A physician, after being introduced to me, a philosopher doing ethics in a hospital, said by way of welcome: “Ah, the moral gestapo.”

“Pardon?”

“I agreed with the medical humanities group that you could work with me. No one else would, and they pleaded with me.”

“Ah,” I said, repeating his greeting, not knowing quite what to say.

The physician then paused and said, “I have nothing to hide. I do everything by the book.”

I said something like “That’s good.”

The conversation stopped for a moment as I wondered how to proceed, and in the space I left vacant, he asked, “Where did you get your medical training?”

I said, “I don’t have any.”

He looked surprised, shook his head in apparent disgust, and from that point on simply ignored me.

Two Impediments

This exchange illustrates two impediments that face any philosopher doing work within another discipline — being viewed as a moral judge in a discipline while lacking competence within that discipline to make any relevant judgments at all:

1. Moral gestapo? Moral philosophers are viewed as moral philosophers, persons with a concern that things be done morally. If such a philosopher is hanging about a hospital, or an engineering school, he or she is up to no good or, rather, since doing good is what such
a philosopher is assumed to be up to, concerned to uncover moral wrong-doing. I suspect a former Dean of the College of Business at my institution, RIT, was making that assumption when we first met and I offered my services. “We are all moral here,” he said. “You might try a college where there are problems.”

2. Professional expertise? Philosophers are thought to be “hanging about” a hospital, or an engineering school, because it is thought there is no good reason, that is, no reason having to do with engineering or with medical practice, for a philosopher to be in those areas. The philosopher is viewed as an interloper, not skilled as an engineer or as a medical practitioner, but yet there — to make moral judgments about matters he or she lacks the competence to make any judgments about. Professionals are concerned to solve the problems they were trained to solve and so, quite reasonably, are hard pressed to understand why they should interrupt what they are doing to listen to someone without training in their profession talking about the problems they were trained to solve. Professional courtesy goes only so far.

These responses are both common and understandable. Regarding the first, the exchange with the physician changed my initial naive conception of what it was that I was, and am, doing when I engage professionals in other disciplines regarding ethics. At the time of the exchange, I was working with a medical humanities group at the University of Tennessee-Memphis with the aim of uncovering the ways in which privacy considerations enter or fail to enter into medical practice. I thought of myself as an observer and student in the situation, with the physician as my teacher, not as a subject. I had expected to engage in give-and-take with the physician about what sorts of issues regarding privacy arose in medical practice and what sorts of “invasions” of privacy would be acceptable and unacceptable. So I was brought up short by his assumption that I was there to make judgments about the way he practiced medicine — as though he were a suspect. He was mistaken about my being, as it were, a moral commissario. I was not there to second guess his diagnoses, but he was right that his behavior was an object of my concern. The ways in which he respected or failed to respect the privacy of his patients would enter into my findings — as would the details of any give-and-take between us that I found relevant to the way medical practitioners think, or fail to think, about privacy issues in their medical practice. So I was doing more than simply observing or learning. I was judging, and judging in an area about which I knew little more than any observer
without special training in the area. I was not making medical judgments, of course, but, still, the physician was under observation, subject to my judgment about, in this case, the ways in which he observed or failed to observe the privacy of his patients and, as it turned out, the ways in which he and others, and the health care system in general in Memphis, operated ethically and unethically.

It is no wonder he and others, apparently, were not particularly delighted to have a philosopher who specialized in ethics attending them in their examination rooms or on rounds. They would be as reluctant to find themselves subject to moral judgment as any of us would and even more reluctant to find themselves subject to such judgment from someone without the training and expertise that would ensure that any judgment was professionally competent. Moral judgments are as dependent as any other judgment on having the details right, and the understanding of the importance of many of the details within a professional context are dependent upon professional training. A layman is not positioned, by training, to look for the sorts of details a professional trained in the area would automatically notice and is certainly not able to understand the significance of the details even if noticed. Some individuals are unable to excrete zinc, for instance, with at least two results: their pupils come to have a tint of grey, and they either become or mimic the behavior of schizophrenics. No one without special training in the problem is likely to notice the significance of the color of the pupils of a patient and realize that a simple medical remedy that permits zinc to be excreted will restore a patient to a normal state.

So the reaction of the physician to my presence is understandable. Because I lacked, and lack, the training in medicine that would allow me, he thought, to understand what it was that he was doing as a physician, I could, to his mind, only luck into making appropriate judgments. My moral judgments were more likely to float above the details of the issues in a situation, unattached to its realities, unmoored by an understanding of the complexities facing the professional, and so lacking any footing in the practitioner's practice and thus any relevance to that practice.

There was thus a second lesson to learn from the physician’s response to my presence. I realized not only that I was an observer, making judgments that might put the practitioner in a bad light, but also that I had better be sure that my judgment was tempered by a full understanding of all the relevant facts and issues.
THE NEED FOR DETAIL

Moral judgments carry a heavy weight — especially when they are judgments of blame. Roger Boisjoly happened to be visiting my university when he first read Edward Tufte’s piece on how the engineers at Morton Thiokol were morally responsible for the death of the Challenger astronauts. Boisjoly was one of those engineers, and to put it mildly, he was not happy to find himself and the other engineers blamed for the astronauts’ deaths. Tufte very nicely shows how unclear all the charts used by the engineers were and then constructs a single scatterplot that, he claims, makes the danger of launching the Challenger so obvious that “no one would have dared to risk the Challenger in such cold weather.”

That scatterplot purports to correlate O-ring damage with temperature, and shows a spike in what Tufte calls the damage index that arches quickly up in the four flights below 66°, going from 0 damage at 66° to a damage index of 2 at 63°, 4 at 58° and 57°, and then 11 at 53° degrees. The chart shows us that launching the Challenger at the expected temperatures of 26° to 29° would produce O-ring damage that would be, literally, off the chart. If those charged with launching the shuttle had seen that spike, Tufte is arguing, no amount of pressure of any sort, political or otherwise, could have overcome what was right before their eyes.

The Morton-Thiokol engineers are thus morally responsible for the astronauts’ deaths, Tufte is arguing, because they

- failed to correlate O-ring damage with temperature,
- and so failed to present the correlation,
- and, obviously, failed to present the correlation in a clear way,
- and so failed to prevent the flight of the shuttle.

Tufte thus accuses the engineers not simply of what we may call representational incompetence, the inability to present their findings clearly enough for others to understand, a common failing among all too many professionals, but also of incompetence as engineers. Had they presented, and presented clearly, the single piece of engineering information that would have made the difference, Tufte argues, no one would have “dared to risk” launching the Challenger.

So we have a moral judgment about the engineers that rests on a judgment about their competence as engineers. No wonder that physician was nervous enough to refer to me as a member of the moral gestapo and disgusted when I said I had no medical training. Moral judgments about professionals within a professional setting get their point, and their moral weight, from an understanding of what professionals
ought to do as professionals, an understanding that depends upon accuracy about the factual situation within which a professional is operating. Anyone making ethical judgments within a professional setting has got to get the professional facts right.

Unfortunately, Tufte has gotten some fundamental engineering facts wrong. His scatterplot has both coordinates wrong. For the horizontal axis of temperature he mixes apples and oranges. The 53° with the “damage index” of 11 is the calculated temperature of the O-ring at the time of launch, a temperature significantly under the ambient air temperature of 66° at launch. All the other temperatures listed are those of the ambient air. If Tufte listed only ambient air temperature, the spike in damage would appear at 66°, the last spot on his scatterplot where it is presumably safe to launch, and O-ring damage would decrease as the temperature dropped to 63° and rise slightly at 58° and 57°. Such a chart would show us that it was most dangerous to launch at 66°. If Tufte listed only the O-ring temperature, he would have a scatterplot with only one temperature, that of 53°. The O-ring temperature was not calculated for the other flights. Ambient air temperature could be high while the O-ring temperature might be low because the shuttle may have been sitting out in the cold for some time before launch on the first warm day in awhile.

The mistake he makes for the vertical axis is worse. That axis is marked “O-ring damage,” but Tufte mistakes blow-by for soot, an effect of blow-by, thus misunderstanding completely the danger the engineers saw when they found that hot gases had blown by the first O-ring, depositing soot on the second O-ring. The blow-by made the second O-ring the only holdout against catastrophic failure. It is not damage to the O-ring or soot deposited on the second O-ring that is dangerous, but hot gases blowing past the O-rings, whatever damage they may do in transit.

So the scatterplot Tufte thinks would have persuaded anyone not to launch is faulty, with both coordinates wrong, and it would not take much looking for an engineer to see the problems with it. It is not going to convince anyone with a modicum of engineering expertise who knew the engineering data. It does Tufte’s laudable aim of encouraging representational competence grievous harm that his piece de resistance, the scatterplot he claims would have prevented a launch, is so faulty as to be arguably more confusing than the charts the engineers presented.

More importantly, his factual mistakes undermine completely his moral judgment. That judgment would be problematic even if he had his engineering facts right. It is difficult to fault the Morton Thiokol engineers morally. They were overruled, after all, by their superiors at Morton
Thiokol, who initially agreed with their judgment not to launch. In any event, the evidence suggests that NASA was going to launch the Challenger whatever the results of the teleconference with the Morton Thiokol engineers the night before the launch. It is otherwise difficult to explain the dismissal of Rockwell International’s refusal the next morning to agree to launch because of the condition of the launch pad, for which it was the main contractor. The pad was covered with ice so that launching presented a risk of harm from flying ice particles, if nothing else, to the pad as well as to Challenger. One condition of NASA’s protocol for launch is that it never launches against a prime contractor’s objection. It did in this case — apparently without a qualm, let alone a discussion of the sort it had with the engineers from Morton Thiokol the night before. Perhaps it had learned its lesson: if you are going to do something regardless of what others say, just do it, don’t ask. In any event, Tufte’s scatterplot, mistaken as it is, would not have been convincing.

So Tufte made both mistakes the physician apparently worried I would make. He made a weighty moral judgment about the responsibility of professionals without understanding the issues involved. He acted the moral gestapo, and he did it without the special expertise needed to understand how to make engineering judgments or, apparently, moral judgments.

A THIRD IMPEDIMENT

The failure of Tufte’s moral judgment illustrates a third problem philosophers have when engaged in what is called applied ethics within another discipline. It is an interesting question, but one Tufte does not engage, to determine to what degree, if any, the engineers’ failure to represent their results perspicuously was responsible for their superiors overruling them. That assessment would begin to give us a handle on assessing their moral responsibility, if any. But Tufte’s judgment is a blunt-edged simple ascription of responsibility: the engineers, he says, are morally responsible for the death of the astronauts. The judgment floats there, without any qualifications, and, as we have seen, unmoored to the factual contours of the actual decision-making process, a process that included the engineers’ success in convincing their superiors, their being overruled by their superiors only after NASA objected to Morton Thiokol’s refusal to agree to a launch, and NASA’s ignoring Rockwell International’s denial of permission to launch.
3. Purveyor of trivial truths? As I have come to understand as I have worked with professionals in other fields, most non-philosophers are very much at sea in understanding what philosophy is about. If I am not mistaken for a psychiatrist, which happens often enough, I am thought to be someone who engages in word play, uttering trivial truths, when lucky, as though they had deep meaning and, otherwise, uttering nonsense with no practical import.

This conception of the point of philosophy has an advantage if you think philosophers are moral cops making judgments in areas in which they have no competence. On this conception, philosophers make judgments with no particular connection to the details of a situation, and so it does not matter that they lack competence in an area in which they are playing moral cop. Tufte is no philosopher, but his judgment is of the “proper” form: it tells us who is responsible for what, but it does not reflect the details of the terrain it purports to judge. So, in that way, it fits well with the unfortunate conception of philosophical utterances that philosophers all too frequently encounter among other professionals.

It would be a mistake to think this unfortunate conception reflects a thorough misunderstanding of philosophy. Some of philosophy’s features play into this conception. For instance, engineers see philosophers as making what they consider qualitative judgments, judgments that lack the quantifiability they think engineering judgments display. So the judgments of philosophers are by that fact alone to be set aside by engineers from engineering judgments proper. In addition, philosophers are concerned with “big” truths, the nature of being, the nature of morality, and so on, and so, it is thought, their judgments lack the practical point, the usefulness, that mark the judgments of such other professionals as engineers, physicians, and accountants.

A philosopher in ethics who enters into another discipline thus faces suspicion and skepticism — suspicion because of the moral judgments about the behavior of the professionals in that discipline that can be expected to follow the philosopher’s trail, skepticism because the results of that entry will be thought not to be of practical import to the professionals. The reason for the skepticism is that the philosopher’s judgments will be thought not to reflect the disciplinary details only professional training could allow one to see and that the resulting judgments will be too general or abstract to be of any practical benefit to the professional.

Being thought a member of the moral gestapo, being untrained in the discipline and so lacking professional expertise, and uttering at best trivial truths of no practical import — these are three impediments a phi-
A philosopher may face when trying to work with other professionals in a helpful way. I say “may” only because some professionals in other disciplines have a more accurate understanding of philosophy and are more than willing to engage someone from another discipline, but it would be a mistake for philosophers to assume that they will be met with open arms and a loving embrace when they venture into a discipline where they lack professional credentials so as to make moral judgments about the behavior of those who do have the proper credentials.

TEACHING ETHICS WITHIN A DISCIPLINE

Bernard Gert’s *Common Morality* has many virtues, but the virtue that gives it its title is just what makes it an unfortunate choice for professionals in other fields to adopt as an ethics textbook and even for philosophers to adopt when teaching such courses as engineering ethics, accounting ethics, and so on.

The virtue that gives it its title is that it purports to lay out what we all consider to be our common morality, as captured in such admonitions as “Do not lie!” and “Do not steal!” Laying out our common morality is a useful enterprise, of course. Among other things it allows us to become aware of beliefs we have that are fundamental to our common lives, our thoughts and actions, to see connections we might otherwise miss between truths we all accept, often without ever having thought about them, and to grasp the boundaries of what we hold in common morally. In a course in philosophy, such an enterprise may be just what is needed.

Yet however helpful such an enterprise may be for students to go through at some point in their educational experience, adopting the book for a course within or about a professional discipline would be a mistake for both the faculty and the students. Its singular virtue plays into the misconception of philosophy that makes it seem gratuitous, if not insulting, to anyone being trained into a professional practice and to those faculty who are professionals in the discipline in question. It will carry with it into a professional classroom all the problems that physician saw with me when I came into his examination room.

Anyone teaching a course needs to ask the following question:

a. What are the students supposed to get out of the course? What is the aim?

In addition to that we need to consider two other questions:
b. Is the professor qualified and prepared to teach what is in the course? Does the professor have the capacity to achieve the aim?

For any course, but especially for a course within another discipline, where the course of study proposed will necessarily crowd out other items that could be studied, we need to ask as well:

c. What is the gain for what must necessarily be lost? Is the gain worth the loss?

Only a person trained in a discipline is in a position to judge whether the loss of some material thought germane to the course of study, i.e. worth studying, is not worth studying as much as the material being proposed. The professor teaching the course is likely to make that determination.

Whether we consider a course taught by a philosopher within another discipline — accounting ethics, say, or engineering ethics — or a course taught by a professor within that other discipline, we are considering courses where the aim of introducing a text in moral philosophy is to make students cognizant of ethical issues that arise within their chosen area of expertise. Is Gert’s *Common Morality* a good choice for such a course, with such an aim, either as the primary or as a supplementary text? What does it bring to the table?

Imagine that you are a student in computer engineering, say, and that you are in an upper-level course in programming. You have this book in front of you at the beginning of the term, and so, doing what all students ought to do, you glance through it quickly to see what is in it. You quickly discover that the primary focus of the first part of the book is on what are called the “moral rules,” and you discover that there are ten of those — do not kill; do not cause pain; do not disable; and so on. Some you find obvious. “Do not kill” seems obvious, for instance, although, once you begin to think about it, you become puzzled. Do not kill anything? It cannot mean that, you think, because surely it is acceptable to kill some things in some circumstances — a lion attacking you, for instance, when you have no other option but to kill it. Do not kill any human being? That is more like it, but still raises issues for you: is war ever justifiable? Only if that question is answered can we know whether this moral rule, so understood, is true. And the questions continue, of course, as you continue reading the rules. “Do not cause pain.” Ever? But what about playing contact sports? You can cause pain to other players as a normal part of playing the game. So we should never play football or rugby?
The idea of working all this out during the term may excite you, or not, but you will no doubt find it difficult to see how to connect these rules to your practice as a computer engineer and the course you are now taking. One of the rules is “Do not cheat.” Is the professor having you buy and read this book because he thinks you are going to cheat? And the professor thinks you need to read a book to come to know this? One rule says, “Do not deprive of freedom.” Does the professor want you to design software that encourages those using it to make choices? Another rule says, “Do not deprive of pleasure.” “Is this a course in designing software for games?” you ask yourself because otherwise the rule does not seem relevant to what you are doing, as a software engineer, in a course on designing code.

It becomes apparent almost immediately both that the rules seem true and that they seem true just because none of the qualifying details that matter when you apply them are brought to the fore. Working out those details would be a wonderful exercise for students to engage in. They would be forced to work out the details of our moral worlds, the ways in which we ought to act when rules conflict with one another, and how they need to be modified if they are to be of any use to us in our everyday lives. They could discuss how to settle such conflicts on moral grounds when there are no stated rules within our supposed common morality for settlement. They could also discuss how to provide morally acceptable modifying details, again without relevant rules within our supposed common morality.

Such an enterprise would be exciting, I should think, but I am a philosopher. To a student or a professor working within another discipline, even the detailed and modified rules of our complex common moral world are going to float above the disciplinary details that matter in making moral decisions within a discipline. Tufte criticized the Morton Thiokol engineers because he claimed that if they had provided a perspicuous scatterplot of temperature and O-ring damage, no one would have “dared to risk” launching the Challenger. So what rule or rules are we to take it they broke?

“Do not kill?” That seems, well, overkill. There is a world of moral difference between intentionally killing someone and recommending against a launch that resulted in death when you were nestled in a complex decision-chain where your presentation might or might not have made a difference if you had made it in a different way. To assess the engineers’ moral responsibility we need to dig into the details of what they did, or failed to do, regarding the problem with the O-rings that
emerged the previous January. We must answer many questions. Did they try to obtain the data they thought they needed to get a handle on the problem? Did they warn their managers? Did they warn NASA? Make any attempt to resolve the problem by modifying the O-rings? The list of questions is long, and we can only answer them through what amounts to a detailed case study.

“Do your duty?” Of course professionals ought to do their duty. The question is always what their duties are in any particular situation. As we have seen, Tufte’s scatterplot is thoroughly confusing. If the engineers had used it and corrected the temperature axis to reflect only ambient air temperature, they would have shown O-ring damage spiking at 66° and be hard-pressed to explain what relevance that apparent anomaly had to launching at temperatures between 26° and 29°. If they corrected the temperature axis to reflect only O-ring temperature, they would have had only one data point and thus no scatterplot. No one had calculated O-ring temperatures at the time of launch because that information did not seem relevant. How could it matter if O-rings were resilient down to very low temperatures, as NASA itself accepted, and the launches were always in Florida? So they would not have thought of producing a scatterplot simply because they did not have the data necessary to create one that would show anything significant. Did they fail in their duty?

What they did do was what they could do with the data they had: they recommended against launching outside the window of experienced success, that is, below 53°, assuming, as would seem appropriate for any engineer, that experience always trumps experiments. They had also tried to ferret out needed information over the previous twelve months, ever since the problem with the O-rings being passed by hot gasses had presented itself the previous January, and in a meeting the previous August, they explained to NASA what their concerns were about having any further launches without fixing the problem. NASA had decided at that time to proceed with launches despite the engineers’ concerns. The engineers seemed to have done what they were duty-bound to do.

Making that sort of judgment, however, requires, as I say, that we dig into the details of the launch decision, of the launch history, of the constraints on the engineers that operated when they tried to collect the data they thought they might need, and so on. Without an understanding of the professional details we are not in a position to make any judgment. Admonitions such as “Do your duty!” just float, having no footing in anyone’s actual practice and so having no purchase on anyone’s professional interest. Such admonitions tell us what we ought to do, but give us
no understanding of how we are to go about figuring out what it is that we ought to do in any particular professional setting, what it means to do one's duty, or not to lie, or not to steal.

It may seem odd to some that we do not know what it means to steal, for instance, within some professional setting, but think of the problem graphic designers face everyday in their work. It is difficult not to seem derivative, even if a designer is unaware of a particular design echoed by his or her current work, and it is even more difficult to know how to assess designs which are meant to echo previous works. We cannot photograph El Capitan in Yosemite without referencing Ansel Adams. Whether we want our photograph to echo his famous photograph or not, those in the know will make the comparison, and a too close replication of his photograph, intended or not, will invite critical comment. What constitutes stealing in such a situation?

However we answer that question, we would presumably want a student to come to understand that it is a question that needs asking, that there is a moral issue involved in design and in photography that has to do with the replication, intentional or not, of previous work. We would presumably expect students to come to see how ethical issues arise within their professional practice. So, at a minimum, our aim in teaching such a course would be to teach the students how to recognize ethical issues within their discipline as ethical. Common Morality is of no help, of course, in teaching students about their professional disciplines. It is also not helpful in teaching them how to recognize moral issues within their disciplines.

Kinds of Moral Problems

It is not helpful because, as I have said, its admonitions float over the details of any professional setting, lacking any footing in what anyone within a discipline does. It is not helpful for another reason as well. Moral problems are of several kinds. One kind is straightforward and finds itself nicely caricatured in comic strips such as Calvin and Hobbes. Calvin sometimes considers whether he should lie or not, for instance, whether it is too close to Christmas to be bad or whether he can risk being bad and having Santa forget by the time Christmas arrives. These are humorous in part because we have no doubt that Calvin should not lie and because we know that he should have no doubt about it either. If this kind of moral issue arises in a professional setting, then it poses no real problems, moral or otherwise.
Other sorts of moral problems do present problems, however. Some moral problems are conceptually problematic. What is at issue is not any moral rule, but what the rule means in a particular context. I suspect that “stealing” in graphic arts is such a concept. Or for another perhaps less problematic example, parents should exercise due care if they allow an infant or small child into their bed at night. They risk suffocating the infant or child. But what constitutes due care? Never sleeping with a child? Doing so but trying to stay awake enough to recognize when the child is endangered? The moral issue here concerns what substance to give “due care” in the context involved, and, as we would expect, there is a great deal of disagreement among parents and professionals in the area about what constitutes “due care.”

We can see the same sort of issue arising, with the very same concept, for engineers. What constitutes taking due care to ensure the safety of the slabs hanging from the top of the tunnels in the Big Dig in Boston? That will end up being the subject of a legal dispute, but it is also a moral issue for the engineers involved. Nothing in Common Morality will help students or faculty get a grip on that kind of problem, but, more importantly, nothing in the book will help students or faculty see that the issue is a moral issue.5

Another sort of moral issue that often arises is what I call factually problematic. A decision must be made, but not all the facts are in or, at least, those who must act, or refrain from acting, do not know for sure that all the facts are in. The engineers at Morton Thiokol had that kind of problem. They did not have the data they knew they needed for what would happen were a shuttle to be launched in weather as cold as that predicted for the Challenger. They had tried to obtain data that would help, but had been unsuccessful because neither NASA nor Morton Thiokol put the same urgency on the request that the engineers did. So the issue facing them was what they ought to recommend given that there was information that would help, but that was unavailable to them. What they chose to do was to proceed with the utmost caution. They acted on a decision-procedure that gives the greatest weight to the worst possible outcome, the catastrophic failure of the O-rings to seal, and so they urged no flights below the temperature for O-rings at which previous flights had been launched successfully. In the face of uncertainty, they had to make a decision, and their position was determined by a decision-procedure based on caution.6

We can readily imagine a decision in another context also made with factual uncertainty where those deciding risk all, are high fliers. We might
suppose a situation where the need to act to save lives seems paramount, and yet those who must decide to act must do so without adequate information about, for instance, the right way to proceed. They act, making the best of a bad situation, risking all to save all as when those drilling into a mine to provide fresh air for miners may also provide oxygen for a smoldering fire.

The idea that choosing a particular decision-procedure has moral weight is not to be found in *Common Morality*, and yet is of paramount importance that students in the various professions learn that how they decide is as morally weighty in some circumstances as what they decide. It is a measure of how hidden from professionals their decision-procedures can be that the vice president for engineering at Morton Thiokol, Robert Lund, failed to see that in taking off his engineering hat and putting on his management hat, as he was asked to do by his boss, he had switched decision-procedures as well, shifting from the risk-averse procedure followed by his engineers to the cost/benefit analysis typical of those in management. The shift made a difference in his decision to override his engineers’ advice, and it made a moral difference.

Conceptually and factually problematic moral cases are not moral dilemmas although, all too often, it seems assumed that all moral problems are dilemmas. Many are, and many are mixed, with professionals facing a dilemma in which either one or both horns are themselves conceptually and/or factually problematic. Things can get complicated very quickly.

They are complicated even more because there is yet another distinction between moral problems that cuts through the distinctions between the straightforward problems of applying a clear rule, moral dilemmas, and conceptually problematic and factually problematic moral situations. These distinctions between kinds of moral issues can be found wherever there are moral problems. But, in addition to sorting moral problems into those kinds, we must distinguish regarding professions between those moral problems that are internal to the profession and those that are external to it.

The distinction is rough, but clear. Engineers, for instance, most often work as employees, and many of the moral problems they face arise because of conflicts between what they are required to do as engineers and what they are required to do as employees. Getting a product out on schedule, for instance, is an obligation of employees that may cut against the need for testing that an engineer thinks appropriate or even necessary. That conflict creates a moral problem, but it is not one that arises
because of anything the engineer is doing as an engineer. It arises because the engineer is also an employee and has, as an employee, obligations that do not mesh well with the duties of engineers.

An internal problem arises because of moral issues that arise within the profession itself. For example, the intellectual heart of engineering is the solution to a design problem of a certain sort, and the engineer would be morally remiss in the extreme to solve a problem in such a way that the solution necessarily causes harm if any other option were available. The worst possible design solution would be what I call error-provocative. The design is such that users are provoked into errors by the nature of the design. We need only think of a badly designed stove top to get the idea. My mother’s has the burners in the back offset to the left, with the control knobs lined up with the burners, the usual solution to the problem of figuring out which knobs control which burners. Unfortunately, the two knobs on the left are reversed. It looks as though you are to turn the knob on the far left to turn on the back burner, but that knob controls the burner in the front, which is directly in front of the second knob, which controls the burner on the left in the back. It takes more than a little experience, and constant reminders, not to make the same mistake over and over. What we see provokes us into making a mistake. The harm of the switch on my mother’s stove is not great, but we can readily imagine designs that provoke very harmful errors — designs for the controls of atomic plants that encourage, if not provoke, erroneous decision-making, with catastrophic results. It is thus of the utmost importance that engineers realize that at the heart of their enterprise is a moral issue. It is internal to their discipline. They cannot act as engineers, solving design problems, without making a choice, consciously or not, that will or will not cause harm to those who use the resulting artifacts.8

I also think that there are other sorts of internal moral problems to engineering, for instance, having to do with the known effects of choosing certain materials for construction that may not be readily recyclable, or may be toxic, of choosing certain designs that preclude easy reuse of the materials, and so on. All these moral issues I take to be internal to any design problem in engineering.

It is crucial, as I say, that engineers come to see that ethics is internal to their discipline, but they are not going to find that out by reading Common Morality. Nothing in it will prepare students for the task of seeing what harms can result from their own engineering practices or for learning how to solve design problems without introducing harms.
I have concentrated upon engineering to make the distinction between internal and external moral problems, but the distinction holds for every profession. Indeed, we can raise the ante because sometimes professionals are faced with the moral problem of deciding whether to follow the dictates of their profession. Accounting firms, for instance, have been surprised to discover themselves legally liable for providing information that accords with the generally accepted accounting principles which they are, as accountants, obligated to use. Those principles do not provide the truth about a company’s finances, and so investors using their results can be seriously misled. It is thus a moral question of no small practical import to accounting firms, which have lost cases involving billions of dollars when sued, whether they ought to follow the accounting principles internal to their profession or whether they ought to act in an independent fashion to provide accurate information to investors. Again, Common Morality provides no help in getting accountants to see that they have such a moral problem.

**WHAT CHOOSING COMMON MORALITY WILL SAY**

So what is likely to happen if one presents Common Morality as containing truths worth expressing and discussing in a class in a professional discipline? Those truths lack a connection to any disciplinary practices. So students will not think the text is meant to educate them in the moral practices of their discipline. The moral rules seem obvious enough, whatever qualifications they may need, that no one is going to dispute them. Who is about to argue that we should lie or steal or kill? So what is the point of presenting and discussing such admonitions in a class primarily devoted to something else such as computer programming or in a class devoted to moral issues that arise within one’s professional discipline such as engineering ethics.

The students are going to assume that the professor thinks they need to learn or be reminded that they are to do their duty, not lie, not cheat, and so on. But students do not need to be told not to lie or steal. They come to class with the common morality already in hand. That they already hold these truths to be self-evident, as it were, is part of Gert’s point. So being presented with a text that bears no relation to their discipline, but contains admonitions no one is going to dispute, students are going to be encouraged in the all too common view of philosophy as consisting of trivial truths. Worse, they are likely to be insulted. They know these truths. So why has a professor chosen a book that articulates
them? Because the professor thinks they do not know them? They are not that ignorant. Or because the professor thinks that though they know them, they need to be told not to lie or cheat? But that is insulting. The very act of choosing the book will come off as unnecessary and insulting moralizing.

Worse, it will make ethics seem irrelevant to their professional lives. Their likely response to the book will be like that of that former dean of the College of Business at my university: “We already know what is moral, according to what is required by this book; so why are you teaching us this?” Professionals have no more need of admonitions about common morality than the rest of us. With no connections between the admonitions and their actual practice within their professions, students will agree they need to be honest and trustworthy, wonder why they need to buy and read a book that tells them what they already know and accept, and get on with their professional lives, unencumbered by any sense that they are engaged in practices with moral issues.

So if Common Morality were going to be of any use in a course within a professional discipline, the text would need to be tied to the details of the discipline so that students can come to see what it means to do one’s duty, or not to lie, or not to steal within a professional setting. But tying the text even to a single case like that of the Challenger is no easy task.

First it requires a thorough knowledge of the details, of the history of the launches, of the various problems the engineers faced, of the bureaucratic structure within Morton Thiokol as well as within NASA and the other relevant agencies involved, of the decision process used by NASA, and so on and so on. The Challenger is not a day trip, and if a professor is to show any of the range of problems that can arise for a working engineer, more than one such case is needed.

Second, it requires the skill to see the moral issues within a complex professional situation and the skill to tease out the relevant facts, moral principles and rules. It would be nice if students regularly brought this sort of skill to class, but we all know, all too well, that seeing ethical issues is not easy for those in professional settings and that working them through is complicated, requiring the sort of maturity of judgement that is all too rarely found, anywhere, let alone in students just learning the professional ropes. It would be nice if we could expect professors to have that skill as a matter of course, but it is one thing to be skilled within one’s discipline, another to be skilled in teaching the discipline, and yet another to be able to see and understand the moral issues that arise within the discipline. A tennis player can be quite good and yet fail to be
able to teach tennis. A teacher in accounting may be excellent at conveying the principles of accounting to students and yet be completely oblivious to any moral issues that accounting may raise, may think, indeed, that the accounting profession itself is bereft of any moral issues, the moral issues that arise “in” accounting coming from personal failings of particular accountants who fail to follow the rules. We cannot as a matter of course expect professors teaching within some discipline to have the capacity to see ethical issues within that discipline or the ability to ferret out the morally relevant facts and rules and principles if they do see the issues. We cannot even expect philosophy professors to have that capacity and that ability. Those are learned skills, and they require a fairly detailed knowledge of the discipline in question as well as an understanding of the nature of moral issues within professions, an understanding that is not gained by studying moral theories or moral rules.

Third, tying *Common Morality* to a discipline requires time. That presumably is not a problem in a course such as engineering ethics because the whole term could be devoted to such cases that would allow students to see where moral issues arise. That is not to suggest that using *Common Morality* in such a course would be an easy matter or even useful. Even in such a course, where students will be majoring in various sorts of engineering, adopting cases requires a great deal of care. Students in electrical engineering may have trouble seeing the connections between their discipline and the problems faced by the engineers at Morton Thiokol if one picks the Challenger case. The professor will need to choose cases that raise general enough ethical issues as to be relatively common to all engineering disciplines, but are detailed enough to provide a footing within each discipline so that students can see the point of concerning themselves with ethical matters. And each of these cases would have to be tied, somehow, to the text.

But in a class devoted to something else, such as programming, where is the professor to find the time? The students must first read *Common Morality* and then do the work necessary to understand the details of some particular engineering case, and then either they or the professor or both must take the general information about ethics they get from *Common Morality* and use it to ferret out the moral issues in the case and see how they play out, or would play out, for a moral engineer. In a course already packed full with material a professor thinks essential to the students’ gaining the skills and information necessary to master writing some particular elements of software code, for instance, it is difficult to imagine what material a professor would or could drop in good con-
science in order to put in time enough to use *Common Morality* to good purpose. We need only look at introductory textbooks in engineering to see the value engineering professors give to ethics. The books tend to have a mandatory, but short chapter on ethics, and it is almost always at the end of the text where it is not likely any professor will get to it after doing the hard work of engineering that is in the preceding chapters. It is not likely any professor in a professional discipline is likely to choose to give up the material the textbooks take to be essential to learn in the course in question in order to make room for material the textbooks take to be an addition, to be examined only after the material for the course is examined.

*Common Morality* thus fails to meet any of the requirements that need to be met for a book to be adopted for a course within or about a professional discipline. We cannot anticipate faculty in other disciplines, or even in philosophy, having the capacity to use it to teach about ethics within the disciplines. We cannot expect students to learn from it what ethical issues arise within their disciplines. And we cannot reasonably suppose that faculty in other disciplines will remove from their courses sufficient material to leave space for the book and for applying it to the discipline in question.

**CONCLUDING REMARKS**

What professionals need, students and faculty alike, is an understanding of how morality enters into their professional lives in ways that are different from the ways in which it enters into our ordinary, non-professional lives. What would provide it or, better, provide it best?

We face a set of problems that are not easy to resolve.

1. If students are to learn that ethics is internal to their disciplines, they must learn that they cannot learn to think like an engineer, for instance, without thinking ethically. So
   1. Ethics cannot be thought just to be an add-on, a nice thing if you can get to it, like the last chapter in an engineering textbook. Its teaching must be sustained throughout a course of study.
   2. Teaching ethics cannot take the place of other subject matter within the discipline. Ethics will then be put to one side by faculty and students as nice, but not essential to what students must learn to become professionals within the discipline.
c. So the normal course of study within the disciplines must be so designed as to make clear the ethical aspects of the subject matter.

ii. Those teaching in the disciplines will need to know how to recognize the ethical issues and how to discuss them so as not to sound as though they are moralizing. Philosophers, I think, are by training no more adept at either of these tasks than engineers, accountants or any other professional.

iii. Interlopers, in whatever field, are not met kindly by those who have spent years gaining the expertise they need to practice their professions. It is natural that they would find it galling to have someone who has not put in the work that is necessary to make professional judgements stepping in from the outside to assess those judgements.¹⁰

How to achieve these ends in a coherent way in all the professional disciplines is the subject of much discussion among those interested in ensuring that ethics enters across the disciplines. Some concerns are theoretical. What are the ethical issues within the various disciplines? When one is learning to think like an historian, how is one thereby learning to think morally? Engineering? Accounting? Even if we were clear how ethics enters into the various disciplines as an essential component for someone practicing the discipline, we would still have practical concerns. How are faculty to be trained to recognize ethical issues within their disciplines? How are they to be trained without appealing to philosophers and so facing the problem of introducing interlopers into the various disciplines? Are we to train philosophers in other disciplines? Would they be any better at discerning ethical issues within other disciplines than practitioners within the discipline? What form of teaching best works to make explicit the ethical issues involved? Does it require teaching via cases? The questions go on and on. Much work needs to be done, but the vision of ethics within the professions that engenders these questions is worth pursuing. Without it ethics will remain peripheral to the disciplines; with it we shall come to see how the disciplines themselves are value-laden and so stand to enrich and broaden our understanding of ethics.
NOTES

2 Tufte, 52, my italics.
3 Tufte, 44, 52.
5 For an extended discussion of the kinds of moral problems professionals can face, see my Ethical Decision Making in Social Work, with Linda Cherrey Reeser (Boston: Allyn & Bacon, 2000), 2-23, available online at http://www.rit.edu/ethics.
6 I do not mean to suggest that deciding on 53° as the cutoff point for launches cannot be criticized. There are other decisions they could have made that would also have reflected great caution. For instance, they could have opted for no flights below the temperature at which the rocket boosters were ever tested — 40°. That would have scotched the Challenger launch and yet not opened the engineers to the objection that they were being far too cautious.
8 I am currently at work on a book called Error-provocative Designs: Ethics in Engineering which examines the issue of the internal morality of engineering.
9 See e.g. in this regard Terry Smith, Accounting for Growth: Stripping the Camouflage from Company Accounts (London: Century Business, 1992).
10 Regarding a recent book on the hurricane Katrina and the engineering mistakes that led to the collapse of the levees, an engineer said of the author that his “training in environmental management did not qualify him to comment on engineering matters. ‘We don’t see him as a viable source to be discussing the engineering aspect of the levees,’ he said. ‘I have an advanced degree in communications, but that doesn’t qualify me to comment on the New York Philharmonic.’” (John Schwartz, “Ivor van Heerden’s ‘Storm’ Draws Fire at L.S.U.,” New York Times, May 30, 2006). If someone with training in environmental management is not thought qualified to comment on engineering matters regarding the management of flooding, surely someone in philosophy will not be thought qualified either. The engineer is mistaken, of course. It does not require an engineering degree to know that it is a mistake to plant trees on levees, a relatively common practice, it seems. When storms come, they blow down the trees, uprooting them and thus weakening the levees. Even a philosopher can spot such truths.