primary adviser's opinion, the committee members should put their assessment in writing before they engage in any collective discussion of the student's progress. As a positive byproduct, the committees would then also have some ethical oversight of the entire department's research practices. Committee members would be the first "outsiders" to see the results, and they would hear first-hand about the methods and practices. Some common ethics violations cited in the ethics survey in figure 1 of Kirby and Houle's article could be addressed at this stage, well before publication.

With the involvement of the entire committee, the rules concerning meddling would eventually become irrelevant. The advice and guidance provided would be normalized by including more experience and points of view. New faculty would have some introduction to their advisory duties, starting with their very first student. Research is rarely done in isolation, and advising should not be done in isolation.

Joseph O. West
(phjoseph@isugw.indstate.edu)
Indiana State University
Terre Haute

Kirby and Houle reply: The range of ethical issues in physics is certainly far broader, as noted by Frank Melsheimer and Peter Foukal, than those we focused on in our article. We share Jeffrey Marque's frustration that abuse and exploitation of graduate students and postdocs has long been overlooked. One goal of our article was to bring this concern to the forefront in the physics community. We hope that with awareness and good leadership, physics departments and their chairs can take steps to prevent and, where necessary, ameliorate abusive and exploitative situations. Joseph West is correct that the mistreatment of subordinates often arises from neglect, lack of management skills, and lack of awareness of the responsibilities that are specific to supervising students. Thus it is critical that departments establish a structure to prevent abusive treatment and to communicate a set of expected ethical behaviors.

While surveying physics department chairs, we heard about several college and university departments that have highly successful ethics programs or courses. The Task Force on Ethics Education of the American Physical Society will, we hope, help the physics community become more aware of such programs so that departments can implement them. Clearly, education about ethics needs to extend far beyond guidelines concerning data fabrication, falsification, and plagiarism to include the development of mentoring skills, understanding of supervisory responsibilities, knowledge of intellectual property rights and obligations, and appropriate processes for resolving ethical problems.

Kate Kirby
(kkirby@cfa.harvard.edu)
Harvard–Smithsonian Center for Astrophysics
Cambridge, Massachusetts
Frances Houle
(houle@almaden.ibm.com)
IBM's Almaden Research Center
San Jose, California

I offer a modest proposal. I recommend the establishment of a clearing-house for inquiries about research conduct and ethical behavior. There are many occasions when someone is uncertain about how to proceed and may be too junior or isolated to seek local guidance. In addition, ethics questions, particularly for a junior scientist, may be related to the senior scientist he or she would normally ask. Such a clearing-house would encourage a climate that would lead to good behavior. The method could be a moderated electronic mailing list where questions are posted in an anonymous, hypothetical, and timely fashion to ensure privacy.

Since this letter was written, I found a clearing-house, Ethics AdviceLine for Journalists (http://www.ethicsadvicelineforjournalists.org), by which nationwide toll-free telephone calls or e-mail questions are rapidly answered. The entity I propose could emulate AdviceLine. I'm grateful to Casey Bukro, their ethics contact, for details.

I helped set up our research misconduct rules here at Drexel University. Often, ethical problems are not amenable to conventional textbook analysis, and people can honestly and naively misunderstand good research practice.

Leonard Finegold
(L@drexel.edu)
Drexel University
Philadelphia, Pennsylvania

Whitbeck replies: I am glad to see that PHYSICS TODAY readers are interested in a wide range of topics concerning the responsible conduct of research.

Leonard Finegold recommends a clearing-house for inquiries about responsible research conduct. The Online Ethics Center for Engineering and Science Ethics Help-line, cosponsored by the Institute of Electrical and Electronics Engineers and the National Institute for Engineering Ethics, offers such a service. The help-line receives and answers inquiries about how best to respond to ethical problems that commonly arise in research or in engineering practice.

The help-line member in charge at any given time (usually me) decides whether an inquiry is an appropriate ethical question rather than, say, an advertisement or a request for homework help. That person removes any specific identifiers and sends the inquiry to the rest of the team. When a topic seems to require familiarity with a particular setting or situation, the help-line person may consult someone with the relevant experience or may send questions of clarification back to the inquirer. After the team discussion, the member distills an answer from the discussion, which may be a consensus viewpoint, two or more disparate views, or something in between.

We do not use an e-mail list, because we find that a Web form is easier for users. We give inquirers latitude to describe their situation in whatever detail and specificity they think necessary. Occasionally, they turn out not to be looking for help thinking through a particular situation, which is the service we offer. Instead, they want us to issue a judgment against someone. I explain that we have no resources to do investigations, so we cannot issue judgments.

I think we have provided a useful service not only to young investigators and engineers, but to some senior people in well-known research facilities. Our deliberations and advice are not open to public view, although we could offer a more public discussion of typical situations if there is interest.

In my article, I described a discussion method that serves two purposes. It can stimulate the formulation of criteria for responsible conduct that are suited to the conditions of research in a particular area, and it can strengthen a department's ability to communicate with and answer questions for trainees.

The method, an inquiry submission form, and scenarios describing open-ended problem situations are available on our website, http://onlineethics.org/helpline. Although many advantages of the method can be realized only by having the discussions within departments, the Online Ethics Center could use the given scenarios, or others that users submit, to discuss a problem-of-the-month in an open, moderated Web forum.

Caroline Whitbeck
(cwrcr@onlineethics.org)
The Online Ethics Center for Engineering and Science
Case Western Reserve University
Cleveland, Ohio

Book Review on Fire

Peter Zimmerman's review of Lynn Eden's book *Whole World on Fire: Organizations, Knowledge, and Nuclear Weapons Devastation* (PHYSICS TODAY, April 2005, page 62) strikes me as throwing the baby out with the bath water. Zimmerman appears to condemn the book's real message about organizational dysfunction because he dislikes "her and [Theodore] Postol's diatribe against the atomic establishment," which he has labeled "her conspiracy theory." My reading says that Eden provided useful and verifiable history about portions of the development of US strategic targeting procedures.

If there had been a conspiracy within the Department of Defense (DOD) to exclude fire damage from the development of US targeting plans and procedures, I would have had a role in it. There was no conspiracy. What are my credentials for making that declaration? My career in nuclear weapons effects research testing and analysis began in 1951, when I was present at Operation Buster/Jangle at the Nevada Test Site, and continues to the present. Until 1974 I was responsible for planning several DOD nuclear tests. I still consult for the Defense Threat Reduction Agency on matters related to the nuclear effects database compiled by that agency during the entire nuclear testing period that ended in 1992.

My recent review of the 1946 reports of the US Strategic Bombing Survey and my personal involvement with nuclear weapons effects are consistent with what Eden has described. In fact, the survey team's extensive documentation in 1946 was soon put on the back burner by DOD scientists and engineers. The researchers at first used analyses of Japanese building responses to infer the weapon yields. Their analyses also suggested a simplified model for calculating a critical building-element response—a model that is still used in target damage assessment. However, when the Atomic Energy Commission (AEC) began atmospheric nuclear testing in 1948, DOD engineers quickly attached themselves to those tests.

Although we had experiments on thermal ignition and so forth, they were separated to avoid unwanted synergy in systems response. In addition, most structure-response test items were theoretical analysis models, not models of Japanese buildings. Consequently, as the Japanese structural-response database was replaced for US test planners by the sterile-structures tests at the Nevada and Pacific Proving Ground test sites, a unique feature of the Japanese data—the fire damage—faded in importance.

In reading Eden's book and recalling my own experience during those years, I can visualize how our nuclear weapons effects community lapsed into a sort of "group-think" programmatic decision-making process. We could not demand that the AEC test at a rate that would satisfy requirements for good scientific method for instrumentation development, for preliminary scale-model tests, and for thorough analysis of test data before conducting the next test. The DOD engineers were not in sufficient control of their test beds and the timing of events, nor did they have enough time between tests to understand the data.

Conspiracy? Absolutely not. A historically relevant story from which to learn and move on? Yes! And, move on we did.

The real value of Eden's book is in her thesis that entrenched organizational thinking can lead to unwanted results or ignore important factors, and in her suggestions about change. Zimmerman seems intent on finding inconsistencies in engineering and scientific details about the fire damage in Japan and in targeting in general. Certainly, fire damage was devastating in Japan. I started reading Eden's book because I wanted to know what she had written about that, since I was actively reviewing the data. I soon found that her real message was more important and wasn't just a criticism of military