Ethics and Engineering
November 8, 2001

Three types of ethics:
1. Common morality
2. Moral theory
3. Professional ethics or standards of conduct

Morality: those standards of conduct every rational person wants everyone else to follow even if everyone else's following them would mean having to follow them too.

Rational vs. Irrational:
X (an agent) is rational insofar as:
1. X wants to avoid death, sickness, pain, loss of liberty, loss of opportunity and life (except as a means to some good).
2. X believes that people can cause each other death, sickness, pain, and so on; that people can achieve such consequences by withholding food, cutting off parts of their body, and so on; and other similar matters of common knowledge.
3. X can plan acts giving weight to these wants and beliefs.
4. X can act according to plan.

X is irrational insofar as X is not rational (varying degrees).

Comments on morality
- It is to everyone's overall advantage to act morally.
- This definition of morality implies a shared culture and set of values.
- Situations are not always simple. We must be able to stretch and rethink our basic values to adapt to different situations. Therefore, a systematic technique is needed for resolving ethical issues.

Two major types of moral theory

- Teleological (Consequentialist)
  ~ moral right is that which maximizes the net pleasure or happiness
  - Instances of pleasure/happiness or displeasure/unhappiness must be identified and quantified.
  - Theory implies predicting future.
  - Theory dictates that party experiencing happiness is irrelevant
- Deontological
  ~ moral right is determined by the action itself (rule-based)
  - Dictates that one must act only according to that rule which you could will to be a law for everyone.
  - Implies that one must act so as to treat people always as an end and never merely as a means.

7 step procedure for analyzing and resolving ethical issues:

1. Recognize and state the ethical problem.
2. List facts.
3. Identify affected parties.
4. Formulate alternatives (and continue to check facts).
5. Assess alternatives (on ethical grounds, on grounds of feasibility).
6. Construct desired options and persuade or negotiate with others to implement options.
7. Take action (Go back to steps 1 and 2 to see whether this resolves the ethical problem and check whether any facts were overlooked.)

Professional ethics:

~ convention between professionals on acceptable behavior

- Development
  - ✓ Began with common sense
  - ✓ Modified based on experience of profession
  - ✓ Never final
- Purpose
  - ✓ Standardize profession's work
  - ✓ Protect public, serve client, support other standards, etc.
  - ✓ Provides a common basis for doing what is right and avoiding what is wrong
- Comment
  - ✓ Judgement can only be exercised in a context (in 4 years you will be making some big decisions .. where were you 4 years ago)