

# **Moral Reasoning**

# Machinery of Prescriptive Ethics

- Rules – e.g. “always tell the truth”
- Values – e.g. Integrity

The two are intimately related.

Judgments should be

“universalizable” or “generalizable”

Judgments should apply to like cases and not be case-specific or subjective

“If it applies to me now, it should apply to anyone else in a similar position.”

# Moral

## **Relativism**

- ❖ Ethical values are relative to time, place and culture
- ❖ Moral beliefs are subjective and arbitrary
- ❖ “It’s all a matter of personal opinion”
- ❖ Decisions shift easily

## **Absolutism**

- ❖ Ethical values completely objective
- ❖ Unchangeable, universal, no exceptions
- ❖ Comparatively inflexible
- ❖ Neither position tenable

# Objectivity

Codes of ethics require objectivity, which means that there are principles and values outside of the individual that the members of the community share and that individuals will be measured against.

“Thinking reasonably is thinking morally.”

Samuel Johnson

# Reasonable Person -- Peer

- ❖ What would the reasonable peer do in the circumstances?
- ❖ Reasonable person: mature, sane, sober, well-informed, well-intentioned, open-minded, calm, detached but empathetic ...
- ❖ Reasonable peer – add expertise.

# Moral Decisions VS Moral reason

Reasons explain a decision:

- ❖ Reason + Reason +... = Decision
- ❖ Explanation... System of reasons

## **Moral reason**

- ❖ Is general, not particular or contingent reason, not instinct or external authority  
not selfishness moral value, not economic, legal, social value

# Moral Explanation

- ❖ At least one of the reasons justifying a decision is a moral reason.
- ❖ This identifies, but does not evaluate a moral explanation.
- ❖ Explanation 1  
Reason + Reason + ...  $\Rightarrow$  Decision 1
- ❖ Explanation 2  
Reason + Reason + ...  $\Rightarrow$  Decision 2

**May or may not be a MORAL dilemma**

# Non-Moral Dilemma

- ❖ I should work late and finish the work I promised I'd finish.

Example of universalizable, non-selfish, moral value (integrity, responsibility, promises...)

- ❖ I should leave and go to a party because I like parties and want to enjoy myself.

Example of non-moral reasons and decision.

- ❖ Moral Explanation 1

Moral reason + reason +... = Decision 1



# Resolution of Dilemmas

- ❖ Some dilemmas are resolved because they are not moral dilemmas.
- ❖ Some MORAL dilemmas can be resolved through a creative third alternative that satisfies both moral outcomes.
- ❖ Or, possible to sequentially act on each one.
- ❖ Or, evaluation will show which is strongest moral explanation and decision.

# Evaluate Moral Reasons

## STRONG

- ❖ relevant to decision
- ❖ concern with person(s) most affected by decision
- ❖ focussed on values of central importance

## WEAK

- ❖ tends to be irrelevant
- ❖ not concerned with person(s) most affected by decision
- ❖ emphasizes peripheral values

# Evaluate Moral Explanations

## STRONG

- ❖ use several perspectives (consequences, motives, rights, virtues, etc.)
- ❖ considers all persons
- ❖ many values

## WEAK

- ❖ narrow focus
- ❖ selective concern
- ❖ fewer values

# **Ethical Theories**

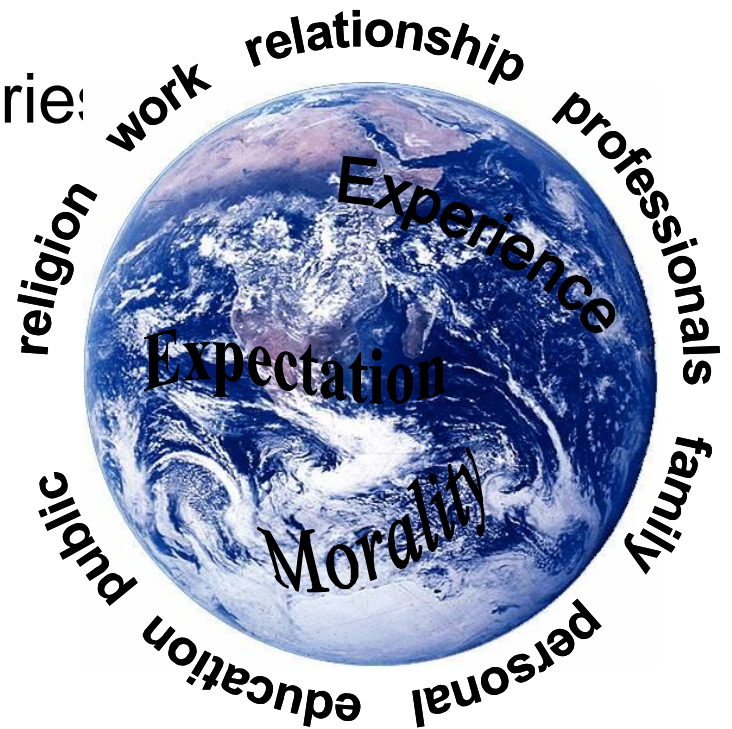
# What is an Ethical Theory?

- ❖ An ethical theory is a comprehensive perspective on morality that clarifies, organizes, and guides moral reflection. (Martin and Schinzinger, 2005)
- ❖ We can look at moral theories as recipes (i.e., a formula or means for a desired end) for thought and action.

# A Moral Theory

**Is a broad perspective which:**

- ❖ helps us decide which element of a moral problem is most important (e.g. consequences, rights, goods, virtues, etc.)
- ❖ helps us resolve conflicts between rules and between values.
- ❖ How We Come by Moral Theories:
  - Family,
  - Religion ,
  - Culture
  - Experience and reflection
  - Education



## Moral Action Theories -- “Doing”

- ❖ consequences for community
- ❖ rights of individuals, duties of individuals
- ❖ What correct course of action should I take?

## Moral Status Theories - “Being”

- ❖ Virtue, character, Care, relationships
- ❖ Narrative, history and plans
- ❖ What kind of person should I be?

# Human Goods

- ❖ Life, health, Knowledge, Play, Art, Friendship
- ❖ “Self-evidently good”
- ❖ Human life considered to be fundamental good, pre-conditional good
- ❖ Human life is not measurable, “life is priceless”
- ❖ Leads to dilemmas in the workplace



# Consequentialism

- ❖ The greatest good for the greatest number
- ❖ an act is right only if it tends to result in the greatest net good
- ❖ all acts are potentially permissible; depends on consequences
- ❖ all persons count equally
- ❖ difficult to determine which consequences, what probability, what weight?
- ❖ May sacrifice individuals for greater good

## Definitions



Ethics is, in part, the

- evaluative study of arguments about which actions are right and wrong.



English  
philosopher  
d. 1873

## Utilitarians

The morally right action is  
the action that  
*maximizes aggregate  
happiness.*



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Utilitarianism is major  
consequentialist theory  
Not the only one  
May aim for human goods as a  
matter of duty, without a strict  
utilitarian calculation

# Ethical Theories

## ❖ Utilitarianism

- The classic statement of utilitarianism is “the greatest good for the greatest number”. (Consequentialism)
- Act Utilitarianism versus Rule Utilitarianism
- How does this differ from a cost-benefit analysis?
  - Example: Ford Motor Company, Ford Pinto

# Utilitarianism

- ❖ Engineering and technological decision making, for the most part, are based on derivatives of utilitarianism.
- ❖ A basic tenant of utilitarianism is: *the greatest good for the greatest number.*
- ❖ This gives rise to *economic determinism* as manifest in cost/benefit and risk/benefit analyses.

- ❖ Why a moral framework?
- ❖ • Illuminates connections between engineering codes of ethics and everyday morality
- ❖ • Helps make moral choices, resolve moral dilemmas
- ❖ • Utilitarianism:
  - ❖ – “Produce the most good for the most people, giving equal consideration to everyone affected”
  - ❖ – What is “good”? Consider “acts” or “rules”?
  - ❖ – From codes: “Engineers shall hold paramount the safety, health, and welfare of the public in the performance of their professional duties.”
  - ❖ – “Welfare” is a type of “utility” (so are safety, health)

- ❖ Engineering cost-benefit analysis:
- ❖ – The same as utilitarianism? No.
- ❖ – Typical cost-benefit analysis identifies good
- ❖ and bad consequences of actions/policies in
- ❖ terms of dollars
- ❖ – Why are dollars the correct utility? How to
- ❖ include costs of lives, injuries?
- ❖ – Usually, focus on profits to corporation
- ❖ – Example: Cost of safe designs vs. warranty vs.
- ❖ loss of lives/legal issues (e.g., Ford Pinto)

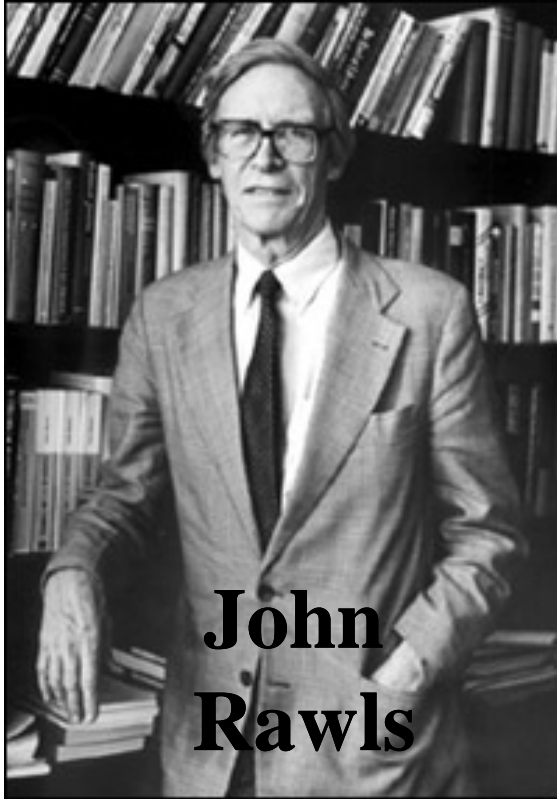


# Cost/benefit and Risk/benefit

- ❖ Insurance: how much am I willing to spend each year to insure my house, car, life?
- ❖ Energy: what risks am I willing to take for the benefit of 1,000 MWe among a coal, natural gas, or nuclear power plant?
- ❖ Medical: how many lives can I save by inoculating all children against polio and what are the costs and risks?

# Drawbacks of Utilitarianism

- ❖ Only the total good, and not its distribution among people, is relevant to moral choice.
- ❖ Difficulty in attempting to quantify the *greatest good*.
- ❖ Utilitarianism tends to be anthropocentric.
- ❖ Utilitarianism judges by consequences.



## Moral right theorists

The morally right action is the action that *respects the dignity of individual persons.*

American  
philosopher  
d. 2002

John Rawls: *A Theory of Justice* (1971).  
Jurgen Habermas. *The Philosophical  
Discourse of Modernity* (translated in  
1990).

# Rights-Based Theories

- ❖ Right = justified claim on someone
- ❖ Right-holder may or may not claim right
- ❖ Which rights?
- ❖ Which rights more fundamental? Or pressing?
- ❖ An act is morally right if it respects and upholds rights
- ❖ Respects individuals, bearers of rights
- ❖ Good of community may be sacrificed for right of individual

# Contemporary Philosophy

- ❖ Rule-Based or Principled-Based ethics versus Contextual or Situational ethics.
  - Rule-Based: Belief in a universal set of rules, principles and values.
  - Contextual/Situational: Based on the context; on the information available in the moment in any given situation.

# Duty-Based Theories

- ❖ Duty = obligation, responsibility
- ❖ Considers motive or intention of decision-maker, plus nature of act, rights, consequences
- ❖ Good motive, means are acceptable, nature of act is good
- ❖ Consequences are of secondary consideration
- ❖ Recognizes complexity
- ❖ Value of individual is important
- ❖ May sacrifice community good for the sake of individual duty

# Duty (Deontological) Ethics

- ❖ Immanuel Kant (1724-1804) and the Categorical Imperative
  - Kant believes unconditional commands are something that we must all obey (versus hypothetical imperatives).
  - “Act only according to that maxim by which you can at the same time that it should become universal law.”
  - “Act so that you treat humanity whether in your own person or in that of another, always as an end and never as a means only.”

- ❖ Rights Ethics, Duty Ethics
- ❖ • Rights ethics: Human rights is the moral “bottom-line”
- ❖ (and human dignity and respect are fundamental)
- ❖ – Liberty rights: Rights to exercise one’s liberty that lead to duties of others not to interfere with one’s freedoms
- ❖ – Welfare rights: Rights to benefits needed for decent human life
- ❖ • Codes? “Engineers shall hold paramount the safety, health, and welfare of the public in the performance of their professional duties.” (refers to each individual)
- ❖ • Public has rights (life/no injuries from bad products, privacy, to get benefits through fair/honest exchange in a free market), *what are their duties in these respects?*
- ❖ • Duty ethics: Right actions are those required by duties to respect the liberty or autonomy of individuals. Codes?



# Kantianism

- ❖ Often viewed as a duty-based theory
- ❖ But rights emerge from duty to treat others with respect
- ❖ X has a duty to Y
- ❖ Y has a right that X must respect
- ❖ E.g. right to know and duty to tell

# Kantianism

- ❖ “Deontological” = prior to action
- ❖ Decide if an act is right or wrong without looking at consequences
- ❖ Motivated by reason alone
- ❖ “Universal moral imperatives”
- ❖ Reason tells us that something is always right ... all can follow without contradiction

# Kantianism

Duty to:

- ❖ “Always tell the truth”
- ❖ “Always avoid taking an innocent life”
- ❖ “Always treat others as ends in themselves and never as means solely” Basis of respect for persons

# Social Contract Ethics

- ❖ Social contract theory fits sort of a “low ball” ethic. The social contract theory says it is in everyone’s best interests to set up mechanisms by which reciprocity is achieved in social relationships. (“You scratch my back I scratch yours.”)
- ❖ These contractual relationships are enforced by a third party (i.e., government) we create to insure everyone does their part.



American  
philosopher

UNC-  
Chapel Hill

## Virtue and feminist theorists

The morally right action is  
the action that  
*displays the virtues of a  
caring, just person.*

# Virtue-Based Theories

- ❖ Act for the sake of virtue, or as a virtuous person would
- ❖ A virtue is a good character trait or disposition
- ❖ Tendency to act in a way that promotes human good or human flourishing
- ❖ Vice is a bad character trait
- ❖ More people affected by virtue than fewer
- ❖ More virtues expressed than fewer
- ❖ BUT, some virtues may be more important than others

# Virtue Ethics

- ❖ Virtue ethics puts the emphasis on the development of a good character.
- ❖ Ancient Greeks looked at happiness in terms of spiritual fulfillment and well-being and not material enrichment (Aristotle).
- ❖ To develop a good character we have to continually practice virtue (habits of mind and will).

- ❖ Virtues in engineering
- ❖ • Public-spirited virtues:
  - ❖ – Focus on good of clients (“client-focused”)
  - ❖ – Focus on good of public
  - ❖ – Generosity - going beyond minimum requirements in helping: “engineers who voluntarily give their time, talent, and money to their professional societies and local communities”
- ❖ • Proficiency virtues:
  - ❖ – Mastery/competence
  - ❖ – Diligence (e.g., software engineering case study example)
  - ❖ – Creativity (to keep up with technology)
- ❖ • Teamwork virtues:
  - ❖ – Working together effectively (not a loner)
  - ❖ – Collegiality, cooperation, loyalty, respect for authority



- ❖ Virtue Ethics
- ❖ • Virtue ethics emphasizes character
- ❖ (virtues/vices) more than rights and rules.
- ❖ • Virtues: competence, honesty, courage,
- ❖ fairness, loyalty, and humility (vices
- ❖ opposites)
- ❖ • Relevance to codes? IEEE:
- ❖ – “... be honest... in stating claims...”
- ❖ – “...improve our technical competence...”
- ❖ – “...treat fairly all persons...”

# Virtues

- ❖ Whole person considered, not isolated acts
- ❖ Virtues may be culturally specific

Examples:

- ❖ Benevolence
- ❖ Justice
- ❖ Loyalty

- Friendliness
- Courage
- Honesty
- Integrity

- ❖ Self-Realization Ethics and
- ❖ Self-Interest
- ❖ • Ethical egoism: promote only your own self-interest
- ❖ (extreme view!)
- ❖ • Predominant egoism: strongest desire for most people most
- ❖ of the time is self-seeking (“mixed motives,” reasonable!)
- ❖ • Engineers:
- ❖ – Proficiency motives: Challenge self, serve public
- ❖ – Compensation motives: Make money for self/family, but helps
- ❖ community
- ❖ – Moral motives: Desire to do right (“give back”), integrity, feels
- ❖ good and positively impacts community
- ❖ • Engineering companies:
- ❖ – Safety/profit motives! Company competence, education
- ❖ – Professional climate, compensation

- ❖ Self-Realization Ethics and
- ❖ Personal Commitments
- ❖ • Community-oriented version of self-realization ethics
- ❖ • Pursue self-realization, but enrich community
- ❖ • Personal commitments form the core of a person's character and motivate, guide, and give meaning to the work of engineers
- ❖ – Must all engineers have *outside* humanitarian, environmental, family, etc., commitments? No!
- ❖ – Could be directed only *within* the profession, company, or clients (professional behavior in the organization)
- ❖ – Outside commitments should not adversely affect your job responsibilities!

- ❖ Personal commitments - professional life
- ❖ – Create meaning: “enliven ones daily work and life”;
- ❖ “work is worthwhile”; “life is worth living”
- ❖ – Motivate professionalism throughout long careers (deep
- ❖ commitments persist; they are a part of you)
- ❖ – Religious beliefs often supportive
- ❖ • Engineering:
  - ❖ – Meaning can come from technical challenges,
  - ❖ relationships with co-workers... other sources?
  - ❖ – Engineering makes life better for others? Helps others?
  - ❖ – Alleviates suffering?
  - ❖ – Eliminates difficult, dangerous, or tedious toil?
  - ❖ – Makes people healthier/happier?
  - ❖ – Aesthetically or intellectually enriches people?

- ❖ Pro Bono Engineering Work?
- ❖ • Should engineering professions do more to
- ❖ encourage engineers to apply skills in offering
- ❖ voluntary service to others? Yes.
- ❖ • Pro bono (or reduced rate) work is encouraged in
- ❖ law, medicine. Sometimes/often in engineering.
- ❖ Would it raise the stature of the profession by
- ❖ making it a “direct contact” profession?
- ❖ • Engineers do a lot of volunteer work now!
- ❖ • What does engineering education do to support
- ❖ such professionalism? *The “service-learning”*
- ❖ *initiative is happening!*

# Caroline Whitbeck and Ethics as Design

- ❖ Solving ethical dilemmas requires information about the nature of the problem being faced. Ethical dilemmas demand investigation and study. (e.g. investigation of requirements of potential users, recognition of background constraints, protecting against negative consequences, conforming to specifications or explicit criteria.)
- ❖ Resolving or coping with ethical dilemmas requires reflection and dialogue.

# What is ethics?

Ethical considerations  
paradigmatically come into  
play when an action involves  
**harm**  
or potential harm to humans.