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Science, Journalism, and Whistle-Blowing

Discussion of fraud in science is becoming a cottage industry in need of an environmental impact report. Fraud is devastating to science; it undermines the basic respect for the literature on which the rapidity of scientific advance depends. It must be rooted out wherever and whenever it is discovered. That makes it all the more imperative that charges of fraud be made responsibly and that the performance record of whistle-blowers be scrutinized as well as those of the scientists they criticize. In recent times we have been exposed to excesses in whistle-blowing and journalism that come close to the evils they wish to eradicate. We see, for example, the charge that there is widespread fraud, followed by a text defining fraud as a broad concept including "misconduct." Misconduct is then interpreted to include such items as poor proofreading or incomplete references. In a recent congressional hearing, misconduct was further broadened to include a difference in interpretation of complex data. Crying wolf tends to lose effectiveness when the wolf is redefined as a vicious mouse and then it is further conceded that the viciousness is a matter of opinion.

The slowness of institutions in conducting investigations is viewed by some as evidence of an "old boy" conspiracy. But there are good reasons to be slow to accuse a colleague. A student works in close cooperation with a professor for months or years and finally solves a problem. A statement by the professor that "we can't publish until the result is checked" might eliminate a few cases of fraud, but it would forever damage the relation between student and professor. Institutions that are quick to accuse distinguished faculty members of misconduct or worse on the basis of gossip or flimsy data will not long have a distinguished faculty. The fate of whistle-blowers who have lost their jobs or failed to continue in science is often recounted as evidence of retaliation, but the quality of the whistle-blowers' work is relevant to this conclusion. The idea that scientists may cut corners to achieve fame, but whistle-blowers never do, is nonsense. Past track records are not always a guide to future conduct—some distinguished scientists err, some erratic whistle-blowers are right on occasion—but scientists, like ordinary citizens, are innocent until proven guilty. Investigation of their integrity should require substance. It is not a cover-up for an institution to refuse to initiate an inquiry if the only evidence is the accusation by an unreliable source.

The scientific apparatus cannot afford to disregard accusations of fraud, and competent whistle-blowers help science. Investigations should be pursued meticulously, but the final report should strongly state the outcome: If the accusation is correct the miscreant should be punished and the whistle-blower commended. If, however, the accusation is incorrect, in addition to the usual bland announcement of exoneration there should be a denunciation of the false charges and a documentation of the time, anguish, and delay that has been occasioned. Science cannot tolerate fraud, but it should not be at the mercy of headline-happy journalists or incompetent whistle-blowers.

Journalists must distinguish between fraud, sloppiness, and differences of opinion. When an accusation of fraud is made, if the evidence appears weak or the charge exaggerated a careful journalist should be alerted to probe more deeply. Opinions of noninvolved experts on the likelihood of error and the track record of the accuser should be documented early on, even in the initial story. The original story may have to state the facts of an accusation before all the background is obtained, but in most cases the story can be delayed, and in all cases pertinent doubts should be expressed. The final outcome should be publicized appropriately. Finally, the setting in which a story is reported must be considered by a journalist. A story involving a prominent scientist in an inquiry on fraud is bound to make headlines, even if the story is only a question of judgment. The late Senator Joseph McCarthy was particularly clever at manipulating journalists in this way; the techniques should be familiar by now.

Scientists respect integrity, scholarship, and good judgment as much as they abhor fraud, sloppiness, and poor judgment, but these are very different phenomena. Those who mix them together in uncritical ways may decrease our chances of eliminating true fraud, may damage reputations unfairly, and may diminish enthusiasm for healthy differences of opinion at the cutting edge of science.—DANIEL E. KOSHLAND, JR.