



Objectives

Aim 1: You will be able to define the ethic types,

Aim 2: You will be able to explain the qualifications to be a good engineer having a professional character portrait

PROFESSIONAL ETHICS

With the first two modules, we discussed general ethics and theories. In this module, we will focus on professional ethics. then, you will be familiarized with the types of ethics.

The Business Model

According to the business model, an occupation is primarily oriented toward making a profit within the boundaries set by law. Just like any other business, a profession sells a product or service in the marketplace for a profit; the major constraint on this activity is regulation imposed by law. If people ordinarily called professionals, such as doctors, lawyers, or engineers, followed this model, their claim to professionalism would be severely limited. They might choose to adopt the trappings of professionalism, but they would do so primarily as a means to increase their income and protect themselves from governmental regulation.

The major difference between the so-called professionals who adopt the business model and most other occupations, such as sales or manufacturing, is that the latter seek profit primarily by selling a physical product, such as automobiles or refrigerators, whereas professionals seek profit by selling their expertise. Nevertheless, the ultimate goal is the same in both cases: selling something in the marketplace for profit.

The Professional Model

This model offers a quite a different picture of occupations such as medicine, law, and engineering. Crucial to the professional model is the idea that engineers and other professionals have an implicit trust relationship with the larger public. The terms of this trust relationship, sometimes referred to as a “**social contract**” with the public, are that professionals agree to regulate their practice so that it promotes the public good. In the words of most engineering codes, they agree to hold paramount the safety, health, and welfare of the public. That is, they agree to regulate themselves in accordance with high standards of technical competence and ethical practice so that they do not take unfair advantage of the public.

THREE TYPES OF ETHICS OR MORALITY

If ethical commitment is central to professionalism, we must turn more directly to ethics and especially to professional ethics. How does professional ethics differ from other types of ethics—philosophical ethics, business ethics, personal ethics, and so on? In answering this question, it is helpful to distinguish between three types of ethics or morality.

Common Morality

Common morality is the set of moral beliefs shared by almost everyone. It is the basis, or at least the reference point, for the other two types of morality that we shall discuss. When we



think of ethics or morality, we usually think of such precepts as that it is wrong to murder, lie, cheat or steal, break promises, harm others physically, and so forth. It would be very difficult for us to question seriously any of these precepts.

Personal Morality

Personal ethics or personal morality is the set of moral beliefs that a person holds. For most of us, our personal moral beliefs closely parallel the precepts of common morality. We believe that murder, lying, cheating, and stealing are wrong. However, our personal moral beliefs may differ from common morality in some areas, especially where common morality seems to be unclear or in a state of change.

Professional Ethics

Professional ethics is the set of standards adopted by professionals insofar as they view themselves acting as professionals. Every profession has its professional ethics: medicine, law, architecture, pharmacy, and so forth. **Engineering ethics** is that set of ethical standards that applies to the profession of engineering.

There are several important characteristics of professional ethics:

First, unlike common morality and personal morality, professional ethics is usually stated in a formal code. In fact, there are usually several such codes, promulgated by various components of the profession. Professional societies usually have codes of ethics, referred to as “code of professional responsibility,” “code of professional conduct,” and the like.

Second, the professional codes of ethics of a given profession focus on the issues that are important in that profession. Professional codes in the legal profession concern themselves with such questions as perjury of clients and the unauthorized practice of law. Perjury is not an issue that is relevant to medicine or dentistry.

Third, when one is in a professional relationship, professional ethics is supposed to take precedence over personal morality—at least ordinarily. This characteristic of professional ethics has an important advantage, but it can also produce complications. The advantage is that a patient or client can justifiably have certain expectations of a professional, even if the patient or client has no knowledge of the personal morality of the professional. When a patient enters a physician’s examining room, she can expect the conversations there to be kept confidential, even if she does not know anything about the personal morality of the physician. When a client or employer reveals details of a business relationship to an engineer, he can expect the engineer to keep these details in confidence, even though he knows nothing about the personal morality of the engineer. In both cases, these expectations are based on knowledge of the professional ethics of medicine and engineering, not on knowledge of the professional’s personal morality. Suppose a client asks a civil engineer to design a project that the engineer, who has strong personal environmental commitments, believes imposes unacceptable damage to a wetland. Suppose this damage is not sufficient to be clearly covered by his engineering code. In this case, the engineer probably should refer the client or employer to another engineer who might do the work.



Fourth, professional ethics sometimes differs from personal morality in its degree of restriction of personal conduct. Sometimes professional ethics is more restrictive than personal morality, and sometimes it is less restrictive. Suppose engineer Jane refuses to design military hardware because she believes war is immoral. Engineering codes do not prohibit engineers from designing military hardware, so this refusal is based on personal ethics and not on professional ethics. Here, Jane's personal ethics is more restrictive than her professional ethics.

Fifth, professional ethics, like ethics generally, has a negative and a positive dimension. Being ethical has two aspects: preventing and avoiding evil and doing or promoting good. Let us call these two dimensions the two "faces" of ethics: the negative face and the positive face. On the one hand, we should not lie, cheat, or steal, and in certain circumstances we may have an obligation to see that others do not do so as well. On the other hand, we have some general obligation to promote human well-being. This general obligation to avoid evil and do good is intensified and made more specific when people occupy special roles and have special relationships with others.

Role morality is the name given to moral obligations based on special roles and relationships. One example of role morality is the set of special obligations of parents to their children. Parents have an obligation not only not to harm their children but also to care for them and promote their flourishing. Another example of role morality is the obligation of political leaders to promote the well-being of citizens. Professional ethics is another example of role morality. Professionals have both an obligation not to harm their clients, patients, and employers, and an obligation to contribute to their well-being.

The negative aspect of professional ethics is oriented toward the prevention of professional malpractice and harm to the public. Let us call this dimension of professional ethics preventive ethics because of its focus on preventing professional misconduct and harm to the public. Professionals also have an obligation to use their knowledge and expertise to promote the public good. Let us call this more positive dimension of professional ethics aspirational ethics because it encourages aspirations or ideals in professionals to promote the welfare of the public. The aspirational component has generally received less emphasis in professional ethics than the preventive component.

We can use the term **professional character portrait** to refer to the set of character traits that would make an engineer a good engineer, and especially a practitioner of aspirational ethics. We suggest **three-character traits** that might be a part of such a professional character portrait.

The first professional character trait is **professional pride**, particularly pride in technical excellence. If an engineer wants her work as a professional to contribute to public welfare, the first thing she must do is be sure that her professional expertise is at the highest possible level. Professional expertise in engineering includes not only the obvious proficiencies in mathematics, physics, and engineering science but also those capacities and sensitivities that only come with a certain level of experience.



The second professional character trait is **social awareness**, which is an awareness of the way in which technology both affects and is affected by the larger social environment. In other words, engineers need an awareness of what we call the “social embeddedness” of technology. Engineers as well as the rest of us are sometimes tempted to view technology as isolated from the larger social context. In the extreme version of this view, technology is governed by considerations internal to technology itself and neither influences nor is influenced by social forces and institutions. In a less extreme view, technology powerfully influences social institutions and forces, but there is little, if any, causal effect in the other direction. However, the engineer who is sufficiently aware of the social dimension of technology understands that technology both influences and is influenced by the larger social context. On the one hand, technology can be an instrument of the power elite and can be used for such things as the deskilling of labour.

A third professional character trait that can support aspirational ethics is an **environmental consciousness**. We believe that environmental issues will increasingly play a crucial role in almost all aspects of engineering. Increasingly, human welfare will be seen as integral to preserving the integrity of the natural environment that supports human and all other forms of life. Eventually, we believe, being environmentally conscious will be recognized as an important element in professional engineering character.

REFERENCES

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