

# Research Ethics Education: The View from Below

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I am a graduate student at an academic health sciences center that does not have a formal bioethics or medical humanities degree program. Each of the six schools that compose our institution offers one or more ethics courses specifically designed to meet the needs of its own students, although a few of those are cross-listed, and it is possible for students from one school to enroll in courses in another. The graduate school requires one ethics course as part of its first-year curriculum. This course was established 14 years ago, as one of the first of its kind in the country, to introduce students to the issues that currently constitute the nine instructional areas of responsible conduct of research defined by the U.S. Office of Research Integrity.

Although the influence of a single ethics course on the lives of my fellow science students is debatable, it inspired me to study ethics and led to my participation in a series of National Science Foundation-sponsored workshops on graduate research ethics education. Later, I became one of the course's instructors and used it as a springboard to formulate my own graduate-level ethics course on the humane use of animals in biomedical research. I was able to do these things because the issues discussed in the lectures and debated in the case discussions struck a harmonious cord with me. However, this is not the case for the majority of graduate students in science. Students' formal course evaluations, informal comments, and behavior during lectures attest to the fact that ethics education lacks the allure and credibility of scientific training for many research-oriented graduate students.

A number of science students from other institutions, with whom I have worked closely over the last three years, seem to share my experience and feelings of isolation in our interest in ethics. My student friends and I try to make a difference in our colleagues' lives by putting our own little pebbles into the pond of ethics education at our individual institutions. The common influences in our academic lives appear to be our love for the intellectual content of research ethics and the presence of a mentor who not only encourages discussion but who also has provided alternative solutions to sometimes insurmountable practical problems. The short- and long-term effects of this interaction have made us appreciate the tremendous importance of substantial mentoring in the life of a graduate student. Mentoring is currently receiving nationwide attention as an academic necessity. This awareness has been somewhat slow in coming, given the fact that in eth-

ics conferences (Association for Practical and Professional Ethics, Public Responsibility in Medicine and Research, etc.) graduate students consistently identify the lack of effective mentoring as their number one problem in graduate school. During the Experimental Biology '02 conference, the Women in Physiology Committee sponsored a successful interactive workshop on mentoring that was attended by students, young researchers, and senior scientists alike, many of whom were pleased to see the importance of mentoring emphasized.

I often wonder if the formal ways in which we try to communicate ethical training might be inadequate for graduate science students. Current methods do not seem to make a difference in the life of most graduate students in research, nor do they seem able to teach them how to recognize, anticipate, or alleviate their problems. Is it the pedagogical method we use (i.e., lecture formats, brown bag seminars) that is not appealing or effective? How should we look at the enormous and difficult course load of graduate school, which demands a graduate student's full attention and overwhelms the occasional didactic material in ethics? Is it, as students repeatedly tell us, that 22-year-old students know all about ethical conduct and it is therefore a waste of everyone's time to repeat the obvious? Are we really duplicating what students assume they have been taught by their parents or in elementary school? Or is it simply that the lack of a scientific mantle for ethics education is compounded by the fact that ethics has traditionally been linked to philosophy and other humanities departments that have little standing in the eyes of scientists?

Researchers often suggest that the quest for truth embodied in scientific research protects fair and honest relationships and scholarship. However, the increasing incidence of reported misconduct and federal intervention in what has long been thought of as a self-correcting environment, confirms the need for research students to be exposed to and trained in the professional ethical standards of their disciplines. There is substantial growth potential in formal scientific research ethics programs within academic institutions, akin to the need for medical humanities programs, however, in the early 1980s. The creation of such programs is faced with considerable resistance due both to their innovative nature and the deeply felt opposition to apparent federal interference in research. Nevertheless, it is obvious, however, that ethics education does have a place in science, and scientists cannot afford to continue

hiding from ethical debate behind the research bench. Since society demands that we take responsibility for our actions, it would be to the advantage of the scientific community if scientists stepped up and became versed in ethi-

cal issues and dilemmas in order to become the desperately needed cadre of teachers and, one hopes, mentors of their students and colleagues. ■