GOOD COMPUTING: A VIRTUE APPROACH TO COMPUTER ETHICS

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Chapter 12
Ethical Theory
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Introduction

Good computing, as we have seen, is good in the technical and moral senses. Good computing professionals show excellence through their knowledge of computing and through the skills they exercise in their work. But they are more than just technically proficient; they also show a broader awareness of and concern for the ethical and social implications of their work. Moreover, good computing requires more than merely juxtaposing technical proficiency and moral concern. Good computing professionals integrate the two so that the technical knowledge and skills at which they excel are informed and guided by a deeper ethical awareness. In short, good computing, when it passes the mundane, integrates the ethical with the technical so that the technical is adapted to achieving the moral. In this chapter, we will try to inform this integration of the technical and the ethical by a discussion of ethical theory.

This will require some rethinking of ethical theory or, more to the point, adapting ethical theory to a new context and new uses. We present three ethical theories: teleology, deontology, and aretaic or virtue ethics. There are others, both ancient (ref) and modern (refs) but these three have captured the lion's share of ethical discussion today in both lay and professional conversation. We do not even intend to provide exhaustive accounts of these three theories. Fortunately, this has already been done (refs) and we will make copious references to the excellent primary and secondary literature on ethical theory. Our task in this chapter is more specific: to integrate ethical theory into an iterative model of ethical problem solving that mirrors a generic version of the software development cycle: (1) problem specification, (2) solution generation, (3) solution testing, and (4) solution implementation. The ethics tests presented in chapter 4 play a key role here. As we have seen, they provide us with ethical specifications that can be integrated into the design process. Exploring the ethical theory that underlies and supports these tests will deepen and enrich our understanding of them and thereby help us to employ the tests more effectively. Using theory to improve our understanding of the tests requires some tolerance of ambiguity; from the outset, we need to set aside expectations of mathematical precision and deductive clarity. But some precision is better than none (see Aristotle (Nicomachaen Ethics book 1) on having precision requisite to the task at hand). Some time spent with ethical theory will pay off many times by increasing our understanding of how the ethics tests work and when they might fail or need to be supplemented. In a word, a deeper understanding of ethical theory will add *subtlety* to your use of the ethics tests.

Teleological Ethical Theories: Utilitarianism

Classification schemes provide maps that outline the contours of moral territory. Labeling moral theories as teleological or deontological starts the mapping process. In short, teleological theories weigh the outcomes or ends (telos) to evaluate our actions while deontological theories concentrate on the duties (deon) our actions fulfill.

We begin with utilitarianism, a teleological theory. But teleology goes beyond utility. Naïve conceptions of happiness, or more generally *utility* (thus, *utilit*arian), is not an

appropriate starting point for teleological ethics as practiced in professional ethics. Computing, for example, serves ends that are both more immediate and more specific than personal happiness or any of the other intrinsic values offered by Utilitarianism. Nevertheless, utilitarianism is a good way station on the journey toward a teleological ethics proper to computing. We outline this theory through five central ideas and four general criticisms.

1. Utilitarianism is a consequentialist ethical approach. In its backward-looking aspect, it evaluates past actions, policies, and practices in terms of the *consequences* or results they have brought about. In its forward-looking aspect, i.e., as an aid to decision-making, it evaluates action alternatives in terms of their probable consequences and guides us in producing an optimal balance of the good over the bad; we subtract from the goods likely to result the risks or probabilities of harmful consequences. Egoism and Utilitarianism are the two best known consequentialist ethical theories. Egoism chooses alternatives that promise the most good and the least bad *for the agent alone* while utilitarianism focuses on alternatives that produce the most net good for the *greatest number*.

2. Utilitarianism requires <u>a theory of value</u> to sort out consequences into benefits and harms or good and bad. This follows from its consequential character. If we judge actions in terms of the balance between good and bad they produce, then we need to be able to sort out the consequences into broad categories of positive and negative value. Values are qualities attached to things that make them important. By applying a theory of value to the consequences expected from different alternatives, we can compare and rank them. Value theory, a conception of the comparative worth of things, steers us toward actions most likely to maximize positive value.

*3. There are two ways through which things have value: as **means** or as **ends**.* For example, praticing computing is valuable as a means of producing something beyond itself, namely, a degree in computer science; thus, it is valuable as a means to this end. (Later we will see how exercising excellence in computing is valuable for its own sake.) A degree in computer science is valuable because it is a means toward getting a good job. A good job, in turn, brings us money that in turn allows us to purchase other things of value. These things are valuable because of the satisfaction they produce. And so forth. Things and their values form means-ends hierarchies where means are paired with and subordinated to their proper ends. Things at the bottom of these hierarchies are merely means; things in the middle are ends to those below and means to those above. Things at the top of the hierarchy are ends and never means. The latter category of things that are ends and never means are intrinsically valuable because they have their value in themselves; their value does not depend upon something else.

4. Three kinds of Utilitarianism can be distinguished according to their approach to intrinsic value.

- For **Hedonism**, happiness is the only intrinsic value. Everything else is valued as a means to (money) or a part of (virtue) happiness. Hedonists define happiness in terms of pleasure and the absence of pain. Hence, we should choose actions that

produce the most pleasure for the most people in the long run while producing the least amount of pain. A life in which pleasures greatly outweigh pains is a good life in that it maximizes happiness.

- **Pluralism** differs from Hedonism by recognizing more than one intrinsic value. Examples include pleasure, friendship, beauty, truth, and justice. (See Rachels, 104) Pluralists choose actions that promise to realize the maximum number of these intrinsically valuable states of affairs. Hedonism can be reformulated to be compatible with Pluralism by expanding the definition of happiness. For example, Hedonists (especially J.S. Mill) do not reduce all values to means to happiness. They allow that some valuable states of affairs like virtue are valued, not as means to happiness, but as essential parts of it. For example, virtue is intrinsically valuable because the exercise of virtues or human excellences is an essential constituent of the happy life. The same could be said for the other intrinsic values identified by Pluralism. Pleasure, truth, beauty, friendship, knowledge, and justice could be integrated as parts into a more comprehensive concept of human happiness. They would be seen as essential constituents of happiness and, thus, recognized as being intrinsically valuable. Thus a pluralist ethic in computing would look to how a set of intrinsic goods (equity, truth, freedom, pleasure, etc.) are maximized by how a system is designed and implemented. One much discussed question among pluralists is whether there are tradeoffs among these intrinsic goods (ref).

- **Individual Preference Utilitarianism** reduces value to satisfied preferences. (Preferences are roughly the same as desires.) This allows it to ground value empirically in psychology and economics. Psychology identifies human preferences and shows how they are satisfied. Economics measures the intensity of preferences by real and hypothetical markets. The strength or intensity of a preference (its value to a collective of individuals) is revealed by how much the individuals holding the preference would pay in a real market for its satisfaction or how much they would be willing to pay in a hypothetical market for its satisfaction. For example, in a strategy thoroughly criticized by Mark Sagoff (ref), economists measure the preference a community has for the woods located on the edge of town, by how much community members would be willing to pay (in the form of increased taxes) to keep it in its present state. Would they be willing pay more in a bidding competition than the wealthy store chain that wants to pave it over and build a Mega-Mart? The woods, now viewed as a resource, would be used in a way that that satisfies the most intensely held preferences by giving it over to those willing to pay the most.

There are many who hold that value cannot be reduced to "willingness to pay". Sagoff, for example, argues that this turns the issue of environmental value inside out. According to him, it's not *willingness to pay* but *willingness to sell* that is the better reflection of value. This is so because in a bidding market (*willingness to pay*), what we are willing to pay is limited by our wealth, while what we demand in payment from others in a selling market (*willingness to sell*) reflects how intensely we value a resource, even to the point where we might not part with it at any price. Individual Preference Utilitarianism claims to have replaced obscure metaphysical inquiry about

intrinsic value with the empirical study of what we in fact value. It then reduces the intensity of this valuing to the behavior of a collective of individuals in a real or hypothetical market. But values can and do enter into the identities of individuals and communities in a way that market behavior misses. We'll see this better when we explore virtue ethics (e.g. it seems to miss or obscure the point to ask what price one would pay or demand for the production of virtuous action).

5. Utilitarianism combines its consequentialist approach to assessing action with the different value theories of its main forms (hedonism, pluralism, individual preference) in its fundamental principle, the **Principle of Utility**. This principle enjoins us to *choose that action that produces the greatest good for the greatest number*. The two key concepts embedded in this principle are the "greatest good" and the "greatest number":

- **Greatest Good**. The proper end for utilitarianism is to maximize value or good. For Bentham, a prominent Hedonistic Utilitarian, the greatest good consists of maximizing pleasure and minimizing pain. For Individual Preference Utilitarianism, the greatest good consists of creating conditions that maximize satisfied preferences while minimizing unsatisfied or frustrated preferences. Finally, for Pluralists the Principle of Utility mandates choosing actions, policies, or practices that create conditions that allow for realizing the maximum number of intrinsic values. Common to these different types is the notion that the greatest good results from maximizing something positive while at the same time minimizing something negative.

- **Greatest Number**. The "greatest number" refers to the range of individuals included in the Utilitarian calculation. We call this the "community of moral consideration" since each member of this community counts in the overall calculus that determines the greatest good. While most versions of Utilitarianism restrict the greatest number to human beings, others have expanded it to cover all sentient beings, that is, all beings capable of feeling pleasure and pain. Peter Singer's argument for moral vegetarianism (ref) , for example, rests on the expansion of the "greatest number" to include animals as sentient beings. Moral vegetarianism, for Singer, becomes obligatory due to the fact that raising and slaughtering other animals for meat produces so much suffering for those animals that it cannot be countervailed by the enjoyment that eating meat provides for humans. We cite Singer's argument not to convert you to moral vegetarianism but to show how important the scope covered by the greatest number is to a utilitarian analysis. (You might ponder the literature that discusses the personhood of corporations and other organizations with clear decision making structures. Do corporations have interests that can be described as preferences? Are corporations a part of the "greatest number"?) Should the impact of a decision on corporate interests count in the Utilitarian calculus? Do they count as one person or many? Should their influence in the calculus be measured by their ability to pay?) Whether the greatest number encompasses all sentient beings or just human beings is an issue we leave to environmental ethics. For computer ethics in this text, we adjust the range of the greatest number to cover computing stakeholders in the socio-technical system, i.e., all those human individuals and groups that have

essential or vital goods, values, interests, or rights that are tied to what happens in computing practice.

Assessing Utilitarianism

Critics of Utilitarianism focus on four topics:

1. Working through all the consequences of all the possible courses of action conceivable in a given situation is practically impossible. There simply isn't enough time. Utilitarianism provides a ready response: "Do the necessary calculations ahead of time," called rule utilitarianism. Using the Principle of Utility, we can identify and justify a series of practical guidelines or rules. Then armed with these guidelines, we can make split-second decisions and be reasonably confident that they will lead to utility maximizing results. Because we have already carried out the complicated utilitarian calculations beforehand, we can effectively and efficiently integrate this foreknowledge into the situation at hand.

2. Utilitarianism can be used to justify immoral actions. Consider a widely discussed example. You are a leading member of the ruling party of a newly formed government. An angry mob has formed outside your office demanding justice. It seems that a popular public figure has been murdered, and the mob is convinced that this person's enemy, X, has carried out the assassination. You know that X is innocent: the assassination was actually carried out by a member of your political party. If the mob discovers this, they will riot, overthrowing the government and producing chaos and destruction. You can placate the mob by allowing them to falsely accuse and punish X, even though he is innocent. In other words, blaming X, an innocent victim will prevent the riot and keep the government in power and avoid the chaos and destruction of a rebellion. Utilitarianism, thus, justifies blaming and punishing an innocent victim in order to bring about a greater social good. Generalized, the situation looks something like this:

- Punishing an innocent person would be justified if the consequences maximized utility as they do in the case of placating the angry mob.
- Yet punishing the innocent is wrong at least according to our moral intuitions.[1]

Utilitarianism responds by distinguishing "**act** utilitarianism" from "**rule** utilitarianism". In *act utilitarianism*, we apply the Principle of Utility directly to the action under consideration. If this action, among the available alternatives, maximizes utility in this situation, then we are obliged to do it even if it runs contrary to our ordinary moral views. Act utilitarianism would be inclined to pronounce ordinary morality wrong in this situation because its judgment goes contrary to maximizing utility. But *rule utilitarianism* lends more credence to our pre-reflective, common morality. It does not apply the Principle of Utility directly to individual actions. Rather, it uses the principle to

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[1] The method of contrasting an ethical theory with our moral intuition is a standard approach to criticizing moral theory in philosophical ethics. Thus, ethical theories are often spoken of as capturing and systematizing moral intuition.

evaluate and validate general action guidelines. The Principle of Utility would most likely justify the rule, "Do not punish the innocent, only the guilty," because this rule, and not its opposite, maximizes utility in the long run. Having adopting this rule after validating it by the Principle of Utility, rule utilitarianism would then apply it—and not the Principle of Utility—to the situation at hand. This being the case, you—the desperate but moral politician in the example above—would have to find some other way of preventing the riot and staying in power. A difficulty for this approach is whether the rules generated by the principle of utility can all be made consistent with each other (ref).

3. Utilitarianism neglects the moral importance of the distribution of harms and benefits. In other words, it ignores issues of distributive justice. Keeping the Therac-25 units operating (see chapter 6) while investigating the causes of the radiation overdoses in Texas and Ontario might maximize utility. But only if there were no other comparably effective cancer treatments available. But the difficulty with this approach is that the utility (effective cancer treatment) purchased by this decision places an unfair burden on future victims of potential overdoses. A well-rounded moral decision in the Therac-25 case requires more than just calculating and sorting out the consequences; it requires looking carefully at how harms and benefits will be distributed among stakeholders.

Utilitarianism, of course, would deny the charge. An unjust distribution, they would say, insofar as it harms certain individuals would necessarily be included in the utilitarian calculation *as a harm.* Counting it again as an injustice would now count it twice—once as a harm and again as an injustice. This modification upsets the impartiality of the utilitarian calculation of value.

But even this hedge misses the deeper charge. Bringing about an injustice and violating an individual's rights involve more than just harming. (What this something more is will become clearer when we look at deontology below.) The real problem is that we cannot reduce all moral considerations to harms and benefits. Nor can we consistently hold that social utility trumps all other ethical issues. (Deontologists hold that duties and rights, in fact, trump social utility.) There is a tendency in the application of utilitarianism to consider only the total quantity of benefits and harms and not their distribution among stakeholders. This overview of utilitarianism leads us to an important point: we often calculate the good and risk harm that might come from a computing system, but we should also be concerned about the just distribution of those goods and harms.

A similar argument can be made with regard to individual rights. Continuing radiation treatment while testing the Therac-25 software may have strong utility if comparable alternatives are not available. But doing so without informing the patients and allowing them to the right to consent to (or decline) treatment produces a moral problem that escapes the notice of utilitarianism. Utilitarianism in this situation would miss those solution alternatives that balance utility and right. To conclude, the lesson we learn from this criticism is that *Utilitarianism needs to be supplemented by situation audits that highlight justice and rights issues embedded in the situation at hand.*

4. Utilitarianism is incompatible with self-fulfillment and personal integrity. Some critics of Utilitarianism, most notably Bernard Williams, take the theory to task for not allowing individuals to fulfill themselves on a personal level. These critics claim that Utilitarianism uses ever pressing social need to block the right of individuals to formulate and realize personal integrity-building projects. The argument goes something like this:

- If there is a greater social need, then Utilitarianism mandates that I set aside my personal, integrity-building projects to respond to this greater need. (For example, starving children in Africa need money and food more than my own well-fed children. Utilitarianism obliges me to divert my resources from my family to those with greater needs until their wellbeing and that of my family are balanced.)
- But there is always a greater social need. (There will always be more people in more dire straits than me and my family.)
- So Utilitarianism requires that I permanently set aside self-fulfillment or the realization of my own integrity-building projects to respond to the more pressing social welfare of others.

Some Utilitarians, most notably again Peter Singer, argue this way. (Others must have done so if we are to judge by Charles Dickens' attack on "telescopic philanthropy" in *Bleak House*.) On the other hand, J.S. Mill formulates his version of Utilitarianism broadly enough to allow the individual room to build a moral identity by devising and realizing fundamental projects. This criticism, thus, addresses itself more to certain versions of Utilitarianism than to Utilitarianism as such.

Text Box

Would you walk away from Omelas?

　　Ursula LeGuin wrote a fascinating short story entitled, "The Ones Who Walked Away from Omelas." It describes a city in which almost everything is perfect. Almost all the inhabitants are happy and prosperous. Everything seems perfect until the visitor to the city discovers that all the happiness and prosperity of the city are purchased by inflicting unimaginable suffering on one innocent young girl. She is kept alone in a dark room, denied kindness and human interaction, and forced to live in appalling material conditions. At the end of her story, LeGuin poses for us a choice: Would you choose to live in a city where the happiness of the many (including you) is purchased by channeling all unhappiness onto one unfortunate innocent victim?

　　In this way, LeGuin criticizes utilitarianism for its indifference to the distribution of harms and benefits. She presents a different criticism in her novel, *The Lathe of Heaven*. The title is based on a quote from Chuang Tse (XXIII) which she provides at the beginning of Chapter 3:

> Those who heaven helps we call the sons of heaven. They do not learn this by learning. They do not work it by working. They do not reason it by using reason. To let understanding stop at what cannot be understood is a high attainment. Those who cannot do it will be destroyed on the lathe of heaven.

The Lathe of Heaven is about a young man who finds that his dreams effect change in the

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real, waking world. A social psychologist discovers this young man's "effective dreaming" and attempts to use it to improve the world. LeGuin uses this scenario to develop a sustained criticism of the idea that the end of social utility justifies all means.

How do you interpret the quote from Chuang Tse? Can you think of situations where the end doesn't justify the means? Can you come up with situations where individual rights "trump" social utility? At one point in the novel, LeGuin suggests that there are no ends, only means. What do you think this means?

More Teleology: Aretaic or Virtue Ethics

Aretaic or virtue ethics comprises yet another and quite distinct form of Teleological ethics. The Greek word "arete" has traditionally been translated into "virtue". But arete also conveys the notion of excellence in both its moral and non-moral senses. For this reason, many now term Virtue Ethics, "Aretaic Ethics".

Aretaic/Virtue Ethics emphasizes those human excellences whose practice realizes both the moral individual and the moral practice of a profession. Human excellences such as courage, responsibility, and loyalty are characteristic ways of acting (including sets of attitudes, habits, and skills) that can be learned by someone with the ability to perform them (e.g. adequate intelligence) and the proper motivation (e.g. a desire to excel). These excellences are used to describe people who characteristically act in ways that are courageous, responsible, and loyal. This brings us to the difference between Aretaic Ethical theories on the one hand and Utilitarianism and Deontology on the other. Virtue/Aretaic ethical theories focus primarily on the agent while Utilitarianism and Deontology focus on the action. (Crisp & Slote ref, p. 3)

> [Virtue ethics] puts primary emphasis on aretaic or virtue-centered concepts rather than deontic or obligation-centered concepts….[Virtue ethics focuses] on moral agents and their lives, rather than on discrete actions (telling a lie, having an abortion, giving to a beggar) constructed in isolation from the notion of character, and the rules governing these actions.

This different emphasis in virtue ethics has opened up a whole new dimension to professional ethics where we focus on the *exemplary* rather than the *obligatory*. That is, virtue ethics asks, "What are the best practices that we might follow?" rather than "What are the minimal standards that we are obliged to meet?"

Let's examine this in more detail. Act centered approaches lead us to ask questions like the following:

- Do the consequences or results expected of this action justify its being carried out?
- Which of the available alternatives produces the most good and the least harm?
- What duties arise in this situation?
- Who are the stakeholders in this situation and what are their rights?

- If things turn out wrong (harms result, rights were violated, or duties neglected) can we hold anybody responsible? (This last point raises retroactive questions of responsibility, blame, and punishment.)

All these questions focus on actions and their moral worth. Utilitarianism examines the action in terms of the balance of good and bad that it produces. Deontology zeros in on the duties and rights inherent in a situation. Moreover, both theories highlight situations where individuals have gotten it wrong, i.e., where the actions of individuals have fallen below some minimal moral standard. Those who get it right or act in an exemplary way fall outside of this picture.

On the other hand, working out of the six dimensions of virtue ethics identified by Robert Solomon (ref), we find ourselves faced with a different set of questions:

- Does the action in question focus on the good of the community?
- Does it promote excellence in our and others' work?
- Does it square with the requirements of my role in the community?
- Does it reflect integrity on my part?
- Have I exercised careful judgment in perceiving the problem?
- Does it tend to isolate one aspect of myself from others?

Virtue ethics moves the focus from those who get it wrong to those who consistently get it right. We study exemplary individuals who have learned and mastered key skills and excellences (refs). We examine how the actions of individuals support the communities to which they belong and how these communities nourish their members. Because it turns from the obligatory to the exemplary, virtue ethics raises new and fruitful questions for professional and practical ethics.

As with Utilitarianism, we explore Aretaic or Virtue Ethics by looking at its leading ideas.

1. Virtue ethics, as a distinct kind of teleological ethics, posits two kinds of end. First, it posits common goods (such as safety) around which professional and social practices are oriented. Second, it posits the exercise of the virtues or excellences themselves as intrinsically valuable.

Virtues are skills along with associated knowledge, attitudes and emotions that together bring about ends that are central to a community. Programming good and safe software requires a set of excellences. It may involve the exercise of **creative imagination** in developing safe prototypes, **diligence and patience** in further designing these to respond to situational constraints like deadlines and cost, and **responsibility** in carefully validating through further testing that the prototype will function safely in a wide variety of use-scenarios. Safety stands as a fundamental end of good software programming. Creative imagination, diligence and patience, and responsibility describe skill clusters that contribute to this end. Good software programming is thus good in both the

technical and moral senses of the word. Morally, it is guided toward ends like safety. Nonmorally, it marshals technical knowledge and skill toward realizing moral ends.

But the virtues do not serve merely as means to ends like safety. They also stand for activities exercised and valued for their own sake. Aristotle (passage ref) identifies virtues that represent the different activities of practical reason. In his view, the capacity to reason distinguishes humans from all other living beings. We become fully human by exercising this excellence which consists of knowledge (technical and moral), skills (such as moral and technical reasoning), attitudes and emotions (feeling anger in the appropriate circumstances and proper amount). Because they are properly and distinctly human, these excellences stand as necessary constituents of human happiness, and their exercise realizes or fulfills us. By portraying the virtues as activities of reason through which we realize ourselves, Aristotle contends that human happiness comes from a lifetime characterized by the consistent exercise of the moral and intellectual virtues.

2. Virtue ethics, as teleological, starts out by identifying, validating, and integrating ends.

We **identify** ends by looking at what computing professionals do and, more importantly, at what they are trying to do or what they consider to be worthy of doing. This inquiry can be difficult because professionals often differ on what they value as ends. But a profession's code of ethics provides a useful starting point. Codes summarize a profession's attempt to come to a consensus about ethical principles, minimum standards of conduct, and professional ideals. We will look below at ways of identifying ends from a profession's code of ethics.

We **validate** ends by testing them. Ethical principles (autonomy, beneficence, nonmaleficence, justice) and ethical theories (Utilitarianism, Kantian Formalism, Virtue Ethics) validate ends in terms of their ethical content. Different theories and different principles will often converge on certain ends; this convergence counts strongly in their favor. With other ends, theories and principles will diverge. In this case, we should experiment with different, more comprehensive formulations of our ends. Since our ethics tests partially encapsulate ethical theory, they provide the means for a quick, if tentative, validation.

Finally, ends do not necessarily cohere with one another. In engineering, public safety and welfare can conflict with maintaining client trust. **Integrating** these ends can be challenging. Consistent with the methodology we recommend through the iterative moral problem solving model, we begin with end integrative strategies, move to compromises between ends when integration proves impossible, and turn to trading off conflicting ends as a last resort. Integrating, compromising, and even trading off ends requires moral imagination and moral creativity. There is no way of developing these skills other than practice. Aristotle argued that we become moral by first performing moral actions. In the same way, we become adept at integrating conflicting goods by practicing value integrative strategies.

3. The key term in aretaic ethics, arete translated as virtue or excellence, has traditional and modern senses. Traditionally, Aristotle defines virtue as the disposition to choose the mean between the extremes of excess and defect, all relative to person and situation. In its modern sense, virtue portrays a skill or set of skills that support and realize a social or professional practice.

Aristotle, the first systematic virtue ethicist, defines virtue in Book II, Chapter 6 of the Nicomachean Ethics:

> Virtue, then, is a state of character concerned with choice,
> - lying in a mean, i.e. the mean relative to us,
> - this being determined by a rational principle, and…
> - by that principle by which the man of practical wisdom would determine it.

The key point here is the mean, the target at which the virtuous agent aims. Aristotle's discussion of courage shows us what he understands by the mean. The virtue or excellence, courage, is first of all a disposition (a habit or tendency exhibited over time) to choose between two extremes, too much and too little. Too much courage is recklessness, i.e., throwing caution to the wind and taking unnecessary risks. Too little courage is cowardice, i.e., giving way to fear when the situation demands mastering fear and taking a stand. Courage, the mean, is the right balance of boldness and caution, of risking self and protecting self. This mean cannot be formulated abstractly or generally because it is relative to the person and the situation. The way a person of greater strength and size exhibits courage is inappropriate for a person of lesser strength and size. Setting aside David's skill with the sling shot (and divine intervention on David's behalf), what would be courageous for Goliath would be reckless for David due to the considerable difference between the two in size and strength. The mean is also relative to the situation. A courageous soldier manifests courage in different ways in different situations. When the enemy has an overwhelming advantage, courage would lie in choosing a deliberate and strategic withdrawal that allows one to fight again when the odds are better. On the other hand, it would be cowardly to retreat when both sides have equal strength. Thus, the exercise of virtue calls for a special kind of wisdom that Aristotle calls *phronesis*. Because it is a skill, *phronesis* cannot be captured in a recipe or formula. It manifests itself over a course of time where we observe that a person consistently devises actions that hit the mean while avoiding the extremes of excess and defect.

Virtue in its modern sense is defined as a habit of action that supports a social or professional practice or a social or professional role. MacIntyre (ref), for example, defines virtue in the context of a practice:

> A virtue is an acquired human quality the possession and exercise of which tend to enable us to achieve those goods which are internal to practices and the lack of which effectively prevents us from achieving any such goods.

MacIntyre's definition lends itself nicely to professional practices such as computing and engineering. By identifying the goods around which these practices are oriented, we can characterize the virtues or excellences that best bring these about. Examples, especially those that portray individuals who have acted with excellence, help us to develop an idea of the virtues that support a practice. Tim Still, the hospital physicist at Kennestone in the Therac-25 case, exemplified the virtue of documenting work by keeping careful records of the actions performed by the operator prior to the radiation overdose at that facility. His documentation made it possible to identify and solve the programming errors that caused the misalignment of the Therac-25 turntable and the resultant radiation overdoses. Still also displayed the virtue of responsibility by showing care and concern for patient health and safety. In general, practicing virtues like responsibility, documenting work, honesty, and integrity allows the individual to acquire essential professional skills while maintaining and promoting the central goods of the profession itself.

Text Box: Constituents of a Practice

According to Solomon, a social practice consists of participants, rules & procedures, boundaries, external goals, and internal goals:

- **Participants**: Participants in the profession of computing consists (mostly) of individuals who are trained in accredited programs. They are often publicly and formally certified to perform computing services. Professionals are more than just technicians. In the course of their professional training, they learn to exercise discretionary professional judgment in a skilled manner; they make proper and informed decisions even in situations where the proper course of action cannot be spelled out in advance in the form of a recipe or algorithm.

- **Rules & Procedures**: These refer to the formal and informal rules and procedures that guide professionals in the execution of their day to day activities. Rules are often embodied in different codes that embody technical and ethical standards. Procedures include designing methodology, interacting with clients and users, and testing and validating systems. For instance, difficulties with real time systems (like Therac-25) have lead to the establishment of rules for avoiding race conditions. Computer scientists usually learn these particular rules in an operating systems course.

- **Boundaries**: This element separates a practice from other practices and from society at large. In the case of computing, this separation is facilitated when the profession develops accrediting standards that outline the curricula and assessment criteria of recognized and accepted computing programs. These standards, and the accrediting activities they give rise to, provide the practice with boundaries by giving it definitive content. Professions, through licensing exams and other membership requirements, also separate and define themselves by limiting the number of those qualified and authorized to practice in the name of the profession (ref).

- **External Goals**: These show how the practice fits into the broader social context.

> For example, the practice of medicine realizes the external good of health. Computing, because it deals with information, might be characterized as bringing about the social goals of preserving, transmitting, and organizing/managing information. Deborah Johnson (ref) has described computing as the "instrumenting of human action." These external goals provide insight into the social function of a practice, how it fits into and contributes to the broader social context.
>
> **Internal Goals**: The internal goals of computing can be found by looking at the primary stakeholder relations a computing professional enters into. Each relation supports an internal good. The relation between **professional and public** supports the good of *public welfare* (e.g. health, security, safety). That between **professional and client** is based on *honesty and trust* (ref to fiduciary model) while that between the **professional and profession** requires that the professional act to *uphold the honor and integrity* of the profession. Finally, professionals work to maintain *collegial* **peer relations**.

4. The virtues that form the basis of modern practices and professional communities can be identified by (1) discovering a practice's stakeholders, (2) specifying the goods involved in these stakeholder relations, and (3)itemizing the clusters of skills, knowledge, attitudes and emotions that bring about, maintain, and enhance these goods.

Achieving the internal goods that arise from these key stakeholder relations realizes both the professional and the profession. We can roughly match each of the relations and their correlative goods with a set of virtues that help bring them about. Here we work out some of the virtues that support *collegiality*:

Collegiality between computing professionals would be supported by the virtues of…
> **honesty**, since honesty founds trust and collegiality is based on such trust,
> **friendliness**, since collegiality requires that computing professionals interact with one another and get along,
> **reasonableness**, since computing professionals need to integrate conflicting values that arise in their work with one another, and…
> **humility**, since collegiality requires that computing professionals recognize their individual limitations and their dependency on one another to complete the work demanded by their profession.

This list of virtues is by no means final or comprehensive. But it sheds light on the idea that virtues are skills whose exercise recognizes, maintains, and promotes the common internal goods around which a practice or profession is oriented. We provide an exercise later in this chapter for you to complete this list by identifying the goods and virtues relative to the relations of the professional to the **public**, the **client**, and the **profession**. You will also be given the chance to argue for other stakeholder relations like professional to **environment**.

5. Virtue ethics produces new insights into moral education. In the past because of our preoccupation with act-centered ethical approaches like utilitarianism and Kantian

formalism, moral education has focused almost exclusively on improving moral judgment, i.e., our ability to discern the difference between good and bad or right and wrong. Other areas like moral motivation, moral character, and moral responsibility have been set aside as being either unteachable or whose teaching is tantamount to indoctrination. Virtue ethics leads us to rethink the teaching of morality in several important ways:

- Practice, in moral education, makes perfect. Aristotle is justly famous for holding that the virtuous become so by practice, that is, by first performing virtuous actions. Under virtue ethics, moral education consists of honing the skills associated with the moral virtues. This leads to a practical approach to moral pedagogy where we learn by discussing cases, debating alternatives, and refining decision-making skills.
- Recently, social scientists and philosophers have been studying moral exemplars (ref). One of the most important findings so far is that moral exemplars stand out from others in that they have integrated moral concerns into the core of their character and personality. Having made moral concerns a part of their identities, they tend to do good without extensive internal debate. This goes against the traditional view—born out of act-centered approaches—that portray moral exemplars as those who discern duty only after long and agonizing periods of deliberation (ref).
- Individuals become virtuous, in part, because the communities in which they develop have created an environment in which the virtues flourish. This recasts the role of professional communities. Rather than resulting from an artificial social contract, they stand for the environment in which technical and moral excellences are forged, propagated, and sustained. Studies of moral exemplars show how they are sustained in their development and action by surrounding and supportive communities (ref). This redefines professional societies from organizations designed to promote member self-interest and punish those who fall below minimum standards to communities that encourage the development of moral and technical excellences in members and support those who would uphold professional ideals in the real world.

6. Virtue ethics also provides new insight into moral responsibility.

We are responsible for actions that are intentional, deliberate, or done "on purpose." (ref Austin) Virtuous actions seem to be the exception because they are often performed without reflection or deliberation. Aristotle recognizes this and characterizes virtue as habit or "second nature." During our moral education, we repeatedly perform intentional and deliberate actions. These eventually solidify into habits carried out naturally and without reflection. Since these "habit-forming" actions were performed deliberately in the past, their "natural" repetition in the future falls within the circle of responsibility.

Out-of-character actions become problematic in this context. We need to look into the specific situation to see what prevented the normal character from manifesting itself. Aristotle and Bradley identify different conditions that may cause agents to misfire and act out-of-character of which ignorance and compulsion are the most important. I may fail to keep an appointment out of ignorance because I didn't know its time or place. I could also have missed the appointment because of compelling circumstances. (On my

way, I saw a stranded motorist with a flat tire and stopped to help. I had conflicting obligations and decided that helping the stranded motorist was more important.)

Responsibility, itself, can be examined as a virtue. Doing so pushes responsibility beyond the legal model which is focused on blame and punishment. In the section below, we will look at a general model for constructing the individual virtues. How, on this model, would responsibility look as a virtue? (What would be the extremes of excess and defect?)

Virtue Tables and Guides for Constructing Them
Having looked at the general outlines of virtue theory, we can now turn to examining specific virtues. Virtues, as we defined them above, are those habits and skills that protect, create, or harmonize the social goods around which professions and social practices are organized. What, then, are the virtues of computing? Constructing virtue tables can help us to hone in on these. They can also help us to integrate virtue ethics into decision-making. Armed with these tables, we can ask which virtues are relevant and how they, along with their corresponding goods and values, can be realized in the situation at hand. What would a responsible professional do in Saia's place? How does Still go about realizing the virtue of documenting work in the Therac case? Could Goodearl realize the virtues of loyalty and honesty in the face of LaRue's test skipping?

The table below provides a format for spelling out individual virtues through (1) a general description, (2) the correlative vices of excess and defect, (3) the skills and mental states that accompany and support it, and (4) real and fictional individuals who embody it. Following the table are hints on how to identify and characterize virtues. We start with the virtue of integrity:

Virtue	Description	Excess and Defect	Supporting skills, emotions, attitudes, and beliefs	Moral Exemplar
Integrity	A meta-virtue in which the holder exhibits unity of character manifested in holding oneself together even in the face of strong disruptive pressures.	*Excess*: Rigidity—sticking to one's guns even when one is obviously wrong	*Skill*: Ability to assess action in terms of its impact on one's core beliefs and attitudes. Cultivated conscience refined through self examination and ethical evaluation.	Saint Thomas More as portrayed in Robert Bolt's *A Man for All Seasons*. More refuses to take an oath that goes against the core beliefs in terms of which he defines himself

		Defect: Wantonness. A condition where one exhibits no stability of character.	*Supporting mental states*: Sense of identity, courage, steadfastness, loyalty to core beliefs that form self, & feelings of conscience	

1. How do we go about identifying the virtues in a profession or occupation? Michael Pritchard provides a useful method. In a project designed to study exemplary engineers, he began by identifying these individuals and asking them to talk about themselves. This effort was frustrated by the modesty of those interviewed. They were uncomfortable talking about themselves as moral exemplars. So he changed his approach and asked them about the qualities they would look for in others when, say, hiring new colleagues. They provided the following list:

> *Responsibility, Honesty, Justice (fairness), Articulateness, Perseverance, Loyalty, Cooperativeness, Creative Imagination, Habit of Documenting Work, Civic-Mindedness, Courage, Openness to Correction, Commitment to Quality, and Integrity*

The moral exemplars whose responses constructed Pritchard's list provide us with insight into professional practice. They show how professionals should strive to be good in the moral and non-moral senses of the term. They should strive to become morally good by cultivating *moral* virtues such as responsibility, justice, courage, honesty, and integrity. But professionals need to be good in the non-moral sense as well, that is, technically proficient. For example, a professional cannot be responsible if he or she lacks basic technical knowledge and skills. Professionals achieve excellence (one meaning of virtue) by combining technical skill (good in the non-moral sense) with moral skill (good in the moral sense).

2. We describe a virtue by assembling and arranging different instances or examples of the virtue. For example, we come to understand honesty when we have observed and experienced instances of honest behavior. Working from these instances, we begin to see clusters of characteristics called family resemblances. Not all instances of honesty will show all these characteristics, but large clusters of these characteristics will be present in non-problematic instances of honesty. Instances that provide ideal models of honesty become prototypes; when we think of honesty, we think of these. Others clearly exemplify honesty but fall short of the prototypical. Then there are problematic cases; they show some of the characteristics of honesty but lack others. To determine whether these fall under the concept, we need to compare them with the prototypes and check for resemblances and differences. Finally, there are instances that are clearly not honesty. Instances that show too little honesty (dishonesty) or too much honesty (brutal honesty) come to stand for negative prototypes. By assembling instances into prototypes, positive

cases, problematic cases, negative cases and negative prototypes, we draw a conceptual map of honesty.

Literary examples help. In the table above on integrity, we drew from Bolt's characterization of Thomas More in *A Man for All Seasons*. The events of the play present circumstances that challenge More's integrity. The concept emerges all the more clearly as More successfully responds to these challenges. To take another literary example, Charles Dickens, in his novel *Bleak House*, presents a clear embodiment of responsibility in the character of Esther Summerson. This is made even clearer when he contrasts Esther with a series of other characters: the telescopic philanthropists, Jellyby and Pardiggle; Skimpole who denies that he is responsible by playing the child; the lawyers of the Chancery who unsuccessfully try to reduce moral to legal responsibility. By establishing a prototype of responsibility and then developing a series of deviations from this prototype, Dickens presents a conceptual map of the virtue of moral responsibility.

3. Modern virtue theorists are uncomfortable with Aristotle's claim that all virtues can be located in terms of the correlative extremes of excess and defect. But most of the moral virtues on Pritchard's list can be so characterized. At the very least, this provides a useful preliminary description of most moral virtues. Integrity, as the table shows above, is one of them. Someone who has too much integrity comes off as rigid or fanatic. These individuals refuse to compromise, even when circumstances demand it. On the other hand, those with too little integrity appear wanton and unpredictable. They cave in even when the situation calls for taking a stand. They show no commitment or make only shallow commitments. Specifying the extremes of integrity helps us to see better the core characteristics of the virtue. What about responsibility? (Can you picture individuals who show too much or too little responsibility?) What about honesty? (We can envision too little honesty or dishonesty. But what about too much honesty?) Consider the non-moral virtues. Can an individual show too much or too little creative imagination?

4. Virtues come with supporting psychological hardware, that is, with correlative emotions, attitudes, and beliefs. Loyalty is accompanied by *devotion* to the object of loyalty. Responsibility is reinforced by the emotional attitude of *care*. Integrity is grounded in a sense of personal identity as well as in the voice of conscience. Virtues are also accompanied by certain skills. The skill of honing in on the moral quality of actions and sensing how these relate to our core beliefs accompanies integrity. What skill(s) would honesty require? What skill(s) would responsibility require?

5. Developing a repertoire of narratives of moral exemplars helps us to understand virtues. Literary examples are a good place to start. Thomas More in *A Man for All Seasons* embodies integrity. Ester Summerson, in *Bleak House*, embodies responsibility. Josiah Royce presents Robert E. Lee as the paradigm of loyalty. Recent studies in moral psychology provide detailed narratives of moral exemplars; these have been compiled by means of life story interviews (refs). By projecting moral exemplars into different situations and imagining how they would act, we gain insight into decision-making. We

choose as we would imagine a moral exemplar would choose were he or she in the same situation.

Kantian Formalism

Immanuel Kant put forth a highly influential moral theory in the 18th century that has close affinities to modern deontology and rights theory. In this section, we will present a simplified version basing it on the principle of respect. We summarize Kantian formalism in the following propositions:

1. *Formalism is a non-consequentialist ethical approach.*
- In non-consequentialism, the moral value of an action lies in its formal characteristics, not in its consequences. Kant argues that an action that conforms to duty and is motivated by duty has moral worth even if the consequences turn out bad.   For example, I risk everything to save a drowning boy because it is my duty. I am a poor swimmer and afraid of the water. Yet I summon up the will to overcome this fear and do my duty. On the way to saving the boy, I am overwhelmed by the waves and the current. I drown and the boy drowns. The action miscarries, but because I gave my all to do my duty and my motive was duty for duty's sake, this action still has moral worth.

2. *Ethical actions exhibit four important formal characteristics; they are universal, categorical, reversible, and assume equality between persons.*
- **Universality***:* Maxims, for Kant, are rules that individuals apply to themselves. An athlete may have the maxim of doing 50 pushups every morning before breakfast. Moral maxims are rules that apply not just to oneself but to everybody. In Kant's terms, moral maxims take on the form of universal law. You must be able to apply the rule to all persons without contradiction.
- **Categorical:** Closely related to this is the fact that moral rules are categorical. We can understand this by contrasting categorical with hypothetical. Practical rules always have an "If-then" form: **If** you want X (your end) **then** do Y (as a means X). For example, if you want to escape a difficulty and lying allows you to do so, then by all means lie. The command part of the rule (tell the lie) depends on the truth of the hypothetical circumstances (you find yourself in a difficult situation and lying will extricate you). The strength of the command is merely conditional in that it depends on factors outside of itself. Thus, it commands hypothetically or contingently. Ethical rules command categorically. They take the form, "Do X… no matter what." For example, Kant holds that telling the truth is a duty. (We will explore his argument as to why in a moment.) So its formulation would be: "Tell the truth… no matter what."   Ethical actions are required in themselves, not because of something else; they are commanded as ends, not as means. We do not do the right thing because we expect a reward. Like the movie says, we "Do the right thing." Period. Thus we now have that a moral maxim applies to all people in all circumstances.
- **Reversibility**: We are familiar with this characteristic from the reversibility test. This is roughly the same as the Golden Rule. Positively, the Golden Rule tells us to do to others what we would have them do to us. Negatively, it tells us not to do

anything to others that we would not have them do to us. The underlying idea is respect. We understand this respect through imaginative projection. We imaginatively change roles with others envisioning them in our shoes and ourselves in their shoes. Then we test the reversibility of our action by imaginatively trying it out on ourselves.

- **Equality between Persons**: At the bottom of reversibility is the intuition that I respect you by treating you the same as myself. In other words, reversibility is intimately connected to equality. For the formalist, all moral persons are equal and deserve equal treatment. Equality does not imply sameness because we have different physical attributes and distinct mental competences. But these natural differences do not translate into moral or political inequalities. As moral persons, we all have the right to equal treatment. As we will see this equality is founded on our shared autonomy.

3. *Formalism is based on the fundamental principle of respect for the person.*
These four characteristics come together in the notion of respect. We have a duty to respect persons as persons. The central characteristic that, for Kant, defines personhood is autonomy. Because persons have autonomy, they can establish fundamental life goals, develop plans for achieving them, and form their actions to carry out these plans. Thus, autonomy is based upon and draws together a set of cognitive (knowledge) and practical skills.

4. *Autonomy is intrinsically valuable and demands recognition and respect.*
Autonomy—and the autonomous person—commands respect in and of itself. Non-consequentialists base their criticism of utilitarianism and other consequentialist approaches on this fundamental idea. Under consequentialism, we can sacrifice the individual to promote the social good. This is not permissible under non-consequentialism because of the primacy of autonomy. Autonomy cannot be sacrificed to realize a greater value because it is, itself, intrinsically valuable. For this reason, autonomy establishes both the personhood of the individual in whom it resides and its inviolability. Autonomy must be recognized and respected even in the face of strong and opposing social good. The autonomous individual cannot be sacrificed on the altar of maximizing utility.

5. *For Kant, one formulation of the principle of respect for persons is the Formula of the End.*
Always treat persons (yourself included) as ends and never merely as means. In other words, respect persons by not circumventing (passing around) their autonomy through deception, force, or manipulation. Using someone merely as a means involves deception, manipulation, ignorance, or force to gain the other's cooperation. When we join with others in cooperative ventures we must ensure that they participate knowingly and freely.

6. *Another formulation of the principle of respect, for Kant, is the Categorical Imperative*
Categorical Imperative: Act only on that maxim (=a rule that applies primarily to oneself) that can be converted into a universal law (=a rule that applies to everybody).

Lying fails the categorical imperative because the maxim of the liar, when universalized, defeats itself.

- Step One: Maxim of the liar (Applied by the liar to himself): I should lie to escape a difficulty.
- Step Two: Maxim of liar converted into a universal law: Everybody should lie to escape a difficulty.
- Step Three: Is the maxim self-defeating when applied to everybody? Yes because when the liar's maxim is made into a universal law and everybody becomes a liar, nobody will believe the liar's lie.

The core idea of the categorical imperative is that the wrongdoer seeks to free ride on a moral system. (Economists define free riding as competing for self-advantage in a system where everyone else cooperates. An example would be cutting to the front of a line or riding the subway for free because you know the conductor. The liar wants to lie (compete) in a system where truth-telling (cooperation) is the norm. For this to work, everybody else must be a truth-teller so they will believe the lie. The liar then reserves the right to make himself the exception in his maxim when it suits his private ends.

Rights Theory

Kantian formalism bases respect on the human individual's intrinsic value as an autonomous being. Using this as a point of departure, we can develop a method for identifying, spelling out, and justifying the rights and duties that go with professional computing. We summarize rights theory in four general propositions:

1. Definition: *A right is an essential capacity of action that others are obliged to recognize and respect.*

This definition follows from autonomy. Autonomy can be broken down into a series of specific capacities. Rights claims arise when we identify these capacities and take social action to protect them. Rights are inviolable and cannot be overridden even when overriding would bring about substantial public utility.

2. All rights claims must satisfy three requirements. They must be (1) *essential* to the autonomy of individuals and (2) *vulnerable* so that they require special recognition and protection (on the part of both individuals and society). Moreover, the burden of recognizing and respecting a claim as a right must not deprive others of something essential. In other words, it must be (3) *feasible* for both individuals and social groups to recognize and respect legitimate rights claims.

- *Essential*: To say that a right is essential to autonomy is to say that it highlights a capacity whose exercise is necessary to the general exercise of autonomy. For example, autonomy is based on certain knowledge skills. Hence, we have a right to an education to develop the knowledge required by autonomy, or we have a right to the knowledge that produces *informed* consent. In general, rights are devices for *recognizing* certain capacities as essential to autonomy and *respecting* individuals in their exercise of these capacities.
- *Vulnerable*: The exercise of the capacity protected under the right needs protection. Individuals may interfere with us in our attempt to exercise our

rights. Groups, corporations, and governments might overwhelm us and prevent us from exercising our essential capacities. In short, the exercise of the capacity requires some sort of protection. For example, an individual's privacy is vulnerable to violation. People can gain access to our computers without our authorization and view the information we have stored. They can even use this information to harm us in some way. The right to privacy, thus, protects certain capacities of action that are vulnerable to interference from others. Individual and social energy needs to be expended to protect our privacy.

- *Feasible*: Rights make claims over others; they imply duties that others have. These claims must not deprive the correlative duty-holders of anything essential. In other words, my rights claims over you are not so extensive as to deprive you of your rights. My right to life would not deprive you of your right to self-protection were I to attack you. Thus, the scope of my right claims over you and the rest of society are limited by your ability to reciprocate. I cannot push my claims over you to recognize and respect my rights to the point where you are deprived of something essential. Thus our rights are limited by the feasibility of recognizing and respecting them.

3. Definition: *A duty is a rule or principle requiring that we both recognize and respect the legitimate rights claims of others.* Duties attendant on a given right fall into three general forms:

- *Duty not to deprive*: We have a basic duty not to violate the rights of others. This entails that we must both recognize and respect these rights. For example, computing specialists have the duty not to deprive others of their rights to privacy by hacking into private files.
- *Duty to prevent deprivation*: Professionals, because of their knowledge, are often in the position to prevent others from depriving third parties of their rights. For example, a computing specialist may find that a client is not taking sufficient pains to protect the confidentiality of information about customers. Outsiders could access this information and use it without the consent of the customers. The computing specialist could prevent this violation of privacy by advising the client on ways to protect this information, say, through encryption. The computing specialist is not about to violate the customers' rights to privacy. But because of special knowledge and skill, the computing specialist may be in a position to prevent others from violating this right.
- *Duty to aid the deprived*: Finally, when others have their rights violated, we have *the duty to aid them in their recovery from damages.* For example, a computing specialist might have a duty to serve as an expert witness in a lawsuit in which the plaintiff seeks to recover damages suffered from having her right to privacy violated. Part of this duty would include accurate, impartial, and expert testimony.

4. *Rights and duties are correlative; for every right there is a correlative series of duties to recognize and respect that right.*
- This allows us to develop a system of computing rights and correlative duties.

a) We can identify and define specific rights such as due process. Moreover, we can set forth some of the conditions involved in recognizing and respecting this right.
b) Due Process can be justified by showing that it is *essential to autonomy, vulnerable*, and *feasible*.
c) Right holders can be specified.
d) Correlative duties and duty holders can be specified.
e) Finally, the correlative duty-levels can be specified as the duties not to violate rights, duties to prevent rights violations (whenever feasible), and the duties to aid the deprived (whenever is feasible).

We provide a table below working through these steps with the right of due process:

Basic Right: Due Process

Right: Due Process	Justification	Right-Holder: Engineer as employee and member of professional society.	Correlative Duty-Holder: Engineer's Supervisor, officials in professional society.	Duty Level
Definition: The right to respond to organizational decisions that may harm one in terms of a serious organizational grievance procedure.	*Essential:* Due Process is essential in organizations to prevent the deprivation of other rights or to provide aid in the case of their deprivation.	Professionals who are subject to professional codes of ethics. Supports professionals who are ordered to violate professional standards.	Human Resources, Management, Personnel Department. (Individuals with duty to design, implement, and enforce a due process policy) Corporate directors have the duty to make sure this is being done.	*Not to Deprive:* Individuals cannot be fired, transferred, or demoted without due process
Necessary Conditions: 1. Several levels of appeal. 2. Time limits to each level of appeal. 3. Written notice of grievance. 4. Peer representation. 5. Outside arbitration.	*Vulnerable*: Rights in general are not recognized in the economic sphere, especially in organizations.			*Prevent Deprivation:* Organizations can prevent deprivation by designing and implementing a comprehensive due process policy.
	Feasible: Organizations, have successfully implemented due process procedures.			*Aid the Deprived* Binding arbitration and legal measures must exist to aid those deprived of due process rights

Exercise: *Construct a rights table for the right of Free and Informed Consent*

A Primer on Justice

A weakness of the Harm/Beneficence test is its tendency to gloss over the distribution of harms and benefits. The ethical concept that deals with this distribution is justice, in particular, distributive justice. In this section, we consider briefly some recent discussions of justice.

First, justice is used in different senses that need to be distinguished (ref to Velasquez):

1. **Distributive Justice** examines how to divide and allot fairly the benefits and harms that result from social cooperation.
2. **Retributive Justice** concerns itself with the fair and impartial administration of punishment to wrongdoers.
3. **Compensatory Justice** scrutinizes how we fairly compensate those who have been wrongfully harmed by others.

Justice has been a central problem for political philosophy starting with Plato. In his 1971 book, *Theory of Justice,* John Rawls constructed a thought experiment to find the basic principles of *distributive* justice.

Rawls begins with the central problem of distributive justice. The goods, harms, and risks that accompany social cooperation must be fairly and justly distributed. Three methods of distribution present themselves as leading candidates: equality, merit, and need.

- *Equality*: the benefits, harms, and risks of social cooperation are distributed equally among members of the social group.
- *Merit*: the greatest share goes to those who deserve it. Merit can be defined in terms of knowledge, skill, productivity or even moral virtue.
- *Need*: the greatest share goes to those who have the greatest need.

Rawls then constructs a thought experiment designed to solve this problem of distribution. Imagine a situation where a group of rationally self-interested individuals choose principles of distribution under a veil of ignorance. (This means that individuals will be making this choice unaware of their own special circumstances, for example, whether they will be rich or poor, born in a wealthy nation or in a developing country, endowed with natural talents or handicapped in some way, etc.)

a. Rational self-interest leads us to acquire as many primary goods as possible. These include (a) rights and liberties, (b) opportunities and powers, and (c) income and wealth.
b. Under the veil of ignorance, we pretend to know nothing of our situation. As Rawls puts it, under the veil of ignorance, "no one knows his place in society, his class position or social status, nor does any one know his fortune in the distribution of natural assets and abilities, his intelligence, strength and the like."

The veil of ignorance channels rational self-interest toward an impartial and fair system of distribution. Without the veil of ignorance, those who are rich would gravitate toward a scheme of distribution that maintained and even enhanced their wealth. Those who were poor would opt for a scheme that redistributed the wealth of others to themselves. The scheme could also be shifted towards one's natural talents: if one were strong, one would choose a system of distribution biased toward strength; if one were intelligent, one would choose a system of distribution that rewarded intelligence; if one were male, one would choose a system that favored men. Rational self interest without the veil of ignorance would bias the principles of justice chosen. But the veil of ignorance pushes rational self-interest toward impartiality because the rationally self-interested individual must choose to protect all possibilities, not knowing in advance which one will apply.

With this in mind, Rawls' basic position can be summarized in the following manner:

- Rational Self-Interest + Veil of Ignorance = Theory of Distributive Justice.

Distributive Justice, in turn, is captured by two principles: the Equal Liberties Principle (ELP) and the Difference Principle (DP)

- ELP: "First: each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others." "The basic liberties of citizens are, roughly speaking, political liberty (the right to vote and to be eligible for public office), together with freedom of speech and assembly; liberty of conscience and freedom of thought; freedom of the person along with the right to hold (personal) property; and freedom from arbitrary arrest and seizure as defined by the concept of the rule of law."
- DP = Difference Principle: "Second: social and economic inequalities are to be arranged so that they are both (a) reasonably expected to be to everyone's advantage [most especially to those most disadvantaged] and, (b) attached to positions and offices open to all…."

The Equal Liberties Principle has priority over the Difference Principle so that equality becomes the default pattern of distribution. Thus, any departure from an equal pattern of distribution must have a strong, overriding justification. Moreover, the equal distribution of political liberties is, for Rawls, absolute and cannot be overridden. (This is the basis of Rawls' dislike of utilitarianism where we can override basic rights and liberties to bring about the greatest good for the greatest number.) But, under the Difference Principle, a departure from equality can be justified in the economic sphere if all stand to benefit, most especially the disadvantaged. In this way, Rawls attempts a synthesis that captures the strengths of equal, merit-based, and need-based patterns of distribution.

Rawls' theory of justice has been intensely debated and scrutinized. Some interesting criticisms have emerged. From the libertarian standpoint, Nozick criticizes Rawls for developing a system of justice that sacrifices liberty for equality. Nozick argues that a patterned system of justice (like Rawls') must continually interfere with a

distribution voluntarily reached to maintain a privileged pattern of distribution. (To put it crudely, Nozick argues that Rawls' system of justice would require continual transfer of wealth and goods from those who have more to those who have less. One such mode of transfer is, of course, taxation. So Nozick points out that under Rawls' system we would pay loads of taxes.)

Nozick provides an interesting example of how patterned systems of distribution interfere with liberty. Suppose we voluntarily transfer our money to Michael Jordan to see him play. We enjoy the show but now Jordan has a disproportionate share of the total wealth, as judged by our ideal pattern of distribution, namely, equality. So to restore justice, we take back some of Jordan's money—through taxation—and redistribute it to those who gave it to him in the first place. Overriding the initial, voluntary transfer by a second involuntary transfer doesn't make sense to Nozick. Moreover, he finds it wrong because it sacrifices liberty to equality (or some other privileged pattern of distribution). For Nozick, the current pattern of distribution is not important. What matters is how it came to be. If the current pattern was produced by a just process, then it is a just distribution no matter how unequal it may be. Nozick defines this just process as repeated applications of justice in acquisition (we made it or added value to it) and justice in transfer (somebody bought it from us or received it as a gift without force or fraud).

From the communitarian standpoint, Michael Sandel argues that Rawls starts with an overly abstract conception of the self and winds up with an overly abstract and inapplicable concept of justice.   Rawls errs, according to Sandel, when he starts out with rationally self-interested individuals (one abstraction) and then adds the veil of ignorance which further abstracts from real individuals in real communities. These two abstractions then produce a third: a theory of justice that cannot be brought into touch with the real world.

Sandel draws some conclusions from this criticism of Rawls. He argues that Rawls' methodology leads to a theory of justice that tries to be neutral in all moral disputes. As an example, he cites the disagreement between Lincoln and Douglas on slavery. Lincoln opposed slavery on moral grounds; during the debates he offered substantive moral reasons for rejecting it. Douglas, on the other hand, tried to remain morally neutral by advocating a procedural solution to the problem—each state or territory should make its own choice. The content of the choice, its moral substance, wasn't important to Douglas. What was important was that each state chose its own stance toward slavery. So the process (free choice) and not substantive argument (the moral character of slavery) should determine the issue. Sandel generalizes from this to criticize attempts to solve substantive moral issues by appealing to a process or procedure. They fail because they don't make the substantive moral problems disappear; instead they import substantive moral positions in through the backdoor. Again, consider the Lincoln-Douglas debates. Douglas claimed neutrality. But allowing each state to decide the issue for itself by means of a democratic procedure ignores the fact that slavery can only be advocated on the basis of bad moral reasons. Procedural resolutions place bad substantive moral arguments on an equal footing with good substantive moral arguments. Procedural justice does not resolve substantive moral issues; it only makes it

more likely that these issues will be resolved on faulty moral grounds or on non-moral grounds.

NEEDS SOME CNCLUDING MATERIAL THAT BRINGS IT ALL TOGETHER