



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

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Members of the American Statistical Association (ASA) have been discussing the pros and cons of codes of conduct, ethical standards, or guidelines for professional practice for many years. The development of the present guidelines has been a laborious and at times frustrating undertaking for the members of the Ad Hoc Committee on Professional Ethics. The committee has devoted many hours to reviewing past history within the Association, consulting with other professional societies, and revising statements after discussion of draft proposals with the Board of Directors. In my view, the product of this work is in the right direction and is an excellent step forward.

I am particularly pleased with the general tone of the guidelines. Rules that are too literal and specific would be impossible to apply in all circumstances and might lose relevance over time. The present guidelines *are* guidelines, not a code of conduct to be enforced with sanctions. On the other hand, it has been argued that statisticians do not need such general exhortations to “be good”; that as conscientious, trained professionals they will find such generally stated guidelines superfluous. I do not agree. Experience seems to show that professional norms of appropriate behavior change with changing social conditions, with the expanding uses of statistical methods, and with changing perceptions. One need only think of the emphasis now put on the rights of respondents in contrast with that of 20 years ago. Ethical guidelines can alert statisticians to such changes and encourage accepted professional behavior in a wide variety of circumstances.

The main justification for the guidelines, it seems to me, is to inform statisticians of significant issues in ethical conduct and to suggest appropriate solutions. The individual statistician is still the judge in individual instances. The guidelines also serve to inform the users of statistical services—the employers, funders, research colleagues, and clients—of what they may expect of the statisticians with whom they deal.

The International Statistical Institute (ISI) has recently set up an Ethics Committee. Its chairman, Roger Jowell, delivered a thought-provoking paper at the 1981 Buenos Aires meetings that expressed his views on the type of professional code suitable for the ISI. In introducing the topic, he distinguished the following three models for a code of ethics:

Aspirational code—one embodying lofty ideals

Rhetorical or sanctimonious calls for moral fibre, altruism and high endeavour are hardly likely to induce more than a momentary inspirational glow . . . they are unlikely to have any sustained effect on behaviour; they are of little practical value to those who legitimately look to a code for information about, and justifications for, professional norms or ethical conventions; and they portray a quite inappropriate aura of noblesse oblige designed to support the belief that the professional “is wiser as well as more altruistic than most.”

Regulatory code—one specifying enforceable rules to govern behavior

A set of universal rules would be very difficult to formulate, still more difficult to implement. Even if these problems could be solved, a regulatory code would inevitably be so qualified that its utility would be destroyed. The result would probably be an aspirational code masquerading as a regulatory code.

Educational code—one encouraging the adoption of ethical behavior

Based on the twin premises that most ethical issues defy unambiguous regulation and that ethical decisions are matters for the individual rather than the group, an educational code would seek to describe and explain professional norms, expose inherent conflicts, and give guidance on possible approaches to their resolution. Its aim would be to ensure that individual ethical decisions are informed by professional experience, not governed by professional authority.

Jowell obviously prefers the third model. He suggests that an educational code might have three elements for each issue it covers; first, an aspiration or goal; second, a discussion of the difficulties in reaching the goal, “for example, that statistical data are not ‘privileged’ in relation to subpoenas, that it is beyond the scope of individual statisticians to determine exactly how their data will be used, that statisticians frequently face competing responsibilities towards research subjects, employers, society at large, and so on”; and third, a series of guidelines to good practice.

Jowell was, of course, discussing problems of designing an international code suitable for countries with very different legal, cultural, and professional situations. But even within a single country, the circumstances in which statisticians practice differ enormously, so I agree that regulations designed to *enforce* specific statistical practices would be impossible to implement universally.

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I believe the primary justification for ASA's ethical guidelines is educational. As such, the functions of the guidelines will be to increase the general awareness concerning significant issues, to inform statisticians of competing values and incentives affecting ethical behavior, and to spread knowledge of desirable procedures. Although as written the guidelines are primarily aspirational, they present an opportunity and mechanisms for introducing more educational material of the type suggested by Jowell—in the procedures for extending the guidelines and for adding guidelines for specific areas of application, and in the establishment of the Ad Hoc Committee on Professional Ethics as a continuing committee of the Association. It is my hope that the committee will stimulate discussions of a variety of

ethical issues in *The American Statistician* and elsewhere during the three-year trial period.

It is possible that the guidelines may also serve to assist individual statisticians in maintaining ethical standards in confronting employers, sponsors, or clients in specific instances. A statistician will be able to point to the guidelines as a considered statement of appropriate behavior that has been accepted by the profession.

REFERENCE

- JOWELL, ROGER (1981), "A Professional Code for Statisticians?: Some Ethical and Technical Conflicts," invited paper, plenary session of the International Statistical Institute's 43rd Biennial Session, Buenos Aires, 1 December 1981.

Comment

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The guidelines should serve as an excellent starting point in the evolution of ethical standards within the statistical profession. In a profession that is known to many through Disraeli's phrase "there are lies, damn lies, and statistics," there should be no need to emphasize the importance of a set of guidelines. I became aware of this early in my medical consulting career when, in a cooperative venture to organize some data for presentation in a legal case, a physician suggested calculating the average survival time of a group of cancer patients using the data from dead patients only.

These guidelines provide norms of behavior for practicing statisticians and inform the statistical consumer of what to expect from a consulting relationship. In the context of professional training, the guidelines could be one of the foundations for a teaching program in ethics. The study of ethics should be a fundamental part of the professional training of a statistician, especially consulting statisticians. The committee has proposed collecting a series of case studies that could be used to sharpen the formation of ethical judgment just as biostatistical casebooks have been used in the development of consulting and statistical judgment. This is an excellent idea.

As one with more than 20 years' experience as a consulting statistician in a medical environment, perhaps I could be useful by discussing briefly some situations in which having ethical guidelines could influence behavior. In medical statistical consulting, one often becomes involved in the design of experiments, especially clinical trials. Levine and Lebacqz (1979) have identified "six ethical norms for research involving human subjects: (1) good research design, (2) balance of

harm and benefit, (3) competence of the investigator(s), (4) informed consent, (5) equitable selection of subjects, and (6) compensation for research-related injury. While not all of these norms have been recognized as either compelling or applicable at all times, there is a growing consensus that adherence to each norm is a necessary condition for the ethical conduct of clinical trials." A simple ethical guideline concerned with research design is that a statistician should not propose any design involving human subjects if he is not willing to be a participant in the study, assuming that he met the conditions for entry. This is closely related to the statement of Atkins (1966): "If we would allow a member of our own family to enter the trial, it is ethical; if not, it is not ethical."

A consulting medical statistician may sometimes be asked to coauthor a publication concerning a project that he has had little connection with or, in fact, where he may disagree with some of the major conclusions drawn. For some medical research investigators, having a statistician as a coauthor provides an imprimatur and justifies the methodology used and the conclusions expressed. The experienced consulting statistician, Cuthbert Daniel, has warned of the dangers of "publishing and perishing." Statisticians should be cautious about permitting use of their names on medical research papers; my own guideline is to ask that my name be removed when I believe that the data do not support one or more of the major conclusions in the paper. Unfortunately, in these days of multi-authored papers, it is not always possible to implement this, since sometimes one's name is used as a coauthor or in an acknowledgment without prior approval. (The ethics of this practice is questionable.)

The guideline expressed in Statement II.C concerns the assumptions, methodology, and data processing

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