



ENGINEERING ETHICS & ATTITUDE

Lecture 2.

PHILOSOPHY, RELIGION & ETHICS

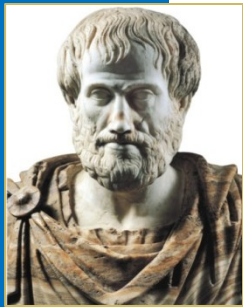
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2020**

SCHOOLS / THEORIES OF ETHICS

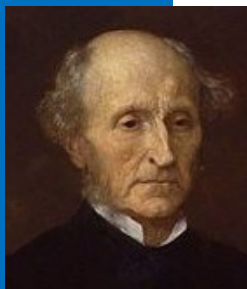
In *Western philosophy* they can be divided, very roughly, into three sorts:



1. Virtue ethics drawing on the work of **Aristotle** holds that the **virtues** (such as *justice*, *charity*, and *generosity*) are dispositions to act in ways that **benefit** both the person possessing them and that person's society



2. Deontology defended particularly by **Immanuel Kant**, makes the concept of **duty** central to morality: humans are bound, from a knowledge of their duty as rational beings, to obey the *categorical imperative* to **respect** other rational beings

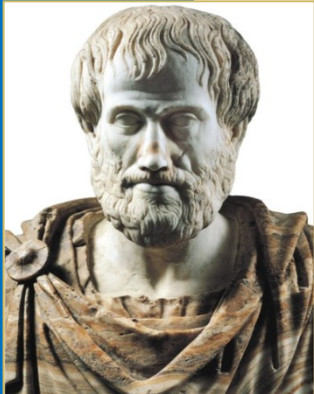


3. Utilitarianism developed by **John Stuart Mill** asserts that the **useful** is the good, therefore the guiding *principle of conduct* should be the greatest **happiness** (well-being) or benefit of the greatest number

ARISTOTLE'S ETHICAL PHILOSOPHY

1

- The highest good and the end toward which all human activity is directed is *happiness*, which can be defined as continuous *contemplation of eternal and universal truth*
- One attains happiness by a *virtuous life* and the *development of reason* and the faculty of *theoretical wisdom*
- For this one requires sufficient external goods to ensure health, leisure, and the opportunity for virtuous action

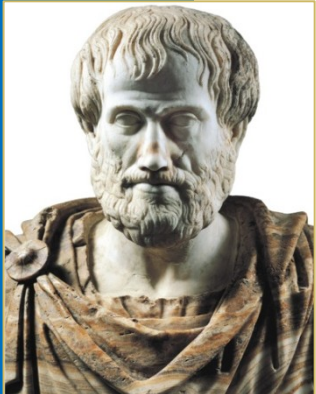


384-322 B.C.

ARISTOTLE'S ETHICAL PHILOSOPHY

2

- Moral virtue is a *relative mean* between extremes of excess and deficiency, and in general the moral life is one of moderation in all things *except virtue*
- No human appetite or desire is bad if it is controlled by reason according to a *moral principle*
- Moral virtue is acquired by a combination of knowledge, habituation and self-discipline

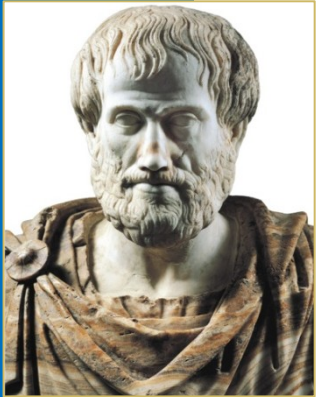


384-322 B.C.

ARISTOTLE'S ETHICAL PHILOSOPHY

3

- Virtuous acts require *conscious choice* and *moral purpose* or motivation, thus man has personal moral responsibility for his actions
- Moral virtue cannot be achieved abstractly — it requires *moral action in a social environment*
- Ethics and politics are closely related, for politics - it is the science of creating a society in which men can live the *good life* and develop their *full potential*

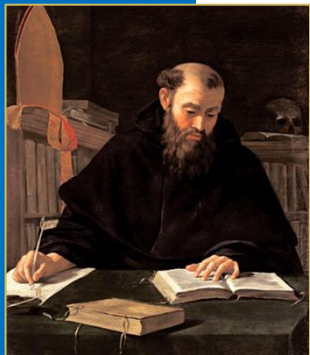


384-322 B.C.

RELIGIOUS ETHICAL THEORIES

1

- A similarity among all three branches of Christianity (*Catholic, Orthodox, and Protestant*) is the belief that the Bible is the *primary guide* to what is ethical and moral
- The ethics themselves are those derived by *interpretations* of the behaviours of individuals in Bible stories
- *St. Augustine* (354-430) in particular made use of the ethical principles of Greek philosophy; he proceeded to develop thoroughly along philosophical lines and to establish firmly most of the *truths* of Christian morality



RELIGIOUS ETHICAL THEORIES

2

- ***Thomas Aquinas*** (1225-1274) located ethics within the context of theology stating that the question of *beatitudo*, i. e. ***perfect happiness in the possession of God***, is the goal of human life
- He defined "***love***" for the benefit of the Christian believer as "***to will the good of another***"



SPINOZA'S MORAL PHILOSOPHY

1

- In Spinoza's view, human **moral judgments** are grounded in human *desires* or *beliefs*
- However, in spite of this anti-realist **metaethics**, Spinoza endorses an intellectualist version of **ethical egoism**: reason dictates that we seek our greatest good, and this greatest good is **understanding**
- He further tempers his ethical egoism by endorsing a version of **contractarianism**, according to which we may be **bound** to obey laws even when we recognize them to be irrational and they seem to hinder our efforts to seek our greatest good, since the alternative (living without the help of civil society) will always be **far worse**



1632-1677

SPINOZA'S MORAL PHILOSOPHY

2

- Finally, to aid us in the pursuit of understanding, which is often hindered by our **passions**, Spinoza provides a series of “remedies” by which the force of the passions may be **mitigated**
- The moral theory he develops has a surprising degree of depth and nuance, since he builds his account of morality on top of a thoroughly naturalistic conception of the world and of humanity’s place in it
- Stating, that **our desire not to be mastered by our passions** remains as strong today as it was in the 17th century, so Spinoza’s moral philosophy remains alive for us today

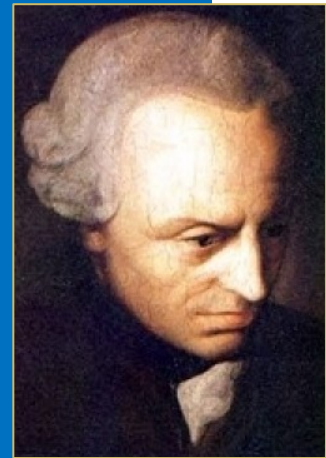


1632-1677

DEONTOLOGY

1

- For **Immanuel Kant** (1724-1804), the morally important thing is not consequences but *the way choosers think* when they make their choices
- Kant says that only one kind of thing is inherently good and that is the *good will*
- The *will*
 - found in humans but not nonhuman animals
 - is not a material thing
 - it is our power of rational moral choice
 - its presence gives humans their inherent dignity
- Moral rules aren't absolute (in space and time) - there are situations of *moral conflict*



DEONTOLOGY

2

- *What makes the will good?* The will is good when it acts out of duty, not out of inclination
- *What does it mean to act out of inclination?* To do something because it makes you feel good or because you hope to gain something from it
- *What does it mean to act out of duty?* Kant says this means that we should act from respect for the moral law
- *How do we do that?* We must know what the moral law is
- *How do we know that?* We use the "**Categorical Imperative**"

CATEGORICAL IMPERATIVE OF KANT

**ACT ONLY ON THOSE MAXIMS (OR RULES OF ACTION)
THAT YOU COULD AT THE SAME TIME WILL TO BE A
UNIVERSAL LAW**

It is a rule for testing rules, requiring the following steps:

1. Before you act, consider the *maxim* or principle on which you are (or intend to) acting
2. Generalize that principle

PERFORM TEST ONE

3. If, once generalized, it no longer makes any sense because it *contradicts itself*, then it is wrong to use that maxim as a basis for action

IF NECESSARY PERFORM TEST TWO (aka *reversibility*)

4. If the generalized version makes sense, then ask whether you would choose to live in a world where it was *followed by everyone*; if not, do not act on that maxim

EXAMPLE OF *FALSE PROMISE*

- Maxim: Somebody may make a *false promise* in order to reap financial gain
- Generalized: *Anyone* may make a false promise to get something she/he wants
- This is *self-contradictory* because, if anyone may make a *false promise*, nobody would take a promise seriously; promising becomes *meaningless*
- Result: I may *not act* on that maxim, since the maxim *fails Test One*
- Similarly: permitting *theft* or *lying* must be *rejected* (to safeguard the institution of property and truthfulness)

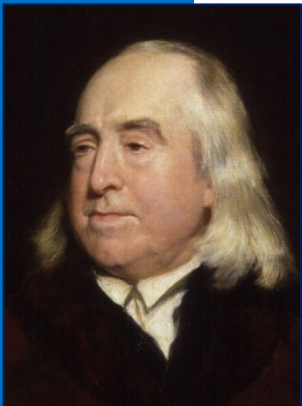
EXAMPLE OF THE „BAD SAMARITAN”

- Maxim: I may *refuse to help* another person in distress who cannot pay me even though I could do so at little cost to myself
- Generalized: Anyone may refuse to help another person in distress who cannot pay her even though *it would cost her little* to help
- Can it be *conceived*? - Yes
- Could you will this to be a *universal law*? – Probably not, because *you might find yourself* in a situation of extreme need and nobody else would help you
- Result: You *cannot act* on the "*Bad Samaritan*" maxim

UTILITARIANISM

1

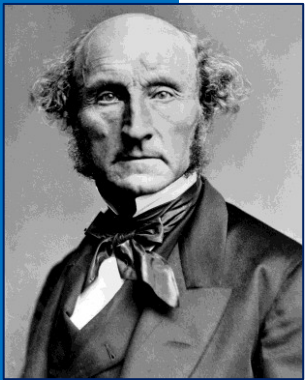
- Utilitarianism is a theory in normative ethics holding that the best moral action is the one that *maximizes utility*
- First **Jeremy Bentham** (1748-1832) declared, that utility is the aggregate *pleasure* after deducting *suffering* of all involved in any action
- It remains highly questionable, whether pleasures and sufferings of different persons could be *aggregated* or not



UTILITARIANISM

2

- **John Stuart Mill (1806-1873)** expanded this concept of utility to include not only the quantity, but *quality of pleasure*, while focusing on rules, instead of individual moral actions
- Utilitarianism states that the *consequences* of any action are the *only standard* of **right** and **wrong**



WHY ENGINEERS STUDY ETHICS?

1. **Help engineers as individuals to understand rationales, ideas and vocabulary of ethics**
2. **Help individuals to make sense of and evaluate from ethical point of view events observed in their own social, or professional environment**
3. **Provide intellectual ammunition to do battle with advocates of economic fundamentalism and others who violate ethical standards**
4. **Enable engineers as employees to recognize and expose potentially unethical choices within a firm**
5. **Enhance moral reflectiveness and strengthen moral courage to act**
6. **Help one handle an eventually unethical directive from a boss i. e. moral conflicts**



ATTITUDES TOWARD ETHICS

- **Amoral**

- **Business is business and law equals ethics**
- **Ethically unaware (apparently naïve)**
- **Business exists only to make money (economic fundamentalism)**

- **Immoral**

- **If you don't get caught it isn't **wrong****
- **Unethical for the firm / Unethical against the firm**

- **The Moral Employee is**

- **Ethically aware**
- **Proactive: acts to prevent immoral actions**
- **Acts in compliance with the Professional Code of Conduct**

ETHICS IS A PERSONAL RESPONSIBILITY

- Who is responsible for increasing our *ethical sensitivity* – how can they accomplish this?
- The responsibility rests first and foremost with us *as individuals*
- Ethics is a personal matter and we *cannot pass the buck* to others
- The individual must *consciously* focus on ethical concerns
- He/she must go beyond the rules, thinking about why the rules are necessary and written as they are – in other words, the *substance behind the form* should be understood

UNIVERSAL ETHICAL VALUES

(EXAMPLES 1)

- **Honesty**
adherence to the facts; fairness and straightforwardness of conduct (sincerity)
- **Integrity**
firm adherence to a code of especially moral or artistic values (incorruptibility)
- **Promise-keeping**
with every promise, you explicitly state that someone should put their trust in you, and everyone involved silently agrees that if you break the promise, you can't expect their trust anymore (trustworthiness)
- **Fidelity**
the quality or state of being faithful; accuracy in details (exactness)
- **Fairness**
the quality or state of being fair, i. e. lack of favoritism toward one side or another (remaining impartial in judgments)
- **Caring**
feeling or showing concern for or kindness to others (empathy)
- **Respect**
an act of giving particular attention (consideration), high or special regard (esteem) to all people

UNIVERSAL ETHICAL VALUES

(EXAMPLES 2)

- **Tolerance**

sympathy or indulgence for beliefs or practices differing from, or conflicting with one's own, i. e. an act of allowing and accepting some deviation from the generally approved standard

- **Responsibility**

the quality or state of being responsible: such as moral, legal, or mental accountability (reliability)

- **Due diligence**

the care that a reasonable person exercises to avoid harm to other persons or their property; research and analysis of a company or organization done in preparation for a business transaction

- **Striving for Excellence**

an important part of professionalism in any job; it involves trying to put quality into everything we do, and this attitude tends to separate the achievers, who make rapid strides in their career from others

- **Transparency and accountability**

the quality or state of being transparent, i. e. open for supervision and independent (public) control

ENGINEER'S ADDITION TO UNIVERSAL VALUES' LIST

- **Professional Personal Attributes**
 - ***Independent:*** not looking to others for one's opinions or for guidance in conduct; not requiring or relying on others
 - ***Unbiased:*** free from all prejudice and favoritism; eminently fair
 - ***Objective:*** of, relating to, or being an object, phenomenon, or condition in the realm of sensible experience, independent of individual thought and perceptible by all observers
 - ***Neutral:*** not engaged on either side (indifferent)
- **Our work should be**
 - ***Relevant:*** having significant and demonstrable bearing on the matter at hand
 - ***Reliable:*** suitable or fit to be referred, giving the same result on successive trials
 - ***Verifiable:*** capable of being verified by third parties
 - ***Representationally faithful:*** professional statements issued should be complete, error free and unbiased

ETHICS AND PROFESSIONALISM

Principles

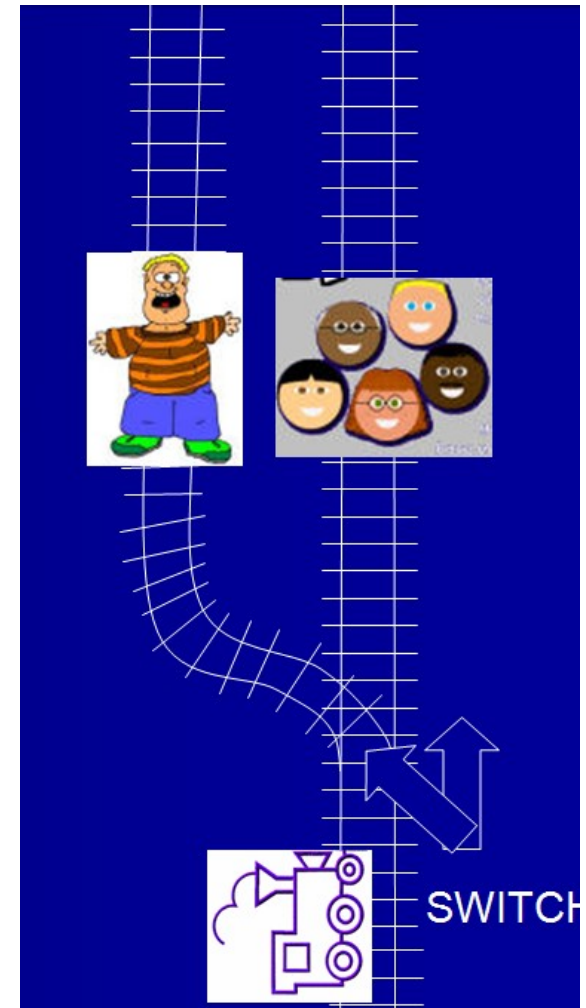
- *Responsibilities*
 - Exercise sensitive professional and moral judgment in professional activities
- *Public Interest*
 - Serve the public interest
 - Honor the public trust
 - Demonstrate firm commitment to professionalism
- *Integrity*
 - Maintain and broaden public confidence
 - Do what is right and just in the absence of rules, with highest sense of integrity

ETHICAL DILEMMAS

- Ethical dilemmas, also known as moral dilemmas, are situations in which there is a *choice to be made* between two options, neither of which resolves the situation in an ethically acceptable fashion
- Knowing how to best resolve difficult moral and ethical dilemmas is never easy especially when *any choice violates the societal and ethical standards* by which we have been taught to govern our lives
- Study of ethical dilemmas may be useful to develop *individual decision making*

THE TRAM DILEMMA

- An out of control tram will soon kill 5 people who are stuck on the track
- You can flick a switch to divert the tram to another track where only one person is stuck
- Should you flip the switch?
- *Should you kill one person to save five?*



THE SURGEON'S DILEMMA

- You are a surgeon with six patients
- Five of them need major organ transplants
- The sixth, an ideal donor for all the relevant organs, is in hospital for a minor operation
- *Should you kill one person to save five?*



THE JUNGLE DILEMMA

1

- You are trekking alone in the jungle and kidnapped by a troop of rebels
- The rebels are rounding up six villagers and the officer offers you freedom, provided you kill one
- *Should you kill one person to save five?*



THE JUNGLE DILEMMA

2

- What if there are only **2** villagers?
- What if there are **10** villagers?
- What if there are **100** villagers?
- Can you ever kill **one** innocent person to save **many**?



FOOD FOR THOUGHT

- Quite often at least *two moral theories* seem plausible...
- But they *disagree* sometimes
- So, they can't *both* be right all of the time!
- Is there a **right** and **wrong** in such situations?
- Are some acts *just right* or **wrong** (without explanation)?
- What about killing civilians (war in Siria) or torturing innocents (Guantanamo) – for a certain (justifiable?) reason?

