

Adding an Ethical Twist to Engineering Design

Philosophy vs. Psychology

- PHILOSOPHY is the study of what a person SHOULD DO.
- PSYCHOLOGY is the study of what a person DOES.
- Ethics are in the realm of Philosophy.

What is ETHICS?

ETHICS is a study of what a person:

- Should DO.
- Should SEEK.
- Should BECOME.

ETHICAL ELEMENTS

- We look at scenarios and case studies to determine the ethical elements and choose a course of action.
- What parts of the story (claims) are ethical elements?
- Identify these CLAIMS and debate.

CLAIMS

DESCRIPTIVE CLAIM – These are claims regarding facts.

- **What I see or what I do.**
- **These can be tested.**
- **These ARE NOT ethical elements.**
- **Example: He arrived 10 minutes late.**

CLAIMS

OPINION – These are claims of things I think or I believe, but that cannot be debated.

- **These ARE NOT ethical elements.**
- **Example: Mario Kart is the best video game.**

CLAIMS

NORMATIVE CLAIM – These are claims regarding what is ideal.

- **What should I do?**
- **These ARE ethical elements.**
- **Example: Seatbelts should be installed in every vehicle.**

FUNDAMENTAL ETHICAL THEORIES

VIRTUE ETHICS – Aristotle

- Strive to determine and achieve “the good life,” where potential is actualized and virtues are developed.
- Cardinal virtues: prudence, temperance, courage, and justice.

FUNDAMENTAL ETHICAL THEORIES

VIRTUE ETHICS – Cardinal Virtues

- **Prudence – Practical Judgment.** Determining the proper end to pursue, and the best means to achieve it.
- **Temperance – Having the right response to the desire to acquire something.**
- **Courage/Fortitude – Having the right response to fear.**
- **Justice – Giving each person their due.**

FUNDAMENTAL ETHICAL THEORIES

DUTY ETHICS – Kant

- Have respect for the rationality and autonomy of other people.
- Do not carve out exceptions for yourself.

FUNDAMENTAL ETHICAL THEORIES

UTILITARIANISM – Bentham/Mill

- An act is morally right if and only if there is no other act that leads to better consequences for everyone affected by the act.
- Cost-Benefit Analysis

MID-LEVEL PRINCIPLES

- **Beneficence – Do something good.**
- **Nonmaleficence – Do not cause harm.**
- **Autonomy – Free and informed consent.**
- **Justice – People who take on risks should also be the beneficiaries.**

MORAL RULES

- Rules we follow because someone else determined it was best for us and others.
- No debate required – just do it.
 - Don't Lie.
 - Don't Cheat.
 - Don't Steal.

CLAIMS – TOOLS YOU CAN USE

Highest Level

FUNDAMENTAL THEORIES

- Virtue
- Duty
- Utilitarianism

MID-LEVEL PRINCIPLES

- Beneficence
- Nonmaleficence
- Autonomy
- Justice

Lowest Level

MORAL RULES

- Don't Lie
- Don't Cheat
- Don't Steal

CLAIMS – TOOLS YOU CAN USE

DAVIS'S EIGHT MORAL TESTS

- Harm Test – Does this choice cause the least harm?
- Publicity Test – What if this option was posted on social media?
- Defensibility Test – Can I defend it to a judge or my parents?
- Reversibility Test – Would I think this is still a good idea if I was one of the ones affected by it?

CLAIMS – TOOLS YOU CAN USE

DAVIS'S EIGHT MORAL TESTS

- Colleague Test – Would my most ethical peers agree?
- Professional Test – What would leadership in my professional community say?
- Organizational Test – What would my organization's ethics officer or legal counsel say?
- Virtue Test – What would I become if I choose this option repeatedly?