

Social and Ethical Aspects in Engineering

IME-251

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Week4 Agenda

- Moral Frameworks
 - Utilitarianism, Right, Duty and Virtue Ethics

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Ethical Theories and Traditions

- Rights Ethics
 - Human Rights
- Duty Ethics
 - Individual Rational Autonomy
- Utilitarianism
 - Overall Good
- Virtue Ethics
 - Good Character
- Self-Realization Ethics
 - Self-fulfillment

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Rights Ethics

- Right ethics emphasizes respecting the inherent dignity and worth of individuals as they exercise their liberty.
- In Engineering:
 - Safety, Health and welfare of Public
 - Special Moral Rights
- Negative verses Positive Rights
- Quandary in Ethical Rights

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Duty Ethics

- Rights and Duty Ethics are typically correlated with each other.
- Important Duties:
 - Do not kill
 - Do not cause pain
 - Do not disable
 - Do not deprive of freedom
 - Do not deprive of pleasure
 - Do not deceive
 - Keep your promises
 - Do not cheat
 - Obey the law
 - Do your duty
- Immorality occurs when we merely use persons as means to our goals, rather than as autonomous agents who have their own goals.

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Duty Ethics

- “Do unto others as you would have them do unto you.”
- “Be honest” because its duty, not because it pays you.
- Dilemma of Kent’s absolutism
- *Prima facie duties* (“might have justified exceptions”)

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Utilitarianism

- Sole Standard of right action is good consequences
- Produce the most good for most people, giving the equal consideration to everyone affected.
- *Act Utilitarianism* and *Rule Utilitarianism*

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Discussion Questions

1. Americans are sometimes criticized for being too individualistic, and in particular for approaching moral issues with too great an emphasis on rights. Although we said that rights and duties are usually correlated with each other, what difference (if any) do you think would occur if Jefferson had written, “We hold these truths to be self-evident; that all people are created equal; that they owe duties of respect to all other persons, and are owed these duties in return”?

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Discussion Questions

2. What does the Golden Rule imply concerning how engineers and corporations should behave toward customers in designing and marketing products? As a focus, discuss whether crash-test information should be made available to customers concerning the possibly harmful side effects of a particular automobile. Does it matter whether the negative or positive version of the Golden Rule is used?

Virtue Ethics

- Virtues are tendencies to find the reasonable (Golden)mean between the extremes of too much (excess) and too little (deficiency) with regard to particular aspect of our lives.

Virtue Ethics

- Public-spirited Virtues
 - Proficiency Virtues
 - Teamwork Virtues
 - Self-governance Virtues
- ☐ Internal Good verses External Good

Self-Realization Ethics

- Please refer to the Book

Ethical Egoism

- Please refer to the Book

Discussion Questions

- Please refer to the Book Chapter 3 exercises

Q & A