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Engineering Codes of Ethics and the Duty to Set a Moral Precedent

Eugene Schlossberger[1]

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Abstract Each of the major engineering societies has its own code of ethics. Seven "common core" clauses and several code-specific clauses can be identified. The paper articulates objections to and rationales for two clauses that raise controversy: do engineers have a duty (a) to provide pro bono services and/or speak out on major issues, and (b) to associate only with reputable individuals and organizations? This latter "association clause" can be justified by the "proclamative principle," an alternative to Kant's universalizability requirement. At the heart of engineering codes of ethics, and implicit in what it is to be a moral agent, the "proclamative principle" asserts that one's life should proclaim one's moral stances (one's values, principles, perceptions, etc.). More specifically, it directs engineers to strive to insure that their actions, thoughts, and relationships be fit to offer to their communities as part of the body of moral precedents for how to be an engineer. Understanding codes of ethics as reflections of this principle casts light both on how to apply the codes and on the distinction between private and professional morality.

Keywords Codes of ethics · Moral precedent · Duty of association · Public outreach · Proclamative · Principle · Engineering ethics

Introduction

Each of the major engineering societies has its own, generally short, code of ethics. Seven clauses may be identified as "the common core" of these codes. Some codes also contain code-specific clauses. Controversy attends at least two clauses. Do engineers have duties of public outreach? Must engineers associate only with

✉ Eugene Schlossberger
esschlos@purduecal.edu

[1] Department of English and Philosophy, Purdue University Calumet, Hammond, IN 46321, USA

morally salubrious persons or organizations? Examining the moral basis for this last clause, the duty of association, suggests a general way to understand engineering codes of ethics. The duty of association is an application of the "proclamative principle," which is implicit in what it is to be a moral agent. The proclamative principle asserts that one's life should proclaim one's moral stances (one's values, principles, perceptions, etc.). More specifically, it directs agents to strive to insure that their acts, thoughts, relationships, and so forth are suitable to be offered as part of the body of moral precedents for their moral community. This rationale for the association clause also lies at the heart of engineering codes of ethics: in a sense, engineering codes of ethics can be summarized, roughly, as "let your activities as an engineer be good examples of being an engineer." More precisely, the proclamative principle urges engineers to strive to ensure that their lives and actions are fit to offer to their communities as precedents for how to be an engineer. Understanding codes in this way casts some light both on how to apply the codes and on the distinction between private and professional morality.[1]

Characterization of Engineering Codes of Ethics

The common core of engineering codes of ethics, I suggest, consists of seven clauses. Each of these seven is found, in some form, in many (not necessarily all) of the major engineering societies' codes of ethics, and those codes generally include most of the seven. Most engineering codes of ethics contain some form of what is generally called the "*Paramountcy Clause*," calling upon engineers to safeguard public health, safety, and welfare. Examples include the NSPE's "hold paramount the safety, health, and welfare of the public," the ASCE's "Hold paramount the safety, health, and welfare of the public and strive to comply with the principles of sustainable development," and the ASME's "hold paramount the safety, health, and welfare of the public." The IEEE does not use the concept *paramount*, but does commit itself to "making decisions consistent with the safety, health, and welfare of the public." A second common element is the *Environment/Sustainability Clause*. The ASCE speaks of sustainable development and environment, the ASME enjoins engineers to "consider environmental impact" and the NSPE mentions "principles of sustainable development in order to protect the environment."

Two other common themes focus on additional core values of engineering. The *Competency Clause* insists that, as the ASME puts it, "engineers shall perform services only in the areas of their competence." The *Honesty Clause* requires engineers to avoid bribery, to eschew conflict of interest, to "avoid deceptive acts" (NSPE) and "false or malicious action" (IEEE). Two final common themes center on the profession as such. The *Collegiality Clause* asks engineers, in the words of the IEEE, to "assist colleagues and co-workers in their professional development." The

[1] One preliminary note should be made. I am using the term "duty" in the quite weak sense that if there is a duty to x, then, in a given case, the fact that option O is an instance of x-ing normally (even if not always) counts as a moral reason (even if not a decisive one) to choose O. Most virtue theorists, Dancy (2004), Ross (1930) (who might remove the phrase "even if not always"), and Kant (2012), (who would also remove the words "even if not a decisive one") would not take serious issue with the idea that we have duties in at least this weak sense.

Faithful Agent Clause requires engineers to "act for each employer or client as faithful agents or trustees" (NSPE). Finally the *Dignity Clause* directs engineers, as the ASCE says, to "increase the competence and prestige of the engineering profession."

In addition to this common core, some organizations' codes contain clauses that are not widely found in other codes. Two such code-specific clauses are of particular interest: the *Duty of Association Clause* and the *Public Outreach Clause*.

The NSPE asks engineers to "participate in civic affairs" and "extend public knowledge and appreciation of engineering and its achievements." More generally, public outreach includes two aspects in which engineers might engage actively using engineering knowledge and skills: public *education or dissemination*, and public *availability of services*. Thus an engineer knowledgeable about nuclear safety might give a public talk on the subject if a nuclear power plant is under consideration in his/her community and an engineer might volunteer to provide free engineering services for a low-budget charitable organization. In addition, the phrase "participate in civic affairs" could be understood to include activities in which an engineer does not use engineering skills as such, such as voting or volunteering to drive disabled voters to the polls. As Florman (2002) states, "Individual engineers are uniquely qualified to perform pro bono work in their communities—and beyond. Also, through their professional societies, engineers have an opportunity (and a responsibility) to call attention to technological problems and to propose solutions—to commission studies, issue reports, set standards, schedule seminars, visit schools, and so forth" (p.23).

Finally, the ASME asks engineers to associate "only with reputable persons or associations." This phrase is somewhat vague. There are at least six different sorts of associations that might or might not be covered by this clause:

1. *Direct participation* (directly participating in a project that is directly morally unsavory), such as designing gas chambers for Auschwitz.
2. *Indirect participation* (either indirectly participating in a project or participating in a project that is indirectly morally unsavory), e.g., working on an algorithm that can be used in a variety of programs, one of which is an email scanning program used by a repressive regime to identify political dissidents, or working on a sensing mechanism that has several legitimate uses but can also be used by terrorists to target an explosive to a high population density area.
3. *Insulated professional relationship*: Working on an otherwise unobjectionable project with a firm or client some of whose other (unrelated) activities are morally unsavory (e.g., working on a biodegradable motor oil for a company that also manufactures DDT).
4. *Public support, as an engineer*, of a morally unsavory activity, organization, cause, or individual.
5. *Public support, as a private individual*, of a morally unsavory activity, organization, cause, or individual.
6. *Private association* with a morally unsavory individual, e.g., being personal friends with a child molester.[2]

[2] For example, Prince Andrew's continued friendship with a registered sex offender engendered much discussion about general moral duties pertinent to associations of type 6.

Two Controversies

These code elements are not all free of controversy. Because the codes are brief and the language fairly general, most clauses in most societies' codes are widely accepted and relatively easy to justify.[3] For example, while there may be disagreement concerning what constitutes competence, few would deny the NSPE's dictum that engineers should "perform services only in areas of their competence." Significant commitment to honesty, the environment, and sustainability also seems beyond dispute, as does dedication to public health, welfare, and safety. Assisting colleagues and maintaining the dignity of the profession seem worthwhile objectives. Controversy may attend the limits and extents of these ideals, such as how to weigh being a faithful agent for the client against other moral *desiderata*, what constitutes welfare and how safe is safe enough, where to draw the line balancing progress and the environment, or how to balance honesty and safety against the dignity of the profession in the case of an underperforming colleague. However, the wording of the codes is general enough to allow for such balancing and fine tuning.[4]

[3] In addition to asking for justification for particular clauses, a reader may wonder why engineers ought to give any moral weight to codes of ethics. Davis (1991) famously argued against the views that the moral force of engineering codes of ethics stems from promissory acts of engineers in joining a society or from contracts with society. Instead, Davis suggests that codes are a convention among professionals, articulating what professionals may reasonably expect of each other in jointly pursuing the ideals of the profession on the basis of which society entrusts the profession with various benefits. As Deborah Johnson puts it, "These codes embody what members have agreed upon as the basic commitments of the profession. They also often express ideals that engineers aspire to" (Hollander et al. 1995, p. 84). I would add to Davis' and Johnson's insights that codes serve a rhetorical role in representing the profession, its institutional duties, its ideals, aspirations, and social role, both to members (fellow engineers) and to the general public. Engineering codes of ethics ought, then, to articulate elements of the "engineering way," to help engineers to proclaim, through their lives, what it is to be an engineer. One may still question the definitive role of the various societies in formulating the criteria for pursuit of the ideals of engineering, much less in deciding what those ideals are. However, insofar as those societies have some institutional standing within the profession and within society, they constitute a proclamative platform at a level few individual engineers can reach, and constitute a rough consensus of the field. Thus there is some moral call for engineers to follow the codes when doing so does not conflict with what is right, as best they can determine.

[4] The paramountcy clause may be an exception, as it stands, since "paramount" means above all else. For example, the "public" invoked by the codes is presumably the human public. Yet promoting human health and welfare may conflict with the welfare of animals and natural environments, even when the human toll of environmental harm is taken into account. Moreover, few would urge engineers to deceive the public by, for example, falsifying results of seat-belt tests, because doing so results in more people using seat-belts, thus increasing public health, welfare, or safety. Finally, as discussed at length in (Schlossberger 2013), engineering for safety may conflict with consumer autonomy. One might reasonably argue that, at least in some cases, consumers could justifiably be given the option of picking a less safe but less expensive choice, even when there is no strong utilitarian justification for that. While many decisions are made by executives, if safety is paramount, then engineers should refuse to sign off on projects in which safety is subordinated. For these reasons, the term "paramount," should not be taken strictly to mean "above all else." Rather, the clause should serve to emphasize the great weight engineers should place on health, safety and public welfare. It is a further issue whether this re-interpretation of "paramount" is best effected by commentary on existing codes or by modifying the language of the codes.

There are, however, at least two controversies I wish to identify and discuss, concerning two code-specific clauses, which I've called the "public outreach" and "association clauses." Both raise ethical issues that extend well beyond the field of engineering.

The first controversy concerns the two aspects of the outreach clause. Some may question why engineers should be (imperfectly) obligated to educate the public. After all, anthropologists, philosophers, and economists are not generally held to have such a duty. One justification for this requirement comes from Martin and Schinzinger's notion (1989) of the role of the engineer as a "social enabler and catalyst," further explicated in (Schlossberger 1993). For the reasons given in those two works, engineers should serve neither as servants, blindly taking orders from management or society, nor as overlords who paternalistically know best what society needs. The idea of "the Great Engineer" went out with Herbert Hoover. The idea of the engineer as order-taker went out with Nuremberg. Rather, the role of the engineer is to work with society, helping society to understand issues, working with management and the public to construct goals and criteria of evaluation, and making possible solutions that best balance those goals and *desiderata*. Engineers should help members of the public "understand their own needs and to make informed decisions about desirable ends…and means" (Martin and Schinzinger 1989, p. 242). In order to fill this role, engineers must help educate the public, speaking out when they have relevant knowledge and understanding of important issues.

Similarly, some might ask why engineers have an imperfect duty to ensure that engineering services are widely available, either via *pro bono* work or other forms of outreach, on the part of individual engineers, firms, or the profession as a whole. Some might even agree with Max Stirner that "we owe each other nothing, for what I seem to owe you I owe at most to myself" (Stirner 1844, p. 263). One argument supporting a duty to make engineering services available comes from the discussion in (Schlossberger 1993) of the nature of a profession. Engineering displays certain features of professions that create a coercive bargaining situation. After all, engineering provides a crucial service without which civilization could not be sustained. The practice of the profession requires extensive training. Some members of the profession are organized and granted exclusive privileges and rights in the form of legal licensure. As a result, in many cases, those in need of engineering services can neither decide to go without those services nor do it themselves. Moreover, both engineering as a field and individual engineers have special institutional duties arising from the benefits derived from public trust, without which the field could not exist. When an engineer designs and oversees construction of a bridge, for example, members of the public entrust the engineer with their lives. Without that trust in the engineer's meeting the engineering's institutional standards for competence and meticulous concern for safety, the engineer would not be given the chance to work. Dual-Investor Theory (Schlossberger 1994) suggests a further justification for both forms of public outreach duties. The various forms of support and benefits that society provides engineers, their firms, and their profession, such as police protection, roads, and a knowledge base compiled over thousands of years, may be regarded as a form of "opportunity capital." Because engineers could not

function without this precious capital, engineers owe society a good return on its investment. Public outreach, it may be argued, is a part of the return to which society is entitled for providing engineers, engineering firms, and so forth with licensure, education, roads, a currency system, and much more.

The second controversy concerns what is perhaps the most controversial clause, the duty of association. In some cases, associations with morally unsavory organizations or persons may seem to violate some other clause. For example, it seems plausible to insist that engineers should not work on directly harmful projects because doing so violates the paramountcy clause. Enjoining associations of type 1 is thus unexceptionable. But is it plausible to insist that the paramountcy clause is violated by associations of type 2? It is not undeniably obvious that it is an ethics violation for an engineer to do harmless work for an unsavory company (type 3) and even less clear that engineers have a professional duty to eschew personal friendships with morally bad individuals (type 6). Associations of type 4 arguably diminish the dignity of the profession, but it is not clear that associations of type 5 can reasonably be held to blemish engineering as a profession. An important question, then, is whether there are independent rational grounds for banning such associations, that is, whether there are reasons not directly subsumed under other clauses.

The duty of association can be understood as an application of two broader duties, one fairly obvious and the other perhaps less so. The obvious duty is the utilitarian principle of promoting good consequences. Associating with an evil organization, by serving to legitimize it, may better enable the organization to achieve its evil ends. Creating tracking software for a repressive regime may result in executions. Many of the ways in which associating with evil produces bad consequences are straightforward and it is hardly controversial that, other things being equal, it is generally better to refrain from bringing about bad consequences. One might argue that because virtually all engineering codes emphasize the importance of public welfare, the association clause is redundant. However, because the harm done by associating with evil may, in some cases, be subtle or indirect, having a separate clause about association might prove helpful. In any case, there is a second rationale for a duty of association, the proclamative principle, which may apply even when negative consequences are small or remote.

Precedent-Setting and the Proclamative Principle

The proclamative principle suggests that the way one lives should be fit to serve as a declaration of one's moral stance, that is, the values, principles, and understandings that constitute one's moral point of view. As an alternative version of Kant's universalizability requirement, it may be phrased as "live and act only in such ways that your life/action can be viewed [that is, is worthy of serving] as a valid moral precedent that forms part of the public morality of your community" (Schlossberger 1989). A moral community, in this sense, consists of a social network with institutions, practices, and other networks of interactions, that together constitute a shared moral enterprise and reflect, as the community's public morality, a complex

tapestry of values, principles, practices, moral precedents, and paradigms embodying a conception of the good life. In the case of engineering, at least two communities need to be considered: the community of engineers constituting the institution of engineering and the broader society within which that institution is set. The proclamative principle suggests we should be willing to offer our lives as part of our community's body of moral precedent, that is, as paradigms guiding the moral thought of our fellows.[5]

The moral imperative to serve as an example, when raised at all, is most frequently understood as a device for prompting others to fulfill their moral duties. Precedent-setting is most often conceived in consequentialist terms: setting an example is seen as important because of its effect on others' conduct, not as part of what it means to lead a moral life. For Fichte (2005, pp. 306–307), for example, the duty to set a good example amounts to no more than following the commands of the independently discernible and comprehensible moral law, so as to induce respect for virtue in others. Similarly, Paley (1825) speaks of "the performing of our religious offices for the sake of setting an example for others" (p. 606). When rulers, executives, and celebrities are claimed to have a duty to set a good example, it is by virtue of their power to influence others (see, for example, Butcher 1997). This is undeniably one root of the duty of precedent-setting. As Goldman (1987) notes, "in practice a person's values will derive in large part from a process of socialization imposed by his narrower and broader cultural setting. No one's judgments will be entirely independent of such influences; nor should they be" (p. 331). Moreover, past examples and how they played out are significant parts of the moral landscape to which a moral agent brings his or her critical understanding and in terms of which a moral agent understands and makes sense of his or her situation and choices. Thus, as moral agents, we ought to strive to insure that our contribution to this cultural setting and to the range of available examples is salubrious.

The duty of precedent-setting, however, is first and foremost a duty of proclamation rather than a duty to influence as such. It bears some resemblance to the duty espoused by some religions to "bear witness." The Quran speaks of being a community so that "with your lives you might bear witness to the truth before all mankind" 2:143. "The duty of Christians to take part in the life of the Church impels them to act as witnesses of the Gospel and of the obligations that flow from it. This witness is a transmission of the faith in words and deeds. Witness is an act of justice that establishes the truth or makes it known" (Catechism of the Catholic Church 2000, 2472). Again, "Christians are called to bear witness to the good news, a witness expressed through the word of proclamation, in the liturgy of the church, and in the life of service." (World Council of Churches 1970). Notice, however, that a Christian who takes to heart the dictum in Matthew 6:5–6 that one

[5] It might be asked why moral precedent is important, since individuals, it might be argued, must follow their individual consciences rather than conform to others' moral judgments. The claim being made, however, is not that people are obligated to conform to their predecessor's lives, but that individuals have a duty to strive to contribute a good example to the set of available moral precedents. Others then must use their own moral judgment about whether the example offered should serve as a precedent.

should pray in a closed room in one's house and not in public[6] is also acting in a way she deems fit to serve as a precedent, though no one else will, in fact, know; she is still proclaiming that, or acting in a way that expresses her belief that, this is how one should pray. Jews are traditionally enjoined to be a light unto the nations. I wish to suggest that precedent-setting is at the heart of the moral life, closely connected to what it is to be a moral agent at all, and that the idea of precedent-setting casts useful light on a number of moral problems, such as the limits of utility (and whether to think in terms of acts or rules) and, of particular importance here, in distinguishing between matters of professional and personal morality. In some sense, the proclamative principle constitutes the essential core of engineering codes of ethics.

Two distinctions and a clarification may prove helpful. First, being offered as a precedent differs from being worthy of serving as a precedent. The former describes a person's intent. The duty I for which I am arguing, by contrast, is a duty to insure that one's life meets the criterion of being able to serve as an example, that is, is of such a standard that it is fit or worthy to be offered as a precedent. Meeting this obligation is thus less a matter of one's actual intentions, less a matter of whether one in fact intends an act to be a moral example, and more a question of whether it is fit to serve in that capacity, worthy of being offered as a precedent. Second, an act (or other feature of one's life) can proclaim a value explicitly or implicitly. I may walk out of a racist talk in part for the purpose of displaying my moral disapprobation. I might walk out for some other reason, but be aware that my walking out displays my moral disapprobation and also approve of (give my imprimatur to) my displaying that disapprobation. Both are instances of explicit proclamation. But if I walk out of the talk for moral reasons (and not because my leg is growing numb or because I am hoping to buy a croissant before the bakery closes), my action proclaims the relevant values even if I am not thinking about proclaiming or setting an example. My action speaks of my values, as it were. This is implicit proclamation. Third, both explicit and (especially) implicit proclamation raise issues of attribution. Philosophical controversy attends what it is for a person to have a belief or value and, as a result, when an act expresses a belief or value. I advocate an explanatory account of having a belief or value. Suppose, for example, Francois snorted and walked out of the talk. Which values that behavior implicitly proclaims depends upon the best story to be told about Francois, that is, the overall story that best explains (in a complex sense of "best explanation") the sum of his actions, occurrent feels and thoughts, relationships, speech acts, and so forth. In general, A feels/believes x at time t if and only if the best explanation of the whole of A's life includes A's feeling/believing x at t. Thus what A's act proclaims as well as what A values is often not clear to an outsider and sometimes not clear to A (we can be mistaken about our values and beliefs). As there is generally a most satisfactory explanation, there is generally a fact of the matter about a person's beliefs and values. This explanatory account of beliefs and values, however, does

[6] Naturally, many churches deny that Matthew forbids public prayer, but the words seem clear enough that some Christians read the passage this way. Not being a Christian, I will avoid taking sides on this question.

allow that sometimes there can be genuine indeterminacy about whether someone holds a belief or value, much less is proclaiming it at a given time. Those who prefer a different account of what it is to have a belief or value would need to offer a different construal of when an action implicitly or explicitly proclaims a value.

In sum, the proclamative principle suggests we have a duty to insure that our lives (including, or in particular, our actions) are worthy (fit) to serve as either explicit or implicit proclamations (moral precedents).

The proclamative principle is grounded in a conception of moral agents as worldviews in operation. As discussed at length in (Schlossberger 1992), to be a moral agent is to be a worldview in operation, that is, to live out a commitment to a moral outlook that gives moral meaning to the world we encounter. What transforms the quantum events constituting Brutus' blade entering Caesar's body from a meaningless dance of random states into an event of moral significance is a complex network of attitudes, values, and concepts such as friendship, betrayal, loyalty, and freedom, that is, a worldview, which is embodied in the lives we lead. A fly and an abolitionist may both exit the same Alabama room in 1858, but the abolitionist leaving the racist lecture is, by moving his legs, proclaiming the value of freedom, the importance of intellectual integrity, the moral equality of all human beings, and so forth. That is why the abolitionist and not the fly is a moral agent. As moral agents, our lives are moral beacons, embodying a complex message about how to live.

Each of our friendships and associations, then, is offerable as a moral precedent, as an example, given its particular context, to guide and inform the thinking of others. This is particularly true because the highest form of friendship includes mutual affection as the natural response to the other's merits. Thus a friendship is, among other things, a moral judgment: in maintaining this sort of friendship with someone, we are proclaiming that he or she, overall and in context, possesses qualities of such value that affection is the only natural response. (For more on this Aristotle-based account of friendship, see Schlossberger 2008). Thus the particular moral message our friendships proclaim must be morally acceptable messages. We are morally bound to strive to ensure that our friendships and associations pass this moral test. Of course, friendships must be understood in their total context. Continuing a childhood friendship with an adulterer is as much a statement about loyalty and the bonds of history and/or the friend's tireless efforts to help the poor as it is a statement about adultery (that it is not so intolerable as to outweigh everything else). But if, considering the overall weight of all these moral factors in the context of our individual history, a friendship or association fails this test, then continuing the friendship or association constitutes a moral shortcoming.

Of course, precedent-setting is context sensitive. Designing a pencil-point that breaks less easily (and hence serves better as a weapon) and designing the sensor mentioned above are both examples of engineering work that has a legitimate use but can be used for ill, but as purported precedents they are differentiable in terms of the likelihood and extend of the possible misuse, the nature and importance of the legitimate use of the work, and many other factors. Treating association as precedent-setting creates built-in sensitivity to the multiple facets of each individual case. The precedent offered by the friend of a child abuser may be as much about

the value of personal loyalty based on shared history as it is about child abuse. Given the different contexts and aspects of human association, this is a decided virtue. Moreover, the proclamative principle, as phrased, leaves open the question of whether very different ways of life might be appropriate to different societies. It is, in other words, a further substantial question whether "the engineering way" is the same in all societies, or whether "how to be an engineer" can vary at different times and/or in different cultures. The proclamative principle is phrased so as to take this possibility seriously without taking a stand on the question.

Understood in this way, the duty of association is really a duty to strive to ensure that one's associations, in the context of one's life, are worthy of being offered as a moral precedent, as a contextualized example of how people in one's society should live.

Conclusion

The proclamative principle is the primary justification for the duty of association clause. It also supplements the justifications for the other clauses: showing concern for the environment and being a good colleague, for example, set suitable moral precedents. Moreover, the duty to set a precedent for how to be an engineer helps with applying and understanding engineering codes of ethics. When should an engineer allow consumers to decide how safe is safe enough? When, in a given case, letting the consumer decide in that particular way sets a good example of how to be an engineer, that is, when the engineer is satisfied that choosing that option in those circumstances appropriately proclaims how to be an engineer both to her community of engineers and to her wider society. Should, in a given case, an engineer accept a certain amount of environmental impact for a particular process that advances human welfare? Yes, if doing so appropriately proclaims to the community (of engineers and the broader society) "this is how to be an engineer." Of course, that doesn't answer the question—it only shows how to pose the question. But that sort of fine balancing isn't accomplished by general codes; it requires detailed argument and giving of reasons about the particular case. Similarly, being a good colleague and a faithful agent, helping the public understand what is at stake in engineering decisions that affect them, and performing competently are all examples of being a good engineer. In deciding whether to take on a project for which one's competency is an issue, an engineer might ask herself "is taking on/declining this project how I want to proclaim to my fellow engineers, and to the public, that this is how an engineer should act?"

Invoking the notion of precedent-setting also illuminates the distinction between professional and personal lapses. Since engineering is not just a means of gaining a livelihood but participating in a value-laden institution, the proclamative principle may naturally be taken to urge engineers to strive to ensure that their activities as engineers are worthy to be offered as examples of how to be an engineer. Insofar, however, as an unsavory association has professional meaning, that is, counts as an illustrative example of how to be (or how not to be) an engineer, such a lapse is a professional lapse, and thus legitimately falls under the purview of a professional

code of ethics. To the extent, then, that a given associations can serve as an engineering precedent, that is, as an exemplar of how to be an engineer, it comes within the legitimate purview of an engineering code of ethics. Some instances of associations of types 1–4 might reasonably be held to fall under this rubric. However, if a morally unsavory association is a purely private one, it constitutes a purely private shortcoming, not a professional lapse. Thus associations of types 5 and 6 would typically fall outside the scope of a code of professional ethics.

In sum, some version of the public outreach, and association clauses may justifiably be included in a code of ethics. The considerations raised above serve to limit the application of these clauses, e.g., "association" does not include private associations of types 5 and 6. The proclamative principle serves also to help flesh out the meaning and help guide the application of these tersely stated clauses. Hillel famously said that the whole of the Torah can be condensed to (a form of) the golden rule. "All the rest," he said, "is commentary" (Babylonian Talmud Shabbat 31a). Perhaps a parallel claim could be made about engineering codes of ethics. Let your actions be fit to serve as a precedent for how to be an engineer. All the rest is commentary.

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