Copy Desk: Joi S. Granger, Margaret E Gray, MaryBeth hartle, Beverly Shields

Arabitation Manager: James Landry Assistant 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

Correspondent-at-Large: Barbara J Culliton Deputy News Editors: John M Benditt, Jean Marx Colin Norman

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: Joseph Alper, Barry A Cipra, Robert Crease

## **BUSINESS STAFF**

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 Sales: New York, NY 10036 J Kevin Henebry, 1515 Broad-way (212-730-1050), Scotch Plans, NJ 07076 C Richard Callis, 12 Unami Lane (201-889-4873), Hoffman Estates, IL Callis, 12 Orlamin Earle (201-369-4673), Holiman 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(0647)52918, 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 2005 Tele-phone 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

**Conflict of Interest** 

wo principles in modern life with wide support are that judges or regulators of a system should be free of conflict of interest and that those judged or regulated deserve to be evaluated by their peers. Yet these two principles are frequently in serious conflict. When asked if the nuclear industry can regulate itself, a biologist would probably say, "Of course not!" A congressman if asked whether biologists can regulate their own ethical behavior might well answer, "How can you expect NIH to evaluate its own grantees?" And a nuclear physicist if asked whether Congress can regulate itself would undoubtedly burst into laughter, and so forth.

Yet in each of these diverse groups, the recipient of a grant or the accused in an ethical inquiry would stoutly maintain that he or she can only be judged by a jury of peers within that same profession. Modern specialization makes it inevitable that those who evaluate complex subjects must have the relevant expertise within that profession to make fair judgments. However, each group is quite willing to say that in somebody else's profession all of the participants are thick as thieves and only outside observers with no axe to grind can protect the public's interest.

Almost all commissions, judges, peer-review panels, and the like, are chosen from within the discipline that is to be regulated. It is not only that expert judgment is required, it is also that individuals will spend time and energy with some unselfishness for their own profession, whereas it is too much to ask them to do this for some other group. Scientists serve on peer-review panels for the National Science Foundation and the National Institutes of Health and on editorial boards of journals, at conditions of pay and hours of labor that would make a sharecropper weep. Lawyers serve on pro bono committees of the bar, newspaper journalists on fellowship committees, and so on. It is quite apparent that the time spent on such pro bono activities, though offering some reward in the form of recognition and mutual trade-offs, is on the whole not justifiable on a strict cost-benefit analysis. Prominent and busy people are willing to spend the time within their own disciplines because they know the survival of that system depends on that sacrifice.

The systems work, in part because the outside world is always watching. The inside group is needed to provide detailed rules and sophisticated analysis. But inevitably, the big picture can be explained to outsiders, and outside groups do intervene if the insiders' decisions seem unwarranted. Almost invariably, sloppiness or negligence in designing procedures develops into a major scandal in which the outsiders demand reform.

One of the more amusing aspects of conflict of interest morality is how easy it is to be sanctimonious about the ethical systems of other profession. Scientists are utterly confident that the "tiny" honorarium they got from University X does not disqualify them from considering University X's grants, but believe an equivalently small honorarium disqualifies a businessman in a parallel situation. When serving on scientific panels one scrupulously leaves the room while one's own university is being considered. Would the congressman from Arizona leave the room when Arizona appropriations are being considered? Newspaper reporters decry any effort of concealment as prima facie evidence of guilt, and yet, asked to give the source of their leaks, discover that confidentiality is essential to their system.

There has to be a reasonable compromise between expertise and conflict. Some cases of conflict are obvious. A businessman cannot serve on a committee to provide a waste disposal license to his own business. A scientist should not be asked to evaluate a colleague's grant. However, firms involved in toxic waste disposal have to be consulted to devise general laws to control toxic waste. Scientists have to be used to evaluate scientific proposals. The line, therefore, must be a compromise. Fame, fortune, and self-interest will tempt anyone, but the idea that one's own profession has a monopoly on virtue is unlikely.

The procedures devised by insiders should always be subject to the scrutiny of outsiders. There will inevitably be some provincialism. Scientists are proud of science and want it to prosper, and they will benefit indirectly if the system prospers. The same is true of businessmen, newspaper reporters, politicians, and public interest groups. That pride, and its concomitant sense of responsibility, is the basis of the pro bono sacrifices that allow any system to work. History shows such a system can be destroyed by excessive suspicion or excessive neglect. A spirit of compassionate skepticism is needed to make it work.—DANIEL E. KOSHLAND, JR.