

# Codes of professional ethics and duty towards the population

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According to the code of ethics of the National Society of Professional Engineers, engineers must “hold paramount the safety, health, and welfare of the public.” Several kinds of arguments have been employed to show that engineers (and other professionals) have such duties towards the population. Some authors have claimed that these obligations are part of the very essence of professionalism; but such an argument is invalid, which relies on an ambiguity on the meaning of ‘professional.’ Professional codes of ethics, since they are based on consensual opinions rather than on objective facts, create a duty to the population only for those who already care about the population, i.e. they apply only to those who do not need a code. It is then clear that the source of codes of conduct (and of the duty to the public) cannot be ethics. They may be public relations or they may provide support and protection from fellow professionals. But such codes of conduct cannot provide unconditional duties to the population. © Mathieu Bouville, 2007

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According to the code of ethics of the National Society of Professional Engineers, engineers must “hold paramount the safety, health, and welfare of the public.” Even though this would seem more obviously required from people whose job is to keep people healthy than from engineers, doctors have no such duty: “a physician shall [...], except in emergencies, be free to choose whom to serve” (American Medical Association: principles of medical ethics). Ladd [1] points out that “lawyers are expected to treat their obligations to clients as having precedence over their obligations to society, e.g., a lawyer’s obligation to a client who is guilty of a heinous crime is thought to outweigh any obligation that he might have to the general public whose interest is to have criminals convicted.” In other words, lawyers and doctors are businessmen with duties to their paying clients, not towards the rest of the population. Why do engineers have grand and far-reaching duties whereas lawyers and physicians have no greater duty to the population than plumbers?<sup>a</sup>

## THE ESSENTIALIST ARGUMENT

### Ethical by definition

It is often assumed that ethics is an essential part of professionalism — “As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity” [3]. This leads to codes of ethics: “The professional ideology maintains that every genuine profession has an ethic. An occupation’s code conveys that this is true for it and hence that it is a profession” [4, p. 212]. Then engineers (but also lawyers, physicians, journalists, managers, and so on) must —as professionals— act ethically. This argument can be formalized as

(P1) All professionals must act ethically.

(P2) Engineers are professionals.

Therefore (P3) engineers must act ethically.

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<sup>a</sup> An obvious possibility is that the explanation is sociological: since engineering, business, etc. have to overcome the historical fact that “the law, being a profession, was accounted a more gentlemanly pursuit than business” [2], they may strive to present themselves as even more professional than professionals. Occupations with an established professional status have no need to go to such extremes. But such differences should fade with time. When such historical contingencies are overcome, will there remain differences between professions?

Variants of P1 include ‘All professionals must follow a code of ethics’ and ‘All professionals must hold paramount the safety, health, and welfare of the public.’ P3 is then altered accordingly.

### Defining professionalism

If professionals have certain duties because they are professionals, one needs to know exactly who is a professional. Yet, there is no consensual definition of ‘profession’; while it is generally agreed that doctors are professionals but janitors are not, whether engineers are professionals depends on the details of the definition one uses. If one considers that professionals have a specialized higher education, specific skills, and a certain social status then they are. If professionals must have direct relations with individual clients and a legal monopoly over their practice then they are not. The choice of definition depends to a great extent on one’s own situation (I want the definition to be broad enough to make me a professional but not so inclusive that professions would lose their cachet). Whatever definition is used one must be consistent, *viz.* ‘professional’ must have exactly the same meaning in P1 and P2. Ethics is a branch of philosophy and everything that has branches has leaves. Can one then conclude that philosophy has leaves?

Based on a definition requiring only education and social status to qualify as professional, P2 is true but P1 needs not be. It may so happen that all people with a certain education and social status have ethical duties; but then one must show this independently for doctors, engineers, and so on. This means proving P3 and inferring P1 from it; but then engineers would have been shown to have a duty independently of their professionalism.

If, on the other hand, one considers that P1 is part of the definition of ‘professional’ —i.e. if, as Davis [5] puts it, “‘professions’ without ethics [...] are mere (honest) occupations”— showing that P2 holds requires to show that engineers have all the characteristics of professionals, including ethics. Once more, one needs to prove P3 before one can have both P1 and P2. One must thus conclude that with either definition, one needs to prove ‘by hand’ that engineers must act ethically, without relying on their status as professionals.

I considered two possible definitions; the first was too weak and the second too strong. There might exist an intermediate definition of ‘professional’ entailing both that engineers are professionals and that professionals must act ethically. But generating such a definition would probably require to show independently that engineers must act ethically. In any case, the burden of proof is on those who assert that such a definition exists. Until such a demonstration is provided we have no reason to assume that engineers have an ethical duty *qua* professionals.

### Professionals and aspiring professionals

Some will reply that P1 is true by definition and that engineers themselves claim P2 to be true. To Davis [5], “a profession is a number of individuals in the same occupation voluntarily organized to earn a living by openly serving a certain moral ideal in a morally-permissible way beyond what law, market, and morality would otherwise require.” This means altering P1 and P2 as follows (P3 is unchanged)

(P1’) All those claiming to be professionals must act ethically.

(P2’) Engineers claim to be professionals.

But then it is not engineering itself that creates a duty but the desire to be a professional: an engineer who does not claim to be a professional would not have any duty while a truck driver claiming professional status would [6].

One may reply that there cannot be two sub-groups: engineers who are professionals and engineers who are not, so that if P2’ applies to a majority of engineers then P2’ is true. While the P1/P2/P3 schema would have required that all engineers be professionals, the P1’/P2’/P3 version allows for several kinds of engineers. This modified argument only shows that those claiming to be professionals have a

duty (also see the difference between doctors and “schmoctors” drawn by Nozick [7], p. 235). It is an argument about individuals, not whole occupations.

Moreover, what engineers really want is not to be professionals: if they can have status, income, self-regulation, and other perks without being ‘professionals’ they will probably not mind. Whether this is related to ethics is an empirical question (a sociological one). Whether an occupation can have certain advantages without a code of ethics cannot be established theoretically (one can for instance note that some sports can have major ethical issues, such as doping, without loss of status).

### Extent of the essentialist argument

One must be careful and distinguish contingent facts from logical necessities. Saying that engineers want to do what is best for the population is like saying that blacks listen to hip hop. There is no necessary link between engineers and the welfare of the population any more than between blacks and hip hop. By essence, engineers are people who apply science to design products and blacks are people with a dark skin. Not everything that happens to be correlated with these is part of their essence.

One can also notice that if engineers must “hold paramount the safety, health, and welfare of the public” *because* they are professionals then lawyers and physicians should have a similar obligation. Lawyers should refrain from doing their best to free murderers and surgeons should give up plastic surgery and instead take care of those who actually need an operation. While the problem was initially to prove that professionals have certain obligations, some professions would now want to show that these obligations are limited.

More generally if one claims “engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of the public health, safety, and welfare” [3], then any occupation that has an impact on the lives of all people should have a code of ethics. But garbage collectors probably have a greater impact on our lives than lawyers — should their professional duties be greater than those of lawyers?

## CODES AS CONSENSUS

### Objectivity and consensus

One may think of basing codes on certain things that are objectively right and wrong — “many of the entries in codes of ethics state responsibilities that would exist regardless of the code” [8, p. 49].<sup>b</sup> Plainly, stealing (e.g.) is frowned upon, illegal, a sin, etc. but is it a *fact* that stealing is wrong? In other words, is ‘stealing is wrong’ just as objective as ‘it is raining’? While it does look like the statement of an objective fact, one should notice that the expression of an opinion may look objective, e.g. ‘beer tastes bad.’ Both ‘stealing is wrong’ and ‘beer tastes bad’ could then express a personal dislike (of theft and beer respectively). In order to know if it is currently raining one looks outside. But there is no way to determine whether stealing (or anything else) is objectively wrong.

In actuality, there is no attempt to base codes on objective ethical facts: “a code is not a stone tablet inscribed with divine wisdom but the work of engineers” [10] (or at least “some parts of the codes are conventions arrived at by mutual agreement within the profession” [8, p. 49]). One should also bear in mind that consensus may have to be obtained at the cost of clarity — “ambiguity [...] permits parties

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<sup>b</sup> If one claims that codes are the embodiment of what is right for professionals to do (like some would take maximizing welfare to be) then they are competitors of theories such as Kantianism and utilitarianism [9]. Consequently, codes can be right only if other theories are to some extent incorrect. In particular, introducing ethical theories in professional ethics classes and then saying that professional ethics is whatever the codes say is inconsistent (unless one believes that there is no disagreement between Kant, utilitarianism, etc. and codes, but then codes are probably superfluous).

to reach a consensus on the formulation of rules” [11], i.e. the consensus may be an illusion with people agreeing on wording without agreeing on meaning [12].

### Problem of competence

Kultgen [4] found that one of the only features common to the codes of engineers, lawyers, physicians, journalists, and other professions he examined is that they require their members to limit themselves to their field of competence. But are professionals competent to establish and interpret a code of ethics? This requires a technical–ethical judgment. In the case of engineering it could give:

(P4) This product has a probability  $p$  to be dangerous at level  $l$ .

(P5) Products that have a probability  $p$  to be dangerous at level  $l$  should not be released.

Hence (P6) this product should not be released.

Proposition P4 is a technical judgment, realm of the engineer. But since the engineer must limit himself to his area of expertise, the probability and level of dangerousness that trigger P5 are not for him (or his code) to determine. Therefore an engineer can never claim that P6 is true. Economic risks (recalls, lawsuits) require a decision from executives of the engineer’s company while society makes the choice regarding human risks (deaths, injuries). As Augustine [13] points out, cars kill hundreds of thousands of people every year. They are also an important source of pollution and contribute to global warming. But, since society *de facto* accepts this risk, engineering codes have no legitimacy to make this risk unacceptable (for instance by claiming that the health of the public is paramount).

### Obeying codes

If codes “have evolved steadily over the past century as ‘current’ practices change” [14] then one reads a code to learn about the latest rage in engineering practice like one may read Vogue to learn about the latest Prada collection. If codes are about “recognizing the current standards of practice” (*ibid.*), they are sociology of that profession, not ethics. Then, why follow them?

If the content of a code is not based on facts, rejecting the code simply means disagreeing with the majority. If compliance is required for licensing then people may be excluded due to a disagreement over what is merely a matter of opinion. Most people would find banning Jews from some professions outrageous, but in both cases people are forbidden from practicing a profession for holding an opinion different from that of the majority. In both cases exclusion is based on might not on right.

If codes are just the opinions of others there is no necessary reason why I should agree with them. Note that I may in fact have more stringent standards for myself than society would (Jesus and Gandhi, who disagreed with the rules set by society, can hardly be called selfish or immoral). If “it is certainly wrong for engineers to work on projects that conflict with their own moral codes” [15] then it is certainly wrong for engineers to accept a professional code that conflicts with their own moral codes. Not only is there no reason to follow codes of ethics but codes may even be plainly wrong. They “have been used with great ruthlessness to punish dissidents who have taken the public’s side” [16], for instance engineers worried about pollution.

The only engineers who have a reason to follow a code (and the only ones that can be held accountable) are those who agree with its content. For instance, one cannot say that “naturally, this code applies to engineering professors as well as other engineers” [17, p. 340]. This means that the code applies only to those who would do what the code enjoins even if there were no such code. Abiding by a code is then promising to do what one would have done anyway, even if there were no code. Codes then apply only to those who do not need a code — they are useless.

Martin and Schinzinger [8] mention the case of Bill LeMessurier, an engineer who found a flaw in his own design and made sure that the building (Citicorp Tower in New York) would be altered and made safe. They state that “LeMessurier recognized and accepted a responsibility to protect the public”

(p. 15). One can of course construe this as the acceptance of a duty to the public, but at bottom it simply means that the engineer acted in favor of the safety of the public. How is accepting a responsibility relevant here? What is the difference between ‘accepted a responsibility to protect the population’ and ‘protected the population’? None.

### Rights

To Harris, Pritchard, and Rabins [18, p. 52] “common morality recognizes the place of special duties and prerogatives attached to special roles” and to Fleddermann [19, p. 87] “engineers also have rights that go along with [their] responsibilities.” But rights granted by whom? Professional societies can only create duties for their members. A right of mine is typically construed as a duty of yours: ‘I have the right to do X’ means that you have the duty not to prevent me from doing X. This works as long as one deals with fellow professionals who accept the same code. In other cases, this pattern of ‘my right as someone else’s duty’ breaks down: no engineering code can create a duty for managers so that no code can generate rights for engineers enforceable against management (unless the code is officially endorsed by the company, in which case it binds all employees as employees). A given code can only create rights with respect to other followers of this code. But then, engineers are powerless to “hold paramount the safety, health and welfare of the public.” Codes create duties but are unable to provide means to fulfill them. And “it is obviously difficult to be ethical when one is powerless” [1].

### Duty fight

According to Lynch and Kline [20], “managers acting on behalf of corporate interests are assumed to engage in cost-benefit analysis that may lead to decisions that value safety less than engineers’ professional responsibility would require.” But one may just as well say that engineers’ obsession with public safety may lead to decisions that value benefits less than corporate interests would require. There is clearly a conflict but it seems rather symmetric. Making the engineering view an *obligation* which trumps a mere “cost-benefit analysis” does not prove that managers should yield: it is just a contrived way of saying ‘we are right and you are wrong,’ not a proof of it. What if managers claimed that they have a duty to maximize benefits? Both sides could then invoke a duty and this may escalate to ‘my duty beats your duty’ T-shirts — a gruesome consequence. As I have shown elsewhere [21], creating new duties to beat other duties is a common practice of professional morality.

I may also say that I have a duty to go meet friends at a bar and get drunk (I promised I would). This trumps everything else since it is a duty. Of course one will reply that I should never have made such a promise in the first place, that this is just a ploy to pass what I want to do as an obligation. But the duty of engineers to hold paramount the interests of the population and the duty of managers to maximize benefits are of the same nature: they are just attempts to turn decisions into obligations to grant them undeserved strength. Semantics (*viz.* calling ‘duty’ what one wants to do) cannot settle the dispute between engineers and management (or any other).

## ETHICS AS FAIRNESS

The claim that professionals have duties *qua* professionals relies on a metaphysical conception of the professions, which binds only the believers. Basing codes of ethics on moral facts would require to establish what these facts are and codes based on consensus bind only those who are part of this consensus. In this section, I try a new route: basing a code of ethics on the theory of justice of Rawls [22, 23], a thought experiment aiming at identifying what would be a fair rule for society to follow.

### Behind a veil of ignorance

What would decide someone who would not know whether he is a professional or not? Someone behind such a “veil of ignorance” would have to consider two cases —if he is a professional and if he is not— and choose a solution which would be satisfactory in either case. If I cut a cake not knowing which piece I will get I will cut equal slices to make sure that the outcome cannot be very unfavorable to me, whichever slice I end up receiving. This procedure is fair because decisions are made independently of one’s own situation.

As potential patient someone behind a veil of ignorance would not want his doctor to sell his liver on e-bay, whereas as potential physician he could make money this way. Since this gain is not nearly as great as the loss as patient, he would decide that doctors should not be allowed to sell the organs of their patients. Likewise, he would not want the brakes of his car or the load-bearing walls of his house to be cheap replacements, accepting if he is an engineer not to gain a few dollars in this fashion.

He may want to grant some professionals a monopoly in order to be sure of their competence (this can be his best interest even if he is not a professional). On the other hand, of what use are unaffordable professionals, however competent? If he were poor, he would not want to die from a disease that modern medicine can easily treat or to be imprisoned simply because he could not afford a lawyer. In other words, the rights and duties of professionals would come from their impact on the whole population, rather than from what is good for them: society would grant professionals advantages inasmuch as doing so generates a societal benefit.

### Duties of citizens

Rawls’ theory was initially designed for society in general. If we apply it to professionals, we must also apply it to other citizens (even if it is then applied slightly differently). If anybody, professional or not, is held to duties towards the rest of the population then professionals have some such duties too (their status does not justify a different treatment).

Yet citizens do not actually have such duties. For instance in the U.S. “one has no legal duty to come to the aid of another person in mortal danger” [24, p. 77]. Even something as simple and costless as calling an ambulance is not mandatory. Even the government has no such duty: “the [U.S.] Constitution imposes no obligation on government or on government employees to assist distressed individuals” (*ibid.*). If the government —which *is* the population— has no duty towards the population, who does? As Iseda [25] points out, obligations such as “‘engineers shall at all times strive to serve the public interest,’ [...] are usually regarded as supererogatory acts for ordinary people, and without special reasons, this should not be different for engineers.”

Since nobody else is held to anything concerning the rest of the population, one cannot hold professionals to such duties (their status does not justify a different treatment). In other words, the population cannot demand from professionals what it refuses to be bound to do itself. Since society *de facto* rejects Rawls’ theory of justice, the latter does not apply at all and in particular it cannot be used to justify duties for professionals. Of course, law and mores vary from country to country, so that the duties of professionals would likewise vary (the U.S. are arguably an extreme case); but in no case would citizens accept as stringent a criterion as Rawls’.

The idea of ‘ethics as fairness’ is not necessarily logically flawed, it is simply not applicable in our world as it currently stands. In any case, while this thought experiment has the advantage of being fair, one cannot expect any profession to ever shoot its collective foot by accepting this inconvenient way of determining the rights and duties of professionals: “Unless you are already disposed to take an impartial or moral point of view, you will see as highly unreasonable the proposal that the way to decide what to do is to ask what rules you would make if you had none of your actual advantages, or did not know what they were” [26, p. 64].

## CODES OF CONDUCT

In the absence of a code *of ethics*, there can be another kind of justification for codes: they are useful.<sup>c</sup>

### Usefulness of codes

*Pride and public relations.* Codes are something “any given group uses to achieve or present its status as a profession” [28], where “‘profession’ and cognate terms have been used as ideological weapons in the struggle for social position” [4, p. 5]. Codes are a way of saying: ‘look I am all grown up now, I just grew a code.’ Codes are not duties as much as they are a right to have duties (not everybody is important enough to have such duties). Note that in this case, what is beneficial is the existence of the code and the public awareness thereof, not the actual content and enforcement of the code: “the code formulates what leaders of the profession would have the public think its operative ethic is” [4, p. 212]. One is therefore not surprised that, even though most nurses Heymans *et al.* [29] interviewed “had never used the codes in practice, nearly all of them thought it was important to have their own code of ethics.”

*A safety net.* Ethical breaches had dreadful consequences for Enron and Andersen. It is the best interest of every company and profession to avoid such a fate. A code may be an incitation to act according to the long-term interest of the profession and its early enforcement may prevent large-scale problems by nipping them in the bud. Moreover, if a scandal does occur, the code and its enforcement can be used to show (or at least claim) that the problem comes from a few isolated individuals, not from the profession or firm itself.<sup>d</sup>

*Support for professionals.* “An appeal to the imperatives of a code can be used as counterpressure against others’ urging to act in ways inconsistent with the Code” [30]. The code is then a proxy for the whole profession: it turns a disagreement between employee and employer into a disagreement between code and employer or even a disagreement between profession and employer, (hopefully) shifting the power balance.

*The professional is a wolf to the professional.* “Ideally, a code of professional ethics should consist of those standards everyone in the profession, at her rational best, wants everyone else in the profession to follow even if that means having to follow them too” [31]. The code essentially applies to others (my colleagues), it protects me from them — both directly and indirectly (they are prevented from making my profession less trusted, less lucrative, etc.). It is not that murder is wrong, it is just that I would not want to be the victim. And the only way to get everybody to agree not to kill me is to forbid murder in general. “The code is to protect each professional [...] by making it reasonably likely (and more likely than otherwise) that most other members of the profession will *not* take advantage of her good conduct” [10]. Like most people are convinced that they drive well but that others do not, professionals “believe that their peers contravene their professional codes relatively often” [32]: laws and rules are necessary for others but not quite for myself. Therefore a code would provide protection at little cost (I act ethically anyway). Codes as protection from fellow professionals are essentially Hobbesian [33].

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<sup>c</sup> There is another aspect of codes, which is neither ethical nor useful: they can be totems. Even though “the single largest professional organisation of engineers in the Netherlands [...] does not have a code of ethics” and “no system of licensing exists for engineers,” van de Poel *et al.* [27] nevertheless “pay ample attention to codes of ethics for engineers” in their engineering ethics class. Even where codes do not exist they may be revered.

<sup>d</sup> Notice that if a company misbehaves and shuts down, competitors take over and there is no major disruption to society. But who could replace professionals? Dilbert’s pointy haired boss will never replace Dilbert, however low the reputation of engineers. If a whole profession loses credibility, we still need them so that the risk is not as great for a profession as for a company in case of a major accident.

### Codes of usefulness

These arguments share several features: (i) codes are necessary: a private stance on ethics cannot suffice; (ii) codes are not essentially ethical: they are useful and convenient (but probably not incompatible with ethics either); and (iii) codes do not require or justify any input from society.

Lichtenberg [34] believes that if what one “objects to is simply the word ‘ethics,’ nothing significant is lost by speaking of a code of conduct instead.” But then nothing significant is lost by speaking of an occupation rather than of a profession. The fact that codes of ethics are supposed to support the claim to a ‘profession’ status shows that words are important. While a ‘code of conduct’ sounds petty and rigid (very much like an old-fashioned boarding school) a ‘code of ethics’ sounds magnificent and benevolent. One justifies codes of conduct and markets codes of ethics.

Notice that, so far, we have not shown that professionals have a duty to the population, but a duty only to fellow professionals. Concerning the population at large, all that could be justified was public relations.

### Welfare of the public as self-interest

The Hobbesian construal of codes as protection relies on the fact that a professional may be a victim of fellow professionals. But we should notice that codes also have an impact on professionals as non-professionals [10]. If an engineer is on a bridge that collapses, he is the victim of the lack of competence or of ethics of a fellow engineer. But in this case he is not a victim as engineer. Unethical engineers may harm other engineers as colleagues but also as mere passersby. In order to maximize his own welfare, an engineer should come to an agreement to safeguard other engineers’ welfare: ‘you promise to build a safe house for me to occupy and I promise to build a safe car for you to drive.’ But no civil engineer can design a building that will never collapse onto fellow engineers even though it may collapse in other circumstances. In order to protect other engineers, an engineer must protect all users, i.e. safeguarding the welfare of fellow engineers requires to extend benefits to the whole population (the public is then a kind of ‘free rider’). The reason for caring for the whole population is that professionals are also non-professionals in some contexts: they must find a solution benefiting both professionals and non-professionals (which is reminiscent of Rawls).<sup>e</sup>

If codes are non-aggression agreements, we should care about the public inasmuch as the public includes professionals with a code granting us the protection our code grants them. So in the case of the Challenger accident engineers had no duty towards the astronauts, despite what Davis [10] maintains. (Naturally, one may decide to do one’s best to ensure their safety, but this does not mean that there is an obligation to do so; as I already mentioned, one may have higher standards for oneself than those by which one is held as professional.) If engineers cannot protect their own interests without extending such benefits to the whole population they have a reason to care about the welfare of the population, but this does not apply to any situation, so that the importance of the welfare of the population is conditional.

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<sup>e</sup> The case of certain other professionals, such as doctors and lawyers, is quite different. A urologist may treat a cardiologist better than other patients expecting the same preferential treatment in return. In the case of professions dealing with individual clients, caring for fellow professionals does not have any necessary implication for the whole population: the self-interest of physicians, lawyers, etc. does not naturally give rise to benefits for the public. In their case, there must be an explicit agreement between the professionals and society, trading monopoly, income, and status for a code of ethics and its enforcement. Note that in this case, society has a right to verify that the code is enforced, unlike with the other professionals.

Luegenbiehl [35] wrote about engineers that “the group recognizes an obligation incurred in exchange for the power to regulate itself and to define requirements for membership in the profession.” While this would make sense for lawyers or physicians, there is neither benefit for engineers.

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