

## Ethical Theories

### What is Ethics?

Ethics is the study and evaluation of human conduct in the light of *moral principles*. Moral principles can be viewed either as a standard of conduct that the individual has constructed for him/herself; or, as the body of obligations or duties that a society, organization or religion requires of its members.

Ethics has developed as man has reflected on the intentions and consequences of his acts. From this reflection on the nature of human behavior, theories of *conscience* have developed, giving direction to much ethical thinking. Conscience is defined as moral awareness, i.e., knowledge of right and wrong. The different ethical theories define conscience differently. For example, conscience has been looked upon as the will of a divine power expressing itself in man's judgments; an innate sense of right and wrong resulting from man's unity with the universe; an inherited intuitive sense evolved in the long history of the human race; a set of values imposed by a society; and/or, a set of values derived from the experience of the individual.

The *intuitionists* (Rousseau, Cudworth, Hutcheson) postulated an innate moral sense which serves as the basis for ethical decision - one just knows immediately (intuitively) the right thing to do. The *empiricists* (Comte, Locke, Helvetius, Mill) deny any such innate principle and regard conscience as a power of discrimination acquired through experience. Empiricists believe that all knowledge is derived from internal experience (reflection) and sense perception. So, at one extreme (intuitionism), we have conscience as the originator of moral behavior; at the other extreme (empiricism), we have conscience as the result of living a moral life.

Another approach philosophers have taken in studying ethics is the consideration of absolute good as opposed to relative good. Throughout the history of philosophy, individuals have sought an absolute criterion of ethics. Many moral codes have been based on religious absolutes. Kant, in his *categorical imperative* (see below), attempted to define an ethical criterion independent of theological considerations. *Rationalists* (Plato, Spinoza, Royce) founded their ethics on metaphysics, by defining systems which explain the ultimate nature of existence.

All the varying methods of building an ethical system pose the question of the degree to which morality is authoritarian (imposed by a power outside the individual). If the criterion for morality is the welfare of the state (Hegel), the state is the supreme arbiter. If the authority is a religion, then that religion is the ethical teacher. *Hedonism*, which equates good with pleasure in various forms, finds its ethical criterion in the good of the individual or the good of the group. An *egoistic hedonism* (Aristippus, Epicurus,

Hobbes) views the good of the individual as the ultimate consideration. A *universal hedonism* (Bentham, Mill), such as *utilitarianism*, finds the ethical criterion in the greatest good for the greatest number.

We will study some of the ethical systems described above in more detail. They will provide for us a basis for organizing our thoughts as we explore ethical issues.

### **Why be moral?**

Machiavelli (The Prince): “a man who wishes to profess goodness at all times must fall to ruin among so many who are not good.”

Hobbes (Leviathan): Life without some sort of order and morality would be “solitary, poor, nasty, brutish, and short”.

### **Can we rely on the law to tell us the “right” course of action?**

It is too simplistic to reduce morality to legality, or to embrace the suggestion that following the law exhausts our moral responsibilities. Just because the law permits a certain course of action does not mean the action is morally acceptable (Nazi Germany or the slave laws in America).

### **Important Modern Ethical Theories**

We now present the primary ethical theories which we will use as we delve into ethical issues.

Two main categories:

1. *Teleological* (from Greek *telos* for end or goal): evaluate actions by the goal or by the consequences of the action. “Right” actions are those which produce the most good.

The primary example of a teleological ethical theory is *Utilitarianism*: developed by Jeremy Bentham and John Stuart Mills: “the greatest happiness for the greatest number”. We assume that we can define (using a common numerical scale) in a precise manner the costs and benefits of each alternative action, like a moral calculus. One then chooses the alternative that produces the greatest net expectable utility, i.e., the one with the greatest net benefit (or the lowest net cost) for the widest community affected by the action.

Some problems with this approach:

- a) Actions such as deceit, murder, theft, etc. are usually morally wrong because of harmful consequences, but they can be ethically justified if it can be proven that they produce the greatest good for the greatest number. So even human and moral rights are not absolute here. If we maximize happiness for a society by enslaving a small segment of society, is this morally justified?
- b) How do you define “good” and “happiness”?
- c) How to avoid self-serving assumptions and prejudices in performing the cost-benefit analysis? If you do not overcome these assumptions, you end up with rationalizations of unethical or selfish behavior. The job of objectively considering all the consequences of each alternative, from the point of view of each stakeholder is very difficult.

2. *Deontological* (from Greek *deon* for obligation): actions are intrinsically right or wrong regardless of consequences. The “right” action is deduced from a duty or a basic human right. This category includes both duty-based (*pluralism*) and rights-based (*contractarianism*) theories.

Pluralism (duty-based):

- Kant: Morality consists of obligations that are binding on any being that is rational. So, a moral individual must perform actions for the sake of duty regardless of consequences.

How is this duty defined? It is a universal law like the laws of science and physics. It is expressed as the *categorical imperative*: “I should never act except in such a way that I can also will that my maxim should become a universal law.”

For example, I usually break promises so my maxim is: promise breaking is morally acceptable when it is in my best interests to do so. Can I take that individual maxim and turn it into a universal law? It would look like this: “It is permissible for everyone to break promises when it is in their best interests to do so.” But this contains a logical contradiction: universal promise breaking is logically impossible since if everyone broke promises, the entire institution of promising would collapse and there would be no such thing as a “promise”, because in such a climate, anyone making a promise would lack credibility. So the maxim would destroy itself as soon as you made it a universal law.

The categorical imperative is the test for right/wrong: Can it pass the test of universalization?

Another way of viewing the test is *universal acceptability*: Do all rational beings accept this action or decision regardless of whether they are the

perpetrators or the victims? Would the victim and other neutral parties consider these actions moral? This is basically a version of the golden rule: do unto others as you would have them do unto you. Think of it as a publicity test: If what I am about to do became public knowledge and everyone (my family, my employer, my friends, my colleagues, etc.) would know, would I still perform the action?

Problems with this approach:

- a) Inflexible and absolute: Do we really have absolute duties to tell the truth or keep promises? What if I can save a person's life by telling a lie? Kant's theory seems to violate moral common sense.
  - b) What if there is a conflict of two universal laws: to tell the truth and to save a life – which rule should take precedence? It is difficult to avoid appealing to consequences to decide.
- Ross extended Kant's theory in the early 20<sup>th</sup> century. He felt that through reflection on our ordinary moral beliefs, we can intuit the rules for morality. These moral rules or duties are ultimate and the first principles of moral reasoning.

Ross does allow for exceptions, i.e., one duty can be superceded by a more important, "higher" one. So, for example, we should lie to save a life since saving a life is the "higher" duty. Ross defined seven basic moral duties:

- 1) Keep promises and tell the truth (fidelity)
- 2) Right the wrongs that one has inflicted on others (reparation)
- 3) Distribute goods justly (justice)
- 4) Improve the lot of others with respect to virtue, intelligence and happiness (beneficence)
- 5) Improve oneself with respect to virtue and intelligence (self-improvement)
- 6) Exhibit gratitude when appropriate (gratitude)
- 7) Avoid injury to others (non-injury)

### Rights-Based Ethics (Contractarianism)

A right is an entitlement that all humans have by virtue of being human (e.g., freedom of expression, right to privacy, right to own personal property, etc.) The roots of this ethical theory lie in the social philosophy of Hobbes, Locke and Rousseau. They believed that morality is grounded in the *social contract*.

In a pre-political state, there is absolute freedom which is accompanied by anarchy, war, strife. A government is established and everyone enters into a contract with the government. On the one side, the government sets up laws to

protect rights, and on the other, the people agree to respect others' rights and obey the laws.

The social philosophers took this a step farther. They felt that rights are fundamental and not necessarily dependent on the contract. Moral reasoning should be governed by respect for individual rights and a philosophy of fairness.

The difficulty of using a right-based analysis (considering whether a particular course of action violates anyone's legal or human rights) is in defining the parameters of these rights. For example, what are the limits to free expression? But even with this problem, it is always important to consider stakeholder's rights in determining a course of action.

Rawls is a modern social contract philosopher whose theory of justice is based on fairness. The principles of justice are those which equal, rational, self-interested individuals would choose as the terms of a social contract for themselves and their descendents. There exists a prepolitical "original position" where this choice would be made.

In the area of computer ethics, we define the notion of "information rights" which are rights that individuals should possess regarding their personal information that is scattered about in various databases. At a minimum, every person deserves a right to the privacy, accuracy and security of this information. This must be juxtaposed against a corporation's "information property rights". Their information is their property which they can use as they please. This will be a fundamental issue for us as we begin to explore information ethics.

## **Professionalism and Codes of Conduct**

Before we look at how to apply ethical theories in our work in computer ethics, it is important to consider other guidelines available to us. There is much controversy over whether computer “professionals” are really professional in the traditional sense of the term. Here are the common characteristics of the professions:

1. Intellectual training to master a complex corpus of knowledge.
2. Service to society.
3. Autonomy, i.e., professionals can exercise their autonomous judgement because of their expertise.
4. Governance by a code of conduct.

The mainline traditional professions are law and medicine. Are we professionals? We do lack autonomy, but we are certainly closer to the paradigm than other occupations (carpenters, mail carriers, stockbrokers, etc.). So we can say that we belong to a "developing" profession and thus a code of conduct does seem appropriate.

We have two standard codes of ethics in our profession: The ACM Code of Ethics and Professional Conduct, and the IEEE Code of Ethics. The advantages of such codes of conduct are they help to create an environment conducive to moral rectitude; and, they serve as a moral "compass" for those in a quandary. But they are not universal in the way such codes are in the medical and legal professions. We find it difficult to implement the codes so that professionals take them seriously. There is also the question of enforcing the code and deciding what to do with violators. This is something we need to address (as attorneys and physicians have) if the codes are to mean anything at all. Still, they can provide some guidance in certain situations.

## **A Framework for Ethical Analysis**

We have presented three different ethical frameworks and noted the differences. Despite these differences, each approach represents a unique perspective from which one can assess and deliberate over moral issues. All of these theories seek to elevate the level of moral discourse from preoccupation with feelings or gut reactions, to a reasoned and thoughtful consideration of the right course of action.

Here are some questions we can ask ourselves and tasks we can do as we consider ethical issues, to put these theories into action:

- Goal-based analysis: Which action generates the best overall consequences for all parties involved? After performing a cost/benefit analysis, which action maximizes benefits for all stakeholders?
- Duty-based analysis: Can I universalize the course of action I am taking, i.e., is the action universally acceptable even to those who are directly affected by it? Does the

action violate any basic ethical duties? Are there alternatives which better conform to these duties? If each alternative seems to violate some duty, which is the strongest duty?

- Rights-based analysis: Which action best upholds the human rights of the individuals involved? Do any alternatives violate fundamental human rights or the legal rights of a contract?

And here is an "algorithm" to apply when confronted with an ethical issue:

1. Identify and carefully define the ethical and legal issues in the case.
2. What is your first impression toward the issues, i.e., what does your moral intuition tell you?
3. Define in detail all possible courses of action.
4. Consult the appropriate codes of ethics (ACM, IEEE, corporate or organizational, etc.) for guidance.
5. Use the ethical theories (see above) to help reason about the issues.
6. What is the "best" action based on the theories and codes? If there are conflicts, which approach should take precedence under the circumstances? Why?
7. Take action.

## Case Study

Jon Stevens is a junior and a CS major at Walden University, a large school in the northeast. He has worked with computers all his life and always knew he wanted to work in CS. Jon is an excellent student, and is highly regarded by the students and the faculty. He is currently taking courses in Compilers, Operating Systems, and Java.

Jon is known among his friends and fellow CS majors as a "hacker". He has managed on several occasions to break into various systems that he had not been authorized to use. Some students admire these antics; in their eyes, these "accomplishments" confirm his technical expertise. The faculty and administration are also aware of his skills, but he has never broken into any university system, so they leave him alone.

One day, Jon's Operating Systems professor was discussing computer security and describing her involvement in the development of the security system protecting the university medical center's patient information database. The security for such a database must be extremely tight since all kinds of sensitive information (e.g., diagnoses of AIDS or emotional/mental illness) is stored on patient records. The professor boasted that the security was "virtually impregnable". Jon thought this boast was meant as a challenge to the class (but no one else in the class thought so).

So late that night, Jon set about breaking into the patient information database. He worked for hours to gain access to the medical center's network. Once there, he was able to find the patient information database, but the security really was formidable. It took him days to do it, but through determination (and cleverness), he got in. Jon was so

excited that he didn't even bother to read any of the data, but just logged off and took a long nap.

Later that day, the system administrator for the medical center network found evidence of the break-in. He also determined that the patient information database had been accessed but no individual records had been read. He notified university police and officials, and within a day, Jon was caught.

Jon was summoned to the Dean of Students office and presented with the evidence. He confessed and said it was a harmless prank – he just wanted to prove his professor wrong. He also explained how this type of thing is a special hobby of his, but he never meant to do anyone any harm. In fact, he had done the university a big favor by exposing a vulnerability, and he could give the system administrator over at the medical center some advice on how to stop such break-ins in the future.

The Dean could clearly see that Jon was not a “criminal”, or even malicious in any way. She reviewed his academic record and saw that he was an excellent student who had never been in any trouble before. Given all this, and the fact that he was honest and wanted to use the experience in a helpful way, made her feel lenient. But, she held off on giving a punishment since she knew this was going to be a controversial issue with the university administration and faculty. She sent Jon off and told him to come back the next day to hear the university's decision on his penalty.

Later that day at a university function, the Dean discussed the issue with other administrators and faculty members. Some felt a stern lecture and warning would be enough. Others felt a much stronger penalty was in order, maybe even suspension from the university. A message must be sent to “hackers” that such deviant behavior is not tolerated.

You are the Dean of Students. How do you decide what penalty is appropriate for Jon's break-in?

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