Investigating Professional Responsibility
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In this paper I will discuss two approaches to the investigation of professional responsibility. The term "applied ethics" is often used to mean either, or both, what I and many others in the U.S. call "practical ethics" as well as what is called "applied ethics." However, the terms "practical ethics" and "applied ethics" are also used as names for two philosophically distinct approaches to scholarship on professional ethics and other areas of ethics that deal with specific moral questions or problems. I confess to being an advocate of the practical ethics approach, but my goal here is not to convert you from speaking about applied ethics to speaking about practical ethics. Rather, it is to make clear how the two different approaches affect the nature of scholarship in professional ethics.

I begin by briefly describing the emergence of scholarly work on the subject of professional ethics that began in the late 1960s and '70s in the U.S. I apologize for opening with a U.S.-centered story, but trust that much of the later argument in this paper about both professional ethics in general and engineering ethics in particular will be widely applicable, especially in technologically developed democracies.

The emergence of scholarly work on the subject of professional ethics is a useful starting point because many writers on engineering ethics are scholars in the humanities and social sciences, rather than engineers, and it behooves us to look critically at our own disciplines and how they may distort the understanding of engineering ethics as well as contribute to it. Scholars may find the story of the response of analytic philosophy to the emergence of professional ethics instructive for what it reveals about the features and foibles of our disciplines and how they can influence what we see and overlook in science and engineering ethics.

The Possibility of Professional Ethics as a Scholarly Field

In the early 1970s, when significant numbers of philosophers began to participate in the conversation about professional ethics, some had qualms about it and denied that professional ethics could be a valid domain of scholarly investigation. Those who were skeptical about making professional ethics a domain of philosophical investigation said that rules enjoining honesty or promise keeping are the same whether one is a physician, a lawyer, or a bricklayer.[1] (On one level this assertion is trivially true, but it does not take into account the differences

among professions as to what one must attend to and the pitfalls one must avoid in deliberating about how to be honest or keep promises.) This assertion was just a corollary of the view that ethical norms are timeless (rather than enduring) and apprehended by reason alone and in abstraction from any social context. (There were some squabbles between the consequentialists and the deontologists about just what timeless principles reason dictates, however.) It was a legacy of strong and consistent influence of Kant and the Utilitarians, and the Enlightenment faith in reason that they exemplified. (The early Twentieth Century saw the development of the intuitionist form of consequentialism.)

The tendency to assume that philosophy dealt with timeless propositions strengthened when, soon after World War I, Logical Positivism (and later, Logical Empiricism) became a dominant view in epistemology. Although the tendency to equate reasoning with deductive reasoning had had a long history in philosophy, deductive logic took on a new prominence in Logical Positivism. Deductive logic, after all, seemed clearly a part of philosophy and not in danger of becoming a separate empirical discipline, as had the previous branches of philosophy that became physics and psychology. At the same time, deductive logic was close enough to mathematics to be immune from the charge of being merely speculative. Only after the shock of the Gödel incompleteness result and the failure of the Hilbert program, was philosophy gradually weaned away from the illusion that deductive logic was the heart of philosophy.

Ethics was the field of philosophy most distorted by this trend, which at the extreme even briefly saw the emotivist view of ethics, according to which what purported to be ethical judgments were not judgments at all, but only expressions of feeling (A.J. Ayer) or attempts to persuade (C.L. Stevenson). It may come as no surprise that when philosophers again recognized ethical judgments as judgments, they sought to construe them as much like logical truths as possible. This tendency often rendered them blind or indifferent to practical deliberation However, many Aristotelian, feminist, American Pragmatist, Marxist and Thomistic philosophers questioned the hegemony of Enlightenment attempts to found ethics on one or more principles given by reason alone—which hereafter I shall refer to as "rationalist foundationalist" moral theory (whether consequentialist or deontological)—and the consequent tendency to neglect moral deliberation in favor of moral criticism.

At mid-century, Stuart Hampshire argued that moral philosophy had gone astray by representing reason as deductive reason and thus neglecting practical *deliberation*. He argued that philosophy had neglected Aristotle's distinction between theoretical judgments and practical judgments, such as those about what would be a good thing to do in a given problem situation. He also argued that

philosophers had misunderstood the task of philosophical clarification, had erred in assuming that all literally significant sentences must describe, and had mistakenly concluded that because moral judgments are not *logically entailed* by statements of fact that statements of fact cannot *form the basis for* moral judgments. He argued that the bifurcation of fact and value judgments had encouraged the neglect of deliberation, which always considers factual judgments in concluding what would be a good (or even "the best") thing to do in some circumstance (Hampshire 1983).

Nine years later, in "Modern Moral Philosophy," G.E.M. Anscombe (1958) argued for some of the same conclusions in her trenchant and thoroughgoing criticism of philosophers from Hume and Kant to Henry Sidgwick to the "Oxford objectivists" (intuitionists) of her own day. Like Hampshire, she went back to Aristotle's conception of ethics and argued for adequate attention to deliberation that did not misrepresent it as a deduction from theoretical principles. However, she took a further step in challenging the continued use of the notion of moral obligation on the grounds that it is a holdover from Judeo-Christian ethics based on divine law that could not stand on its own. Anscombe held that the attempt to base obligation on conformity with supposedly timeless abstract principles was part of the whole mistaken view of ethics that neglected deliberation and which, she argued, led to moral corruption. It leads people to *calculate in advance* circumstances in which they might be justified in performing some great wrong, such as procuring the judicial murder of an innocent person. I take Anscombe to be drawing attention to how such calculation hardens people to the thought of doing a great wrong.[2]

In the 1980s, such works as Alasdair MacIntyre's *After Virtue: A Study in Moral Theory* (1981), Bernard Williams's *Ethics and the Limits of Philosophy* (1985) and Annette Baier's "Extending the Limits of Moral Theory" (1986) voiced renewed doubts about rationalist foundationalist approaches to philosophical ethics and the attendant reliance on deductive reasoning from abstract principles in U.S. philosophical circles.[3] By this time, practical and professional ethics had already taken on a life of its own.

Medical Ethics as an Example of Professional Ethics

Professional groups had not waited for philosophers to get around to recognizing professional ethics as a scholarly field. Many professions—medicine, nursing, and engineering, in particular—had had a long history of ethical reflection on professional norms by the time philosophers joined the conversation in significant numbers in the 1970s. The consumer rights movement in the U.S. had helped to spawn the patient rights movement, which was a further influence on

the emerging conversation in medical ethics and one that helped bring it widespread public attention.

The medical profession had a long, if discontinuous, history of ethical reflection. In the 1970s (before most of them became employees of hospitals and health maintenance organizations), U.S. physicians enjoyed a very high status and income—I recall at that time one German-trained physician who had come to the U.S. telling me that she had come to understand that in the U.S. "M.D." stood for "minor deity." This high status helped to ensure that even those philosophers who sought abstract universals in ethics paid some attention to physicians' experience when they wrote medical ethics.

However, the history of medical practice developed in parallel with philosophy of medicine and bioethics, and only occasionally informed the early development of bioethics. Abstract principles still influenced philosophical bioethics in the early 1970s. The views of John Rawls were becoming increasingly influential in philosophical ethics in the 1960s and 1970s just as the field of bioethics was emerging. In his 1957 article, "Outline of a Decision Procedure for Ethics" in the influential journal the *Philosophical Review*, Rawls (1957) had sought to define for philosophy a significant role as ethical arbiter. He suggested that the business of philosophical ethics is to address ethical problems by formulating applicable ethical principles and ordering them so as to decide which takes precedence in case of conflict. In 1971, in his major work on social justice, *A Theory of Justice*, Rawls (1971) elaborates his position as being that for very general principles of justice, the ordering is serial so that one must satisfy a prior principle before considering satisfaction of the next principle.

In their 1979 book, *Principles of Biomedical Ethics*, Tom Beauchamp and James Childress (1979) took up the task of formulating principles. The intuitionist W. D. Ross (1930) had proposed his "principle of non-maleficence" in 1930, and Beauchamp and Childress adopted it as one of their four "principles of biomedical ethics." This principle bears some resemblance to the physicians' *empirically based moral rule* "First, do no harm", but they are not looking for an empirically based moral rule, but Ross's abstract principle, as their jargoned name for it reflects (Jonsen 1977). Had they been looking for experienced-based rules they could not have failed to notice that the successes of twentieth century medicine changed the presumption about doing harm. Treatments such as chemotherapy, which poisons patients in an attempt to kill the cancer cells before killing the rest of the patient's cells, have hardened medicine to doing harm in the hope of bringing about a dramatic improvement in health outcome. (Of course, some have suggested that medicine has gone overboard in providing aggressive measures that do harm.) Rather than recognizing an obligation not to harm,

contemporary medicine recognizes an obligation to refrain from taking particular risks or imposing harms that the patient forbids (See Whitbeck 1985; 1997a; 1997b).

That the principle of non-maleficence was retained despite the change in the actual norms of good medical practice reflects the persistent tendency in some circles to ignore the arguments of Hampshire, Anscombe, and others and to proceed by continuing to develop abstract principles and subsume cases under them, either ignoring the process of deliberation or misrepresenting it as deductive reasoning.

At nearly the same time (1978), the first edition of the *Encyclopedia of Bioethics* appeared and provided an influential reference work with a diversity of philosophical perspectives on bioethics. The same year saw the publication of Sissela Bok's *Lying: Moral Choice in Public and Private Life* (1978). *A*rguably *Lying* marks the beginning of "practical ethics" as contrasted with "applied ethics" because of the close attention that Bok paid to the specifics of lying in particular circumstances and avoided abstract considerations.[4] Although *Lying* was not a work in bioethics, one topic to which she gave considerable attention was the lies told to patients by physicians.

Stephen Toulmin (1981) explicitly challenged to the Beauchamp-Childress method of subsuming cases under the abstract principles in his influential 1981 article "The Tyranny of Principles: Regaining the Ethics of Discretion." He argued from his experience of the actual conduct of moral reasoning—including his time as a member of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research where authorities from varying moral, philosophical, and religious traditions frequently deliberated to consensus on policies for patient involvement in decision making. Judgment about what is morally acceptable occurs not "top down" from principles, he argued, but by analogical reasoning from case-to-case. This experience led Toulmin to collaborate with Albert Jonsen on *The Abuse of Casuistry: a History of Moral Reasoning* (1988), which deals with the method of case -to -case reasoning.

Can Norms Be Specific to a Profession?

Philosophers who took more abstract approaches to philosophizing were wary of attempts to identify particular responsibilities and moral hazards as characteristic of specific professions. Where those with abstract approaches discussed particular responsibilities at all, they tended to discuss them as an afterthought, and to reduce special responsibilities to a minimum by seeking to show that rules for professional behavior are derivable from more general or abstract values,

such as fidelity or respect for persons. What is notable in these approaches is that in formulating their principles they did not first inform themselves about the actual problem situations about which professionals must deliberate. Thus they were in no position to recognize how those problem situations vary from profession to profession.

The practical ethics and applied ethics approaches disagree over whether principles can be formulated on the basis of reason alone, or whether, as Alasdair MacIntyre (1984) has argued, whatever meaningful principles and moral rules there are in ethics are not abstract but include understanding of their domain of application and derive from communities' experience of how to avoid moral pitfalls in the problem situations they do in fact encounter.

The sorts of problem situations encountered and hence the temptations and moral hazards encountered in those problem situations vary considerably from profession to profession. For example, engineers' relationships (with their clients, their employers, or members of the public—most of whom they never meet but for whose safety they have a responsibility) do not closely parallel the relationship of physicians to patients. Each type of relationship has its own moral challenges, which also affect the character of the profession, and each has its own types of moral hazards and temptations, to be guarded against with substantive rules of practice. No one denies that virtues are desirable in everyone. However, not all virtues are equally important for the fulfillment of all responsibilities. Thus impatience is tolerated in surgeons more readily than in kindergarten teachers, and indecisiveness is tolerated in kindergarten teachers more readily than in surgeons, because of the special demands and moral hazards of each profession.

Looking at the titles of early influential works that purported to be about moral problems, such as the 1976 collection of essays *Moral Problems in Medicine* (1976), one might expect that moral problems did receive attention. However, the essays in this collection do not deal with problem situations, much less with deliberation about how best to solve them. Rather, they are essays about types of acts, such as abortion and euthanasia, and they discuss in general terms, when, if ever, resort to those actions is justified. Such debates were conducted in terms that were largely irrelevant to those actually dealing with problems that might lead one to resort to those acts. After several years of such debates, some began writing about the *deliberation* of those in problem situations. In particular, feminist scholars with ties to the women's health movement sought to examine problem situations women faced and to expand their alternatives, rather than debate whether they had the right to resort to actions they would rather avoid resorting to at all (see Addelson 1991; Rothman 1986; Whitbeck 1983).

In an early defense of taking the ethics of the various professions as valid subject matter for scholars and attending to the problem situations they faced, Heinz Luegenbiehl observed that many moral problems arise in professional practice that are unfamiliar in ordinary life (1991). Later in this paper, I shall return to focus on the ethically significant problem situations that characterize practical ethics.

Those ethical "codes" and guidelines that members of a profession have created and revised over time provide a helpful guide to the problems actually encountered by professionals. Of course, codes and guidelines have many origins, but even those that reflect the experience of practitioners should not be assumed to give *exhaustive* specifications of what practitioners should or should not do. Instead, they provide guidance on handling *common* temptations and avoiding *common* pitfalls for those in the profession. Later I shall return to the question of how the norms in codes of various professions differ.

Practical Ethics and Applied Ethics

As I have been using the term, the "applied ethics" approach to professional ethics is the application of rationalist foundationalist ethical theory or abstract ethical principles (MacIntyre 1984). These principles are abstract in that they are supposedly apprehended in abstraction from context. An example would be the principles of justice that, as John Rawls suggested, would be chosen from "behind a veil of ignorance," that is, rational beings ignorant of their own position in society (and so without the benefit of any actual moral experience) would choose them.

In contrast, practical ethics begins with ethically significant practical problems and the enduring (rather than "timeless") moral rules and norms that have been developed to give guidance to those addressing those problem situations. In the case of professional ethics these would be ethically significant problems of the sort that commonly arise in professional practice (not rare, extreme, or science fiction cases) and the norms of responsibility appropriate for those with the special knowledge and opportunities for action possessed by members of the profession in question. Other areas of practical ethics deal with problems encountered by other groups, such as family members or citizens. Some areas of practical ethics are organized by topic, such as biomedical ethics. These include problems and responsibilities of professionals and nonprofessionals (such as patients). Therefore, professional ethics overlaps with other categories within practical ethics. In particular, policy questions about health care or technological development *partially* overlap with ethics of the relevant professions.[5]

Some who pursue practical ethics are philosophers aware of the philosophical literature arguing that deliberation is the central form of moral reasoning. However, many are not philosophers but are simply interested in finding good (or better) ways of addressing problems or developing good policies for preventing difficulties, harms, injustices, and the like.

In recent decades, many who initially adopted the applied ethics approach have modified their views to take account of the insights that have come from practical ethics. However, four tendencies of the applied ethics approach persist into the present day. The first of these is the emphasis on application of foundationalist ethical theory (that is, one or another view of what reason alone supposedly tells us is the crux of ethics). The second is the emphasis on analysis to the neglect of synthetic reasoning. Third is the tendency to treat moral problems as if they came with their possible solutions attached, that is, as if they are multiple-choice problems. The fourth is the tendency of proponents of applied ethics to ignore their own historical and cultural position and to argue as though their principles were timeless truths.

The invocation of rationalist foundationalist theory with assumptions born of the European Enlightenment is a particular problem for development of a more international and cross-cultural discussion of professional ethics. Although wide acceptance has been accorded to the notion of human rights as defining a minimum in the treatment of individuals, many cultures view the group, rather than the individual, to be the proper focus of attention in moral matters.

The contextual emphasis in practical ethics makes it better able to recognize and adequately account for differences across cultures and societies, even as agreements such as the "Washington Accord" on the Recognition of Equivalency of Accredited Engineering Education Programs Leading to the Engineering Degree—see, http://www.washingtonaccord.org/wash_accord_agreement.html —seek to develop some uniform international standards for professions.

Philosophical Ethical Theory, Foundationalist and Other

Rationalist foundationalist theories hold that reason by itself gives us a specification of what ethics "all comes down to." For example, "behaving ethically consists in acting to achieve the greatest good for the greatest number," or "behaving ethically consists in acting so that one treats every one as an end and not as a means only," or "acting from the motive to do one's duty," "respecting the rights inherent in persons", or "keeping one's agreements."

Aristotle and pre-Enlightenment philosophers as well as continental philosophers from Nietzsche to Jonas all understood philosophical ethics in a very different way from the foundationalists. So, although Aristotle holds up the question of the "good for man" as the central question of ethics, his theory does not specify a test of "right action," let alone maintain that some test is dictated by reason alone, apart from social experience.

New theoretical approaches containing thoroughgoing critiques of all abstract approaches to ethics (and philosophizing) have arisen in Anglo-American philosophy since 1980. For example, Annette Baier approvingly quotes Bernard Williams as saying:

> [T]he ideal of transparency and the demand that our ethical practice should be able to stand up to reflection do not demand total explicitness, or a reflection that aims to lay everything bare at once...I must deliberate from what I am. Truthfulness requires trust in that as well, and not the obsessional and doomed drive to eliminate it (Williams 1985, p. 200).

Baier goes on to say:

> Though I welcome Williams's emphasis on the importance and fragility of confidence, and his reminder of the close link between the trusty and the true, I would amend his statement to "*we* must deliberate from where *we* are"; for, as he himself emphasizes, confidence and trust are social achievements (Baier 1986, 544-545).

Philosophers like Baier and Williams argued that the abstract mode of philosophizing poses the danger of making ethics irrelevant to actual moral life, rather than leading to moral corruption, as had Anscombe. Such arguments against the appropriateness of abstract and detached philosophizing in ethics drew strength from Thomas Nagel's argument in his book, *The View from Nowhere* (1986), against detached philosophizing in general.

The most naïve use of rationalist foundationalist theory in applied ethics has been to treat such theories as though they were specifications of what one ought to attend to in responding to particular moral problems. So for example, consequentialism (in either its utilitarian or intuitionist forms) is treated as requiring that one consider only consequences in responding to a problem situation. This is a mistake, of course, as the example of Richard Brandt's rule utilitarianism clearly illustrates. Brandt did believe that ethics comes down to achieving the best consequences, but that following certain rules would achieve the best long run consequences and it was the rules rather than individual acts

that should be subjected to the utilitarian test. Clearly some utilitarians would council considering applicable moral rules and others would the consequences of particular responses to the problem. What makes them utilitarians, rather than, say, contractarians or deontologists, is their embrace of the abstract principle that being ethical consists in producing the greatest utility for the greatest number. Of course, Brandt does not give a catalog of moral rules that pass the utilitarian test any more than act utilitarians tell us how to learn all the consequences of potential responses or how to deal with outcomes that are not expressed as arithmetic quantities. They are not giving directions on how to manage *concrete* moral problems.

Some who take an applied ethics approach are much more sophisticated and would never make the mistake of treating rationalist foundationalist theories as though they were specifications of what one ought to attend to in responding to particular moral problems. Even they emphasize analytic reasoning to the neglect of synthetic reasoning and tend to treat moral problems as multiple-choice problems, however.[6]

Applied Ethics Approach to Deliberation

To illustrate the difference between applied ethics and practical ethics in the adequacy of their treatment of deliberation, consider the method of deliberation proposed by one of the most careful and sophisticated proponents of applied ethics. Jim Childress specifies the following steps for finding an "ethically justifiable course of action" and describes his as a method as one for "ethical *analysis* of cases."[7] The steps in the method are:

1. Describe **all** the facts in the case.
2. Describe the relevant principles and values of the …interested parties.
3. Determine the main clash of values and principles.
4. **Determine** possible courses of action that could protect as many of the principles or values in the case as possible.
5. **Choose and defend** one course of action on the basis of the relevant principles and values.
6. In the defense show that the conditions for overriding *prima facie* principles and values are met. [He then specifies five conditions, such as "the agent must seek to minimize the negative effects of the infringement."]

Childress is right that his method is one of analysis, but synthesis is also required to devise a course of action. Childress's scheme draws attention to some important considerations, however. For example, his emphasis in step 4 on

protecting as many of the principles or values in the case as possible is a major improvement over earlier applied ethics methods that merely sought to satisfy the top-ranked principle at the expense of others. In what it omits, however, it misrepresents the process of devising a good response to a moral problem. Note first, the formulation of the problem is a major step that is simply assumed in Childress's method, and the problem-solver is assumed to be in the omniscient position of possessing all the facts and "the relevant principles and values of the … interested parties."

Although Childress elucidates how to defend or justify one's choice, the "determination" of the possible responses remains a mystery. To determine a course of action (rather than to devise a course of action) suggests that one is to identify possibilities that are established before the agent decides what to do. Indeed, if the possibilities were not established for the agent, it is hard to see how this step could be one of analysis. Where the courses of action come from or how the agent establishes what they are is not explained.

Childress offers this method not for trivial moral problems, cases in which one might say that reasonable responses are obvious, but for cases that are thought interesting or difficult, since step 3 explicitly assumes that the agent confronts a conflict of values or principles.

In what it assumes Childress's method has much in common with the method of decision analysis in which the first step is to "define," or to "identify and bound," the decision problem, that is, to identify possible alternative actions, types of relevant information that will be available, possible consequences, and other considerations such as cost and societal impact. In carrying out the first step in using decision analysis, those setting up the problem *specify* both what considerations are relevant and what alternatives are possible, that is, one sets up a multiple choice problem with value estimates of the consequences of those actions and their likelihood.

Problem Situations in Practical Ethics

In practical ethics (including professional ethics), the focus is on problem situations and statements of ethical norms derived from the experience of practitioners and others involved in and affected by the practice ("stakeholders"). The problem situations are often called "problems" for short—in the sense of situations to be addressed, not necessarily difficulties—rather than "cases."

Problem situations are more than "war stories"; problems call for response. The norms articulated in ethical codes and guidelines are aids to taking action in such

problem situations. Of course, calling some rules or guidelines "ethical" does not make them ethical. Codes of ethics may enjoin practitioners to behave in ways that have no ethical significance, or may even be unethical. Furthermore, the norms articulated in many written codes and guidelines can be elicited from experienced engineers. What is important is drawing on the experience of the relevant communities and professions, whether or not such cumulative reflection is written down. To understand the ethical import of the actions such guidelines enjoin, one must understand the problem situations that they are meant to address. Therefore, the formulation and interpretation of problem situations and of ethical guidelines and other statements of norms are mutually informative and correcting. Important facets of a problem may come to light when it is viewed in relationship to ethical guidelines, and gaps and practical problems may show up deficiencies and omissions in ethical guidelines. In attending to particulars, practical ethics does not fall prey to being anecdotal and unsystematic. Practical ethics considers, articulates, and critically reflects on the ethical systematizations that communities have developed to address specific sorts of problems that arise in specific societal contexts, as well as those developed by philosophers.

Professions and their Norms of Practice

As professions have developed, the ethical aspects of the specialized problems of professional practice have garnered more attention both from within and without those professions.

I accept the characterization of professions as the occupations that both require mastery of a specialized body of (theoretical and practical) knowledge and seek to promote or protect one or another significant aspect of others' well-being. Professionals are expected to integrate complex knowledge to achieve good outcomes or prevent bad outcomes for others. As a result, others without that knowledge cannot judge the competence or conscientiousness of their practice except in the grossest terms. For example, whereas anyone can judge that a surgeon is at fault for sewing up the patient with surgical instruments inside, only another surgeon, or perhaps only another practitioner of the same surgical specialty, can judge the quality of a surgery she has just witnessed. Although society needs trustworthy behavior on the part of all whose work significantly affects human well-being, society must trust members of a profession to ensure the quality of the practice of their profession to a larger extent than it must trust members of other occupations.

Because professions draw on a complex body of knowledge to further the well-being of others, the moral norms for their practice include responsibilities—most centrally, the responsibility to promote or protect that well-being—as well as

moral rules and obligations. Whereas moral obligations and most rules specify the *acts* that are required or forbidden, fulfilling a responsibility characteristically requires achievement of an end. Carrying out a responsibility requires the making of complex judgments about which *acts* will best achieve the desired *ends*.

The ends or results that the professionals in engineering, research, medicine, or law work to achieve include, respectively, worker or public safety, sound research results, a good health outcome for one's patient, and a good legal outcome for one's client. The professional must figure out in each case what acts will achieve the desired ends, and this requires complex problem-solving skills.

In contrast to societies that are merely scientific, technical, scholarly, learned, or disciplinary societies that focus exclusively on technical or scholarly advances in a discipline, professional societies may also have a disciplinary focus, but they address the professional behavior of their members and issue explicit statements of ethical norms for professional conduct. Accordingly, philosophy is a discipline, not a profession, while teaching is a profession. The National Society of Professional Engineers (NSPE) and the Order of Quebec Engineers (OIQ) are professional societies, but the American Philosophical Association is not. The International Institute for Electrical and Electronic Engineers (IEEE), the Information Processing Society of Japan, and the System Administrators' Guild of Australia (SAGE-AU) each have a dual focus, on both professional issues and disciplinary advances.[8]

Engineering societies in continental Europe, such as the Flemish KVIV, the Dutch KIVI, and most recently the German VDI, have developed a professional as well as technical focus only relatively recently. Although this means that their codes of ethics have not yet been time-tested against the moral experience of practitioners, the practical ethics approach that I discussed earlier and am about to demonstrate is possible to use.

If we examine codes of ethics for professions, we find that some rules are common, at least within a profession. An example is the prohibition of bribery, or at least bribery to obtain work, that is generally found in engineering codes of ethics.[9]

> The code of ethics of the IEEE states: "We, the members of the IEEE, … do hereby commit ourselves to the highest ethical and professional conduct and agree …. [10 items, including] to reject bribery in all its forms."

> The Institution of Engineers, Australia (IEA) gives in their Examples of Rules of Practice 2: "[Members] shall neither pay nor offer directly or indirectly inducements to secure work."
>
> The Code of Ethics of the OIQ states as provision 3.02.09: "An engineer shall not pay or undertake to pay, directly or indirectly, any benefit, rebate or commission in order to obtain a contract or upon the carrying out of engineering work."

The American Medical Association (AMA) has a provision against fee- splitting in its code of ethics. "Fee-splitting" in the context of medicine is paying a kickback to another physician for having that physician refer the fee-paying patient. The prohibition against fee-splitting is similar to the stricture against paying a bribe to obtain work in that both bribing and fee-splitting represent ways in which inferior practice threatens to thrive over proficient practice. The difference between the two prohibitions reflects differences in the ways in which members of each profession obtain work.

Moral Rules That Vary with Profession

How are we to understand the similarities and differences in the moral norms of various professions and professional organizations? As I have pointed out elsewhere (Whitbeck 1998, chapter 2), codes of professional organizations illustrate how ethical standards vary with the moral problems encountered by a profession. Some rules of practice in one profession have counterparts in other professions. Others do not. For example, rules about maintaining client confidentiality appear in law and health care as well as engineering, but in the codes for medicine there is no rule precisely corresponding to the rule in engineering codes against taking work outside one's competence. Perhaps this is because medical education regularly teaches some procedures by having trainees perform them on patients, so that one is doing procedures *before* one is proficient in doing them, in order to develop that proficiency.

Some professions are more concerned than others about the potential for compromise or appearance of compromise of professional judgment posed by receiving a commission for one's work. So the U.S.'s National Society of Professional Engineers (NSPE) takes an especially dim view of engineers (but not of those outside engineering) working on a commission basis.[10] The absence of such concerns in medical codes of ethics may only reflect that relative rarity with which physicians are asked to work on commission, or where doing so would threaten to compromise professional judgment.

In addition to differences in the frequency with which some problems arise are differences in the vulnerabilities of those with whom the professional encounters in professional practice. An illustration is the prohibition within the AMA code of ethics of what is sometimes called "patient abandonment":

> Once having undertaken a case, the physician should not neglect the patient, nor withdraw from the case without giving notice to the patient, the relatives, or responsible friends sufficiently long in advance of withdrawal to permit another medical attendant to be secured.

Engineering codes do not have such a rule. The only one that I have found that even mentions withdrawal from service to a client is the 1983 code of the OIQ. Their provisions 3.03.04 and 3.03.05 state respectively:

> "An engineer may not cease to act for the account of a client unless he has just and reasonable grounds for so doing. The following shall, in particular, constitute just and reasonable grounds (a) the fact that the engineer is placed in a situation of conflict of interest or in a circumstance whereby his professional independence could be called in question; (b) inducement by the client to illegal, unfair or fraudulent acts; (c) the fact that the client ignores the engineer's advice," and

> "Before ceasing to exercise his functions for the account of the client, the engineer must give advance notice of withdrawal within a reasonable time."

Even here there is no suggestion that an engineer must be sure that another engineer will take over the work. The vulnerability of patients is much greater vis-à-vis their physicians than is the vulnerability of engineer's clients, and this makes a difference to the norms of their practice.

On the other hand, current codes of ethics for several engineering societies, including the American Society of Mechanical Engineers (ASME) and the American Society of Civil Engineers (ASCE) state, "Engineers shall perform services only in areas of their competence." No such stricture is placed on physicians. This may be due to the fact that at least for the present medical training always involves having physicians learn on patients.

Of course, we may ask whether new provisions should be added or existing ones ought to be abandoned. When the problem of the physical abuse of children came

to light in the U.S., physicians were assigned a new duty to report such cases and educated to identify patterns of injury that were likely to have been intentionally inflicted. Provisions within U.S. engineering codes about not criticizing the work of other engineers were recognized to interfere with the need and responsibility of the profession to police itself and were eliminated or changed to prohibitions against *unfairly* criticizing the work of other engineers.

Varying Legal and Societal Conditions

Although basic similarities in conditions of engineering practice are found in technologically developed democracies, different legal traditions influence norms of professional practice.

For instance, the U.S. recognizes a right of freedom of speech and interprets this right more broadly than do other technologically developed democracies. As a result, the U.S. was slow to sign on to the U.N. Declaration on Human Rights, because some of its provisions, particularly the provision against hate speech, threatened to interfere with the constitutionally protected right of free speech. In the end, the U.S. signed on with the provision that it could not agree to anything that conflicted with the U.S. constitutional right to free speech.

By contrast, defamation is considerably easier to prove in Australia than in the U.S. In particular, in Australia truth is not a sufficient defense against it. (Perhaps this is a legacy of having once been a penal colony and the attendant widespread desire to let people make a new start.) The IEA code of ethics stipulates that its members shall "neither maliciously nor carelessly do anything to injure, directly or indirectly, the reputation, prospects or business of others."

This example illustrates how societal and cultural factors can introduce differences in available options and hence in the practical deliberations of engineers (and other professions in which safeguarding the public is a responsibility), even in technologically developed democracies.

Conclusion

The "applied ethics" approach proceeds from the formulation of abstract principles held to derive from reason alone, and applies these abstract principles to instances. This approach focuses on analytic reasoning exclusively. In contrast, practical ethics begins with ethically significant problem situations and recognizes the need for synthetic as well as analytic reasoning to devise responses that satisfy many ethically significant criteria simultaneously. It recognizes that the moral rules it uses come from experience and thus are

influenced by the particular problem situations that arise in the community whose experience is distilled in those rules. Although it frequently benefits from insights from ethical theory (including from the insights of foundationalists), practical ethics does not attempt to formulate ethical norms in abstraction but draws on experience as well as philosophical insight to illuminate the ethical aspects of particular problem situations.

Philosophers who take a practical ethics approach expect to draw on the experience of relevant communities, in the case of professional ethics that would be members of the profession in question. Therefore, they expect to work collaboratively with members of the profession they study and with other humanists and social scientists and benefit from their insights and criticisms.

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Notes

[1] I would emphasize that I heard this view voiced even by senior figures who *participated* in the early conversations in professional ethics and even several who went on to contribute to a much more nuanced view of philosophical ethics, including professional ethics.

[2] Notice that it is advance calculation rather than consideration in deliberation that Anscombe finds so heinous, as she says in a footnote, "If he thinks it in a concrete situation, he is of course just a normally tempted human being. Deliberation is quite different in character from testing theoretically based moral rules with extreme dilemmas." " Modern Moral Philosophy" is of major philosophical importance for many other points that it makes, as well, including the need for philosophical psychology and what came to be called "action theory."

[3] I have given an overview of the range of these criticisms at
http://onlineethics.org/bib/appendix.html

[4] Note especially her discussion of the limitations of (foundationalist) ethical theory in illuminating practical ethics in the section titled "Systems" in Chapter IV, "Weighting the Consequences."

[5] Some policy questions may be regarded as questions of engineering ethics, that is that some questions, which are called "macro" questions, are questions of engineering ethics even if society as a whole, rather than engineers alone, must answer them. The term was introduced by Ladd (1980. See the discussion of it by Herkert (2001

[6] I argue for an alternative view of moral problems in greater detail in Whitbeck (1996).

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[7] *Guidelines for the Ethical Analysis of Cases* handed out by James Childress at the AAAS Minority Scholars Workshop on Values and Ethical Issues in Science & Technology (July/August 1991). Quoted by permission. Childress says the method was adapted with major modifications from Loyola University Stritch School of Medicine, Medical Humanities. I have added bolding to terms of particular significance for my argument. I have discussed this example elsewhere in Whitbeck (1997b).

[8] Codes of ethics have a long history in U.S. engineering societies. They were proposed from the 1880s, and the first code of ethics finally adopted was the AIEE's code in 1912 (Layton 1971, p. 84).

[9] Some of these examples and illustrations appear in Whitbeck (1998).

[10] See for example the judgment of the NSPE's Board of Ethical Review on their case 78-7 at http://onlineethics.org/cases/nspe/nspe78-7.html.