

Author's Commentary on "Much Obligated"

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Lying, cheating and stealing are examples of behaviors that most members of our society would deem unethical in most situations. It follows that many young scientists may think of such behaviors when asked to discuss ethics. For example, it is unethical to fabricate data; it is unethical to copy someone else's answers during an exam; and it is unethical to plagiarize. Each action is a relatively unambiguous example of unethical conduct, and scientists can easily define the behaviors that make each action unethical. Many of the ethical quandaries faced by scientists are not so straightforward. This case study is designed to illustrate a subtler ethical dilemma: conflicting commitments and obligations.

Conflicts of obligations are those situations where competing obligations prevent honoring both obligations effectively. Werhane, Patricia, and Doering, Jeffrey. "Conflicts of Interest and Conflicts of Commitments." *Professional Ethics* 4 (3 and 4, Spring/Summer 1995): 47-81. Young scientists are faced with conflicting obligations and commitments the minute they step into the laboratory. New graduate students certainly have obligations to their advisers/mentors, who are offering their expertise and affording environments in which students can pursue research. Students may also be obligated to assist other graduate students in laboratory or department. They may act as teaching assistants and therefore have obligations to undergraduate students. Outside academia, graduate students may have obligations to their families, who may have sacrificed so that the students could pursue higher education. The list can continue on and on.

While many graduate students feel that life becomes golden upon graduation, obligations seemingly loom larger. As professors, the scientists now have obligations to whole laboratories and all their players from student workers to technical assistants to graduate students. Professors also have obligations to their superiors, funding agencies, university committees, professional societies and families. Vesilind

devotes an entire chapter to this juggling act in his book *So You Want to Be a Professor*. Vesilind, P. Aarne. "The Academic Career" in *So You Want to Be a Professor*. Thousand Oaks, Calif.: Sage Publications, Inc., 2000, pp. 173-80.

Unfortunately, very few scientists are professional jugglers by training. With so much promised to so many people, something has to give. When these obligations conflict and scientists are forced to honor one obligation over another, they may find themselves in an ethical pickle.

In this case, there should be no bad guy. Jones may come off as naive, and McCleary may seem a little aggressive, but one would be hard-pressed to determine where to place the blame. Certainly no one has committed any act that needs to be reviewed by a judiciary board. It is simply a case where commitments have been made to several different parties and the two major parties involved have a different hierarchy as of commitments.

Question 1: To whom is Jones obligated, and what does he owe them? What about McCleary?

Ideally, students will come up with a variety of answers to this question. Jones is certainly obligated to McCleary, who has funded him at least partially throughout his work, afforded him a laboratory with equipment and technicians. McCleary has also lent Jones his expertise and reputation in pursuing funding and provided an environment in which Jones can freely pursue the science that interests him. Jones is obligated to keep McCleary informed of his results and allow him to share in the credit for his successes at some level. Jones is also obligated to share in the responsibility of disseminating his research findings.

Jones is also obligated to the funding agencies that supported his work, one of which is a nonprofit organization devoted entirely to raising money to defeat Kruse's disease. Jones is responsible to the funding agencies for honestly pursuing his hypotheses and reporting his findings to them.

Jones may also have familial obligations and obligations to those who gave him technical support throughout the work. Students can continue in this same vein in trying to determine McCleary's obligations.

Question 2: In what ways do any of these obligations conflict?

Students can weave a complicated web trying to determine which obligations conflict. For example, Jones feels an obligation to the scientific community and recognizes that patents may hinder other scientists building on his work. The patents, however, would partially satisfy Jones's obligation to McCleary by letting him share in their successes. The patents also would add prestige and perhaps revenue to McCleary's lab, fulfilling in part the professor's obligations to his laboratory. McCleary, however, in an attempt to market the patent in a manner that brings profit to the lab, may make the test much more expensive than the Society for the Prevention of Kruse's disease would desire. Considering Jones's obligations to his family, it may be in his best interest to be part of the patent and make a little profit from his work.

Question 3: Which (if any) of these obligations are more important or stronger than others? Why?

The real ethical quandary develops when students are asked to determine which obligations are more important than others. Having to choose one obligation over another will push students to consider the ethics surrounding obligations. Why is it so bad to break promises?

Question 4: What are some of scientists' obligations to society? Are any of these obligations "special"? Why?

The first three questions are designed to encourage each individual to decide which obligations should receive priority in this particular situation. The fourth question is designed to encourage students to think of the bigger picture: our obligations to society as scientists. As research scientists, we spend years becoming experts in our fields. In many situations, what we research and how our results are used affect an enormous number of people. To say that we have "special" obligations may be pretentious. An assembly line worker has as great an obligation to society in ensuring that a car's braking system is properly assembled. The development of nuclear, chemical and biological weapons, however, is one example of scientists being the most knowledgeable in their fields and seemingly failing in their obligations to society. The result has proved disastrous for several generations.

As members of society most knowledgeable in our fields, we certainly must define our obligations to society. At present, progress is exploding in the field of biotechnology. The technologies being developed could go far to alleviate human

suffering but could also prove calamitous if misused. Most scientists agree that we have an obligation to society to be honest in our discoveries, but how far do these obligations extend? Do we have obligations to society to ensure that these technologies are not misused? These are decisions each scientist will have to make individually. What are our obligations? How far do scientists' obligations extend? How can we adequately honor all of our obligations?