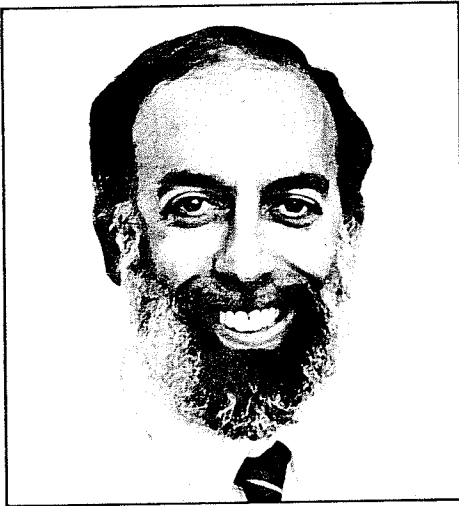


20 ways to put Life into a Code of Ethics

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"Many professionals do not think about ethics the way they think about an ordinary engineering problem. They do not think about the code as part of a system. No matter how much a code is revised, it remains a piece of paper until one comes up with a strategy for implementation and then carries it out."

This article offers a different approach to improving professional ethics, what might be thought of as a systems approach. My intention is to change the focus of discussion, not to provide a definitive strategy. I recognize that much of what I suggest may prove unworkable in practice and that you will know better than I what can, and cannot, be made to work under the actual circumstances in which you practice your profession.

Few professionals think about ethics the way they think about an ordinary engineering problem. They do not think about the code as a part of a system. No matter how much a code is revised, it remains a piece of paper until one comes up with a strategy for implementation and then carries it out. If you agree that your code is pretty good, the problem of improving your members' professional ethics is primarily a problem of developing a strategy for implementing your code of ethics (and then carrying out the strategy). It is to this strategy that I now turn.

Educating Engineers

How much do your members know about what is in their code of ethics? If your members are like most other engineers, the answer will be, "Not much." Few are likely to read, much less refer to, a copy of the code. Few will have had a course in engineering ethics in college or graduate school. Your members are likely - and here I use words I hear often - to take their ethics from "the seat of their pants."

So, here's your first problem: **how** do you move your code of ethics from the paper on which you have printed it into the mind of the engineer whom you want it to guide? Here are six suggestions for doing that:

1. Try to get engineering schools to teach engineering ethics. Whether this is done as a distinct course or as part of other courses, the teaching should include systematic study both of some hard cases such as the Challenger disaster and of at least

one major engineering code (that is, the NSPE, IEEE or ABET code). Engineering students need some experience of how engineers integrate what a code of ethics says into what they do. My impression is that, even today and even at a school like IIT, most engineering students still must pick up what engineering ethics they learn in bits and pieces, without much help in understanding how those bits and pieces fit together or where they fit into an engineer's daily work.

2. Print your code in a form more likely to be read. One possibility is to print it in large type on a laminated sheet, perhaps eight feet long and four feet high. Members of your society would then feel obliged to hang it on a wall where they might read a part in a idle moment. Better yet would be to publish it as a booklet, with a good index and illustrative examples.

3. Require your members to read the code once a year. You might enforce this requirement by having each member each year sign a statement asserting that he or she has read the entire code as part of renewing membership. Most will learn something new each time they read the code. (I still do.) Your members are already required to subscribe to the code of ethics as a condition of membership. My suggestion is that you make sure they know what they are subscribing to. Making them read the code would give it a visibility it now lacks.

4. If reading through the whole code each year seems too grim to contemplate, you might annually publish a workbook of hard problems. Instead of reading the code "cold," your members might each year be required to resolve problems in the workbook, citing relevant code provisions. They might do this alone or in a small study group. The contents of the workbook would be changed each year as new problems were identified. Members would have to send in their conclusions. These would not be graded but used to get some sense of how well the code resolves the problems. If most engineers come to the same conclusion on a particular problem, the code gives a rela-

tively clear answer. If there is nothing like a consensus on a particular problem, the code probably needs revision.

5. You might add to the code's visibility in another way: **Make a session on ethics part of every important meeting your society holds.** The subject of each such session should be a particular ethical issue, problem or case, not ethics in the abstract. Such sessions should be scheduled on principle, even when you do not yet have any idea what could be discussed. Making such sessions routine will force you to look for ethical issues to discuss. Once you start looking, you will, I think, find many worth discussion in any field in which a significant number of your members work. Ethical issues tend to be invisible because they are pervasive, not because they are rare.

6. **Make sure that a substantial number of ethics questions are included on state examinations required for licensure as a Professional Engineer.** There's nothing like an examination to increase interest in a subject. But be sure that the questions require analysis, not just memorizing the code. Most engineers - like most other people - will doubt the intellectual respectability of any subject the test of which can be passed simply by reporting what one memorized.

7. **Consider amendments to your code often and with as much membership involvement as possible.** Having your membership consider amendments makes the code more visible and tends to increase familiarity with the fine points of the relevant provisions. More important, it is a way of getting members to think about the point of having a code. Those who participate in debates about particular provisions are likely to have a better sense of the code as a whole than those who do not - whatever the fate of particular proposals for revision. Those who participate are also likely to become much more sensitive to issues of engineering ethics generally.

Educating Others

I have just suggested seven ways to educate your members about ethics. Now I want to suggest three ways to educate those with whom your members work. Such education is important. Consider: If one of your members tomorrow recommends against a certain course of action because of an ethical

problem, how will colleagues respond? Will they immediately set about trying to resolve the problem? Or will they instead react as if to some Biblical taboo? Will two or three references to the code turn the member into a pariah, with no choice but to start looking for another job?

Ethical conduct is a flower that does not do well in stony soil. If an engineer works in an environment to which engineering ethics is foreign, the engineer is likely to be discouraged from raising ethical issues and in time likely to forget to raise them and indeed likely to cease thinking about them altogether. The code will become words without import, a tribal chant. So, you cannot be satisfied with educating your members. You must figure out how to make ethics a part of your members' working environment. Insofar as you are successful, your members will not have to raise ethical objections. Others will do it first. And, when others do not and your members do, the objections will be accepted in the same spirit as an objection based on technical impossibility.

Here then are three ways you can help to give your members a working environment hospitable to ethics:

1. **Require each of your members each year to present an immediate supervisor, employer or client with a copy of your society's code of ethics,** indicating that the member is bound to abide by it and that the supervisor, employer, or client might find it informative and specifically pointing out that much of the code is there to protect the client or employer.

2. **Local engineering societies should be encouraged to present ethics workshops on site for members in particular companies.** Managers should be invited to attend and everything should be done to make their attendance possible, enjoyable and useful. Engineers should try to get managers, and others they work with, thinking like engineers.

3. Where possible, your society should **offer to do ethics presentations at the appropriate trade associations and other meetings of managers.** The more the managers get used to thinking that ethics has something to do with their job, the easier it will be for individual engineers to raise ethical issues. The emphasis of these ses-

sions should, however, not be on the code as such, but on how to solve particular problems with the help of the code.

Interpretation

As important as teaching people about the code of ethics is, it is probably not going to be enough. Short codes are easy to remember but hard to apply. Long codes are harder to remember - but easier to apply when there is a provision on point. Of course, no matter how long a code, it will be silent on many particulars. Occasionally, in a complex situation, it may even seem to give inconsistent directives. Codes need interpretation.

Such interpretation cannot, however, be left to private judgment. Professional ethics is a cooperative enterprise. A professional code is a way of coordinating the conduct of individuals, the members of the profession, so that each member of the profession may do as they should because they have good reason to believe the other members of the profession will do the same. Conduct can be coordinated only if there is a common code and different members interpret the same words in the same way.

Of course, a professional society cannot control what its members do. Even government cannot do that. But a professional society certainly can define a common understanding of what is ethical for its members. A professional society certainly should try to keep "gray areas" to a minimum. So, part of implementing your code is providing common means of interpretation. I make the following suggestions:

1. **Establish a committee, the primary job of which is to invite ethical questions from members of your society and issue reasoned opinions.** I think the ethics committee of the National Society of Professional Engineers (NSPE) is a good model.

2. **Publish the opinions of your ethics committee in your society's publications** so that members have a chance to read them and comment. The opinions might be collected from time to time, or at least indexed, so that members might refer to them. Publication should be in a form preserving the anonymity of the problem's source while including enough detail to maintain the problem's realism.

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3. Your society might also **establish an "ethics hot-line" for members who have problems on which they need an opinion relatively quickly**. If the question is discussed in an already published ethics opinion, the ethics committee need only send the inquirer a copy of the opinion. If, however, the question has not yet been thought through, the ethics committee might provide an "informal opinion" right away and then later consider whether to issue a formal opinion.

4. Your society might try to **work out ways large companies could themselves provide suitable ethics counseling for their engineers**, for example, by designating a senior engineer without management status as an ethics resource or ethics ombudsman with a direct line to the office of corporate counsel. Large companies might also be urged to allow their engineers to set up their own ethics committees, to publish their opinions in the company newsletter, and so on. This last suggestion belongs as much to education as to interpretation.

5. Your society might **develop a questionnaire any company could use to evaluate its ethical environment, an "ethics self-audit."** The audit might ask whether applicants for an engineering job get questions testing their ethical sensitivity, whether a code of ethics is prominently posted where engineers work, whether the organization has routines for raising ethical questions, whether department heads are explicitly evaluated on the way they handled ethical issues, and so on.

Enforcement

Education and interpretation are, I think, the solution to much of the problem of making your profession's ethics a living practice. Education makes talking about ethics legitimate. Interpretation helps clear up ethical confusion. Most people most of the time will do the right thing once they see where the right lies. I must, however, admit that sometimes that is not so. So, I now turn to suggestions for dealing with the relatively few times when education and interpretation are not enough. What more can your society do to help make it easier for your members to do the right thing?

1. **Establish a grievance hot-line for complaints about violations of the code of ethics or conditions tending to cause such violations.** Like the ethics hot-line, the grievance hot-line would try to preserve anonymity so that engineers need not en-

gage in public whistleblowing. A committee receiving such complaints would first determine whether the complaint does describe an ethics problem. If it does, the committee would then advise the member on what to do (e.g. "Take this to OSHA") and help to do it. Whenever possible, the committee should advise how the engineer might change the superior's mind so that what would now seem mere obstruction could be made to look more like praiseworthy concern for the company's welfare. Often, identifying the legal ramifications of the subject of the complaint is enough to reveal how imprudent the unethical conduct would be. So, the grievance committee probably should have a lawyer on its staff.

2. **Establish a mediation committee to intervene informally, and privately, between an engineer with an ethics complaint and the supervisor or employer.** The engineer's anonymity should be preserved if possible. Where it cannot be, the committee should reveal the engineer's identity only with consent. The committee's emphasis should be on resolving misunderstandings, letting the employer know that the engineer is not a quirky individual but a good representative of the profession. Much of what such a committee would do is education.

3. **Consider mandatory state licensing for all engineers** - as Canada now has and as some U.S. engineers have urged for close to three-quarters of century. Licensing would assure that an engineer could plead self-interest, rather than professional ethics, as the reason for refusing to do something unethical. "I can't do that - they'll pull my license" is often an acceptable excuse where "I can't do that - it's unethical" is not. Why an employer should prefer an employee who is afraid of the law to one who wants to be ethical is a mystery to me. But that is sometimes how employers are.

4. In the absence of mandatory licensing, you might **try to create the appearance of such licensing.** You might create a disciplinary procedure of sufficient rigor that any member could look an employer or client in the eye and say, "But if I do that, they'll expel me from the society."

5. **Adopt procedures like those the American Association of University Professors (AAUP) uses to get the employers of its members, universities, to abide by AAUP standards.** An engineer employed by a company might (using the grievance hot-line) file a private complaint

with your society alleging unethical practices or an environment tending to discourage ethical conduct. Your society would then examine the evidence the engineer submitted. If the complaint seemed to have merit, a committee would be sent to the company to investigate. If at the end of a full investigation, the committee found something wrong, it would so declare, suggest changes, and recommend blacklisting the company until the suggested changes were made.

Let me be clear about what this proposal would and would not accomplish. An AAUP blacklisting -- which is called "censure" -- rarely has any observable effect on the well-being of the censured institution. Yet, it does seem to make most administrators uncomfortable -- perhaps because other administrators take censure as a sign of bad management, perhaps because it pricks their professional conscience, perhaps because they are unsure what effect it will have, or perhaps for some combination of these or other reasons. In any case, administrators go to surprising lengths to avoid censure or to change their policies to get censure lifted.

My suggestion differs from AAUP practice in one important way. AAUP cases generally concern one or more faculty members who have been fired. Anonymity is unnecessary. The faculty usually bring their complaint only after, and only because, the employment relationship has been ruptured. What I am suggesting for your society is a somewhat different practice. You should preserve the complainant's anonymity, if possible, so that you need not wait till someone has been fired, is in danger of being fired, or otherwise has little left to lose. My reason is simple. While both the AAUP and MSPE would aim at eliminating improper practices, the AAUP generally has more leeway than MSPE does. Few (if any) complaints brought to the AAUP involve a serious risk to life, health or property. Many of the complaints brought to MSPE will. For that reason, your society's procedures should be designed to encourage engineers to come forward well before a crisis.

Postscript on Whistleblowing

I have now listed twenty ways to make your code of ethics a living practice. I'm sure that you can add to the list. But before you start, I should explain what may seem a surprising omission so that you do not try to

put it on the list. I have **not** suggested that you encourage your members to engage in **public** whistleblowing. I have a reason. It seems to me that any ethics strategy that requires much public whistleblowing will in fact do little to protect the public from harm. The most likely effect of relying on public whistleblowing is that a few engineers will protect the public at great cost to themselves while a great many more will merely suffer pangs of conscience for doing nothing, curse themselves as cowards, or simply laugh off their professional responsibility rather than pay the high price of taking it seriously.

What's wrong with public whistleblowing? The sad truth is that publicly blowing the whistle on your employer is to employment what filing for divorce is to marriage. However justifiable, it is almost always fatal. The employment relation can survive such an act, but few such relations actually do. Employers seldom hesitate to fire a

whistleblower. Most are unlikely to hire an employee known to have blown the whistle on a previous employer. So, an engineer who publicly blows the whistle is likely to be blowing a career as well.

Much the same will be true even in a state having laws protecting whistleblowers. Whistleblowers who cannot be fired generally find themselves cut off from sensitive information, given work about which they do not care, and left no choice but the time of their departure.

That engineers sometimes blow the whistle in public more or less aware that they are risking their career must be a matter of pride to every engineer -- much as a brave death in battle is a matter of pride to a soldier's comrades. Yet, like such a death, it cannot have an important place in any strategy. As General Patton is supposed to have said, "You don't win battles by dying

for your country; you win them by making the enemy die for his." Honor engineers who go public to protect the public from harm. Do what you can to help them save their career. But concentrate your effort on making such sacrifice unnecessary. As Bertold Brecht put it, "Happy is the land that has no need of heroes." ■

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