



**[Ethical Guidelines for Statistical Practice: Report of the Ad Hoc Committee on Professional Ethics]: Comment**

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example, one might view the first sentence in Section II.A as the first *concept* of professional ethics dealing with integrity and the three items listed below it as rules of conduct. Under Lantry's organization for a code of conduct, the term "guidelines" is reserved for clarification and interpretation of the rules of conduct, which are viewed as enforceable ethical concepts. My point is this: If the ASA feels that this document is necessary for whatever reason, is it not important that it be prepared in a manner that is consistent with accepted legal form? I am, of course, not asking that it be cumbersome, rather that the format be consistent with whatever is standard, and that the use of terms like "guidelines" be consistent with accepted usage. Perhaps this document does meet these standards, but a sample of size one suggests to the contrary.

The document that is finally accepted should, I believe, make provision to apply to all who use statistical methodologies, whether they refer to themselves as statisticians or not. As the document now reads, one can violate the guidelines without concern if one merely claims not to be a statistician, since all of the guidelines begin "Statisticians should . . ."

Whether my comments will cause any revision in the document or not, I propose that the document could be improved by rearranging the order of the five sections. I believe the following order will focus the reader of the

guidelines after establishing the background for their creation. Clearly, the first portion should be the Preamble. Within the Preamble though, I am not sure why the "therefore" in the last paragraph follows from the previous two paragraphs. I suspect that it follows from the charge to the Committee on Ethics. If the order of the rest of the document placed Section II, General Guidelines, after all of the other sections, I believe the result will be to strengthen the impact of the guidelines. Within Section II, I find that the four subsections could be captioned as A. Integrity; B. Confidentiality; C. Validation; and D. Responsibility to Clients. I also propose that a fifth subsection be added along these lines: E. Responsibilities to Colleagues. Statisticians should conduct themselves in a manner that will promote cooperation and good relations among members of the profession.

I do not believe that the ASA Committee on Ethics should actively seek out violations to these guidelines; rather, it should respond to alleged violations only if absolutely necessary. It is hoped that the guidelines will serve as a standard and will not often need to be challenged.

One thing is certain. The guidelines and the function of the ASA Committee on Professional Ethics will need to be modified to some extent after the three-year trial period. All of us will have a better idea concerning possible changes after reviewing past experience.

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## Comment

### IRWIN D.J. BROSS\*

Newer professions (such as statistics) considering ethics codes and committees can take a leaf from the book of older professions (such as medicine) and profit from the experience of others: "Ethics" is a tricky business.

The machinery of medical ethics is now receiving severe criticisms in *A Theory of Medical Ethics* (Veatch 1981) and numerous articles. The failure of this machinery to control malpractice or other professional misconduct has led to charges that it is mainly used to cover up such abuses. In dealing with the machinery for professional ethics, it is essential to distinguish actual performance of the machinery from what is hoped or expected of it. Good intentions don't prevent bad practice.

The ASA may be aiming at the right target but in proposing the trial Ethical Guidelines for Statistical Practice, it is pointing in the wrong direction. Admittedly, something should be done about the steady erosion of ethical standards in government agencies, in research and educational institutions, and in the medical and scientific professions. My new book, *Scientific*

*Strategies To Save Your Life* (Bross 1981), gives several examples of how unethical conduct has endangered the public health and safety (Chapters 11, 13, and 14). But is setting up "Ethics" machinery the answer?

The recent fraud in research at Harvard Medical College (Broad 1982) would suggest that internal committees tend to delay, rather than expedite, the resolution of ethical problems. There is a tendency to suppose erroneously that just because a review machinery (often a peer review machinery) exists, it can take care of ethical problems. In practice, committees confronted with these complicated and unpleasant ethical messes (i.e., biomedical frauds tend to involve departmental practices, administrative inadequacies, and persons other than the ones accused of fraud), often look for an easy way out that may not be an ethically valid solution. Conflict of interest and other ethical issues plague the judges as well as those judged (who, on some other occasion, may well be doing the judging). Calling a group an "Ethics Committee" does not change the nature of committeemanship. When given hard choices with painful consequences, committees will dodge the issues, delay the decisions, pass the buck, or otherwise avoid an onerous and unrewarding task.

Unfortunately, a code of professional ethics may tend

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to be structured to protect the professionals, not the public. Sections II.C and II.D of the ASA code sometimes show this tendency. Here is one instance of how medical ethics operated for the benefit of the doctors and not for the benefit of their patients. When our quantitative biostatistical-epidemiological studies on the hazards of diagnostic medical x-rays hit the headlines, I got a call from an irate Rochester radiologist. He complained bitterly that our findings on the dangers of mammography and other procedures had reduced the business of radiologists by 40 percent. He then told me he was calling me up before a medical ethics committee that would take away my M.D. He was much disappointed to learn I didn't have one.

From my experience with ethical problems in the real world, I doubt that the platitudinous ASA code would be much help in resolving them. Consider, for instance, a relatively simple (most of the problems are very complicated and confused) example involving statistics, ethics, and the National Cancer Institute. To attract patients to its comprehensive cancer centers, NCI is now engaged in a multimillion-dollar public relations campaign based on this claim: There has been a dramatic improvement in the cure rates for breast cancer and other major cancers because of surgical adjuvants such as chemotherapy (National Cancer Advisory Board 1981). However, during the same decade that NCI's cure rates dramatically increased, the *death rates* for breast cancer also dramatically *increased* (after decades of stability) (Bross 1982a).

The simple explanation of this paradox is that NCI insists on calling 5-year-survival rates "cure rates." There has been prolongation of life by a few months or a few years but most patients are not cured, although the 5-year survival rates are sharply increased. Since the NCI "Conquest of Cancer" program had promised cures (not just prolonging the agony), NCI has to talk about phony "cure rates" instead of prolongation of life.

It has become government policy to allege that an agency's positions are supported by its statistical reports even when, in fact, the agency's own data refute the claims. Recently I have reanalyzed (with simple, standard statistical methods) a series of government reports on technogenic health hazards that claimed that there was no evidence of excess risk. In every case there was clear, statistically significant evidence of hazard—at Love Canal (Bross 1980b), Three Mile Island (Bross 1982b), Portsmouth Naval Shipyard (Bross and Driscoll 1982), in the children of Japanese A-bomb victims (Bross 1982c), and elsewhere (Stutzman, Caldwell, and Heath Jr. 1982). These unethical practices not only destroy the credibility of government agencies but jeopardize public confidence in science and in the statistical profession.

These examples raise various ethical problems. Should NCI statisticians blow the whistle on the "cure rates"? On other falsified government statistical reports? If a statistician got into trouble for doing this, should ASA try to help? Is misleading the public (e.g.,

by calling 5-year-survivals "cure rates" when they are not) covered by the ASA code? Is this semantics or statistics? Since "misinterpretation" is, in practice, a much more serious trouble with statistical reports than purely technical flaws, would this be too vast a territory for ASA to police?

While the examples raise many questions, I find few answers in the code other than the well meaning "Avoid untrue, deceptive, or undocumented statements." Without guidelines to implement the statement, it stands as an admonition like "Tell the truth, the whole truth, and nothing but the truth." My "Ten Commandments" (Bross 1976; Bross 1980a) at least provide some suggestions for implementation. On the other hand, implementation by peer review machinery has not worked well for medical ethics and isn't likely to work much better for ASA. Indeed, the cure may be worse than the disease.

In the end, I'm afraid, "Ethics" boils down to this: Each statistician must decide as an individual what is the right action to take in the face of an ethical challenge. Taking the right action, particularly action in the public interest, is almost certain to draw heavy flak from the defenders of private interests. A statistician needs the moral courage to face this flak. It would be nice if the ASA would stand behind statisticians with the guts to tell the truth when it is unpopular to do so. However, I cannot see that the ASA ethics code or committees are likely to help one bit in this regard.

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