
Is There Room in Science for Self-Promotion?

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Scientific fraud has received much attention lately, both within the scientific community and increasingly beyond it. In this issue, in fact, you will find continuing discussions of the problem and its impact. (See pp. 11-13.)

Unfortunately, some journalists with a taste for the sensational have exaggerated its frequency. The obvious example is William Broad and Nicholas Wade's *Betrayers of Truth* (Simon & Schuster, 1982). (On the other hand, careful science journalists have detected genuine instances of fraud—for example, Oliver Gillie's 1976 expose in the London *Sunday Times* of Sir Cyril Burt's misdeeds.) Plainly some have mistakenly taken "scientific fraud" as a virtual synonym for "scientific misconduct." This practice was pointed out to me by Robert K. Merton of Columbia University, who has long examined the spectrum of activities that, in different degree, violate norms of the scientific community.

Thirty years ago Merton described some of the colored bands in that spectrum: fraud, both the concoction of false data and the fudging of data to have them support an hypothesis; plagiarism, and correlatively, in priority disputes, falsely imputing plagiarism to others who have independently come upon the same findings; and "secretiveness

lest one be forestalled" ("Priorities in Scientific Discovery," *American Sociological Review*, vol. 22, 1957, pp. 649-59).

Harriet Zuckerman, also of Columbia, has more recently described other hues of scientific misconduct. They include disreputable or negligent errors (as distinct from reputable or state-of-the-art-errors) and breaches of "the etiquette of science," such as eponymizing oneself; the under-acknowledgement of collaborators; ad hominem attacks; and publicity seeking ("Deviant Behavior and Social Control in Science," in E. Sagarin, ed., *Deviant and Social Change*, Sage Publications, 1977, pp. 87-138; "Norms and Deviant Behavior in Science," *Science, Technology & Human Values*, vol. 9, Winter 1984, pp. 7-13). To these can be added issuing research results in least publishable units to increase one's publications, adding gratuitous co-authors to a paper, failing to acknowledge intellectual predecessors, and irresponsibility with research funds.

Rules of the Game

In drawing distinctions between types of deviance or misconduct, these and other sociologists of

science have brought to light the complex and largely unspoken "rules of the game" that scientists honor and to which they usually adhere. In sociological parlance, these rules form the cognitive and the social or moral norms of science. Infractions of different norms carry different penalties and are reflected in the varying degrees of condemnation which each evokes within the scientific community. Fraud is the legal equivalent of a felony, whereas breaches at the other extreme are akin to a lesser offense, such as jaywalking. While recent attention has understandably focused on heinous crimes of a few scientists, pedestrian violations have their own interest.

In *Selling Science: How the Press Covers Science and Technology* (W. H. Freeman, 1987), Dorothy Nelkin of Cornell University observed the rising tendency by scientists to seek favorable media attention for their research. "Increasingly dependent on corporate support of research or direct congressional appropriations, many scientists now believe that scholarly communication is no longer sufficient to maintain their enterprise," she wrote. "They see gaining national visibility through the mass media as crucial to securing the[ir] financial support..." (p. 133) Nelkin cited researchers working on interferon, DNA and artificial intelligence who have pursued the public spotlight for this purpose (pp. 7, 138) and others who have hired public relations firms to prepackage research results for distribution before their formal publication (pp. 174) Indeed, she

noted that many newspaper editors are beginning to feel they are being used as "pawns for grantsmanship" (p. 141).

Zuckerman wrote that "going to the lay public for primary legitimization and recognition violates the norm of organized skepticism since it bypasses the primacy of qualified peer review" (p. 122). With an increase in such behavior, scientists are starting to worry about, in Nelkin's words, "the corruptive influence on science of self-promotion and the encouragement of scientists more skilled in public relations than in research" (p. 169).

Nelkin further observed that "unlike physicians and other licensed professionals with codes of ethics and standards of confidentiality, [scientists] share few norms to guide their relations with the public" (p. 160). One standard, enacted by some journal editors, is known especially in the medical sciences as the Ingelfinger Rule (named for the former editor of the *New England Journal of Medicine*, Franz J. Ingelfinger). It proscribes the publication of articles whose substance has first been reported in the press.

In order to ensure informed judgment on the value of research projects and an orderly dissemination of research findings, the scientific community should examine closely the actions of self-promoting scientists who use the media to gain support. Perhaps some of the unspoken norms regarding scientists' dealings with the public require specific and overt codification, as in the Ingelfinger Rule.

There's One at Every Conference

But what of those scientists who are self-promoting but who do not attempt to circumvent peer review in pursuit of research funds and other awards? (Here I leave aside the visible or continuously public scientists—the popularizers and the social and political activists.) Every field of science has those who promote their own research. Their motto seems to be “modesty is the opiate of the mediocre.” I recently used the terms “charisma” and “chutzpah” to describe these characters (“Some Deviant Behavior in Science Has Nothing at All to Do with Fraud,” *Current Contents*, no. 49, December 7, 1987, p. 3).

These self-promoting scientists, by their unbounded enthusiasm for their projects and their exuberant personal style or flamboyance at conferences often earn the derision and sometimes the censure of their peers. No matter that some of them are obviously brilliant or exceedingly creative. Even when festooned with medals for authentic accomplishments, these intellectual egotists find themselves somehow standing outside the society of science.

Just what standard do these scientists violate? It is the community's consensus that a good scientist—one who can be trusted—casts a cold eye on the data; any passion should be for the advancement of

knowledge, not for the advancement of self. That is the ideal. But John Ziman, now chairman of the Science Policy Support Group, London, noted the reality (and paradox): “One must have sufficient confidence in one's own notions to carry conviction in argument. Yet one must not become so deeply committed that one cannot escape from them if they prove untenable.” He added, “*The Double Helix* brings out the passion and anguish with which scientific research is really pursued” (“Some Pathologies of the Scientific Life,” *Advancement of Science*, vol. 27, September 1970, p. 11).

Of course, most scientists have enthusiasm for their research. That some express it in the form of self-promoting language or behavior reflects more than anything else the diversity of personalities within the scientific community. I am far from unsympathetic with strong or colorful personalities who find it difficult to blend quietly into the background of their adopted milieu.

Is there room in science for self-promotion? Of certain innocuous varieties that are merely extensions of unconventional individuals, I surely hope so. Members of the scientific community can exhibit tolerance toward such colleagues. But of those varieties of self-promotion which attempt to skirt peer review, it is not tolerance but scrutiny and perhaps action that is required. ■