



Ethics in computer science: Philosophical Bases

Karën Fort

karen.fort@loria.fr / <https://members.loria.fr/KFort>



Sources of inspiration

- ▶ Coursera MOOC from the University of Geneva (2018): *Le Bien, le Juste, l'Utile. Introduction aux éthiques philosophiques*
- ▶ *Ethical IT Innovation* (2016). S. Spiekermann. CRC Press.
- ▶ *L'éthique aux interfaces entre biologie/santé et sciences de l'information* (2016). H. Chneiweiss. (with his approval)
- ▶ Wikipedia

Definitions

The Question Behind

Virtue Ethics

Deontological (duty) Ethics

Utilitarianism

A Question of Time

To finish

Ethics?

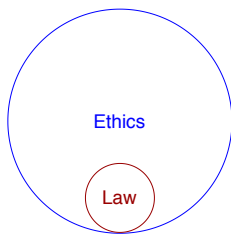
soft law

The screenshot shows the Merriam-Webster website interface. At the top, there is a dark blue navigation bar with links for 'JOIN MWU', 'GAMES', 'BROWSE THESAURUS', 'WORD OF THE DAY', 'VIDEO', and 'WORDS AT P'. Below this is the Merriam-Webster logo, which includes the text 'Merriam-Webster' and 'SINCE 1828'. A search bar contains the word 'ethics'. Below the search bar are two tabs: 'DICTIONARY' (which is selected) and 'THESAURUS'. On the left side of the page, there is a vertical sidebar with several red circular icons: Facebook, Twitter, a group of people, a heart, and a 'CITE' button. Below these icons is a blue circular icon with the number '7'. The main content area is titled 'Definition of ETHIC' and contains three numbered definitions:

- 1** *ethics plural in form but singular or plural in construction* : the discipline dealing with what is good and bad and with moral duty and obligation
- 2** **a** : a set of moral principles : a theory or system of moral values • the present-day materialistic *ethic* • an old-fashioned work *ethic* —often used in plural but singular or plural in construction • an elaborate *ethics* • Christian *ethics*
b *ethics plural in form but singular or plural in construction* : the principles of conduct governing an individual or a group • professional *ethics*
c : a guiding philosophy
d : a consciousness of moral importance • forge a conservation *ethic*
- 3** *ethics plural* : a set of moral issues or aspects (such as rightness) • debated the *ethics* of human cloning

<https://www.merriam-webster.com/dictionary/ethics>

Ethics is not law



Law: sets minimum standards (rules and regulations)

vs

Ethics: sets maximum standards

Why should you care?

- ▶ because you are a citizen, not only a researcher
- ▶ because if you don't as specialists, others with less knowledge will

Definitions

The Question Behind

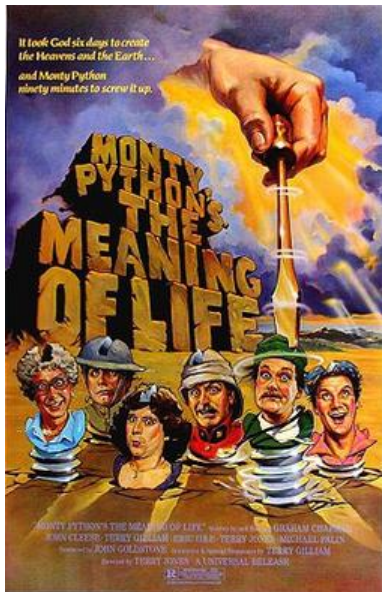
Virtue Ethics

Deontological (duty) Ethics

Utilitarianism

A Question of Time

To finish



(c) 1983 Universal City Studios. All rights reserved.

What is a good life?



How humans should best live (to achieve this **good** life)

Definitions

The Question Behind

Virtue Ethics

Origins

Principles

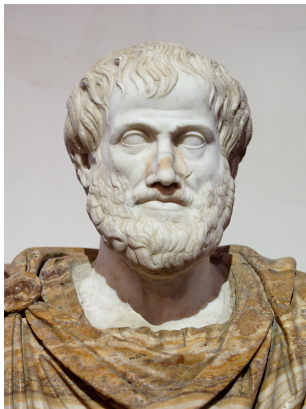
Deontological (duty) Ethics

Utilitarianism

A Question of Time

To finish

Aristotle (384–322 BC)



After Lysippos - Jastrow (2006)

Work on ethics

Nicomachean Ethics

Ethics is about happiness, feeling good

Which "good"?

- ▶ each (intermediary) good (pleasure, money, etc) is linked to another
- ▶ except the **sovereign good**: supreme good, not linked to another

Inspired by nature (proper function of a being):

- ▶ plants: a good life is to grow, to produce fruits
- ▶ dogs: satisfaction of senses
- ▶ specific for human: choose our life and the goal of our life ([practical reason](#))

⇒ thinking in terms of being a "good" person

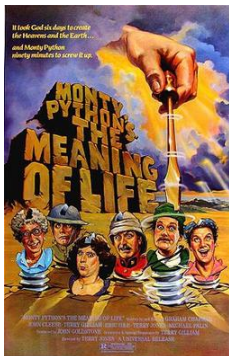
Ethics is about action (not theory)

Do the best thing, make the best choices: a virtuous man is a virtuoso (perfectionism)

To achieve this:

- ▶ exercise being virtuous
- ▶ be surrounded by virtuous persons

Main virtue = PRUDENCE (not too much, not too little: middle ground)



(c) 1983 Universal City Studios. All rights reserved.

Is happiness our goal in life?

Definitions

The Question Behind

Virtue Ethics

Deontological (duty) Ethics

Origins

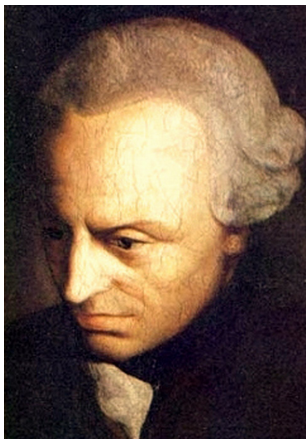
Principles

Utilitarianism

A Question of Time

To finish

Immanuel Kant (1724-1804)



Work on ethics

Critique of Pure Reason

Critique of Practical Reason

The Imperative of the Practical Reason

Inflexible order of nature → to be really free I have to reason (practically) and act accordingly, without being the slave of my passions

- ▶ submission to duty (internal law: wanting to do good) elevates us (perfectionism)
- ▶ test: universalization (care for others)

⇒ thinking in terms of the "right" action

Kant's ethics

- ▶ Perfectionist: the human being should aim at being better
- ▶ Moral principle is a priori and **absolute** ("you shall not kill/steal")

Contemporary Deontological Ethics

Opening towards two dimensions:

- ▶ Jürgen Habermas (1929-): open to other people (intra-generational ethics)
 - ▶ discourse ethics: a respectful, symmetric, authentic discussion with all concerned will generate the best solution
- ▶ Hans Jonas (1903-1993): open to other generations (inter-generational ethics)
 - ▶ ethics of responsibility: preserve what is fragile and vulnerable
 - precautionary principle

Definitions

The Question Behind

Virtue Ethics

Deontological (duty) Ethics

Utilitarianism

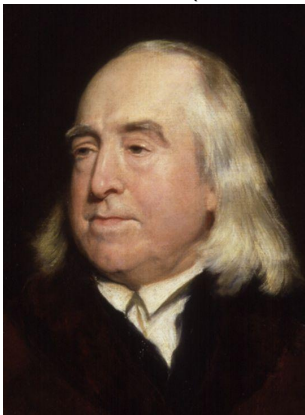
Origins

Principles

A Question of Time

To finish

Jeremy Bentham (1748-1832)

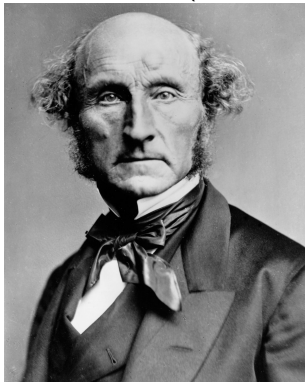


By Henry William Pickersgill

Work on ethics

The Principles of Morals and
Legislation

John Stuart Mill (1806-1873)



London Stereoscopic Company - Hulton Archive

Work on ethics

Essay on Bentham

Bentham's Utilitarianism

Scientific, truly altruistic, method:

- ▶ observation of human behaviours: they want **pleasure**
- ▶ counting positive and negative points (money) for each decision to be made
- ▶ **each person counts for 1** (nobody matters more than the others, even the agent)

⇒ maximize pleasure for a maximum of persons (beings)

⇒ **no** perfectionism

⇒ thinking in terms of the consequences of an action

Mill's Utilitarianism

Maximize **happiness** (not pleasure)

Adds **virtue** as part of happiness (hierarchy in pleasures)

Contemporary Utilitarianism: consequentialism

Only consequences matter

Criteria: satisfaction of preferences, well-being, still not moral

But no more calculus

Which consequences matter?

- ▶ everybody counts for 1: problem (1 person can be killed to save more)
- ▶ average vs addition, negative?
- ▶ of each act, for the agent (if the agent kill 1 person it has really negative effects on the agent)
- ▶ virtues with good consequences (virtue consequentialism)

Definitions

The Question Behind

Virtue Ethics

Deontological (duty) Ethics

Utilitarianism

A Question of Time

Is (techno)Science Necessarily Good?
(some) Turning Points in the XXth century

To finish

Is (the outcome of) science necessarily good?

Are there things that are possible to do that we agree we should not?



(c) <https://www.starwars.com/databank/clone-troopers>

Is (the way we do) science necessarily good?

Are there things that are possible to do that we agree we should not?

The Nuremberg Code

originated before, but finalized during "the Doctors' Trial" (1947)



The Nuremberg Code

originated before, but finalized during "the Doctors' Trial" (1947)



10 main principles, including:

- ▶ Respect of the subject:
 - ▶ informed consent
 - ▶ freedom to quit the experiment
- ▶ Beneficence:
 - ▶ favorable risks/benefits balance
- ▶ Justice:
 - ▶ positive results for society

The Belmont Report [Bel, 1979]

originated from "Tuskegee Syphilis Experiment" (1932-1972)



By National Archives Atlanta, GA

The Belmont Report [Bel, 1979]

originated from "Tuskegee Syphilis Experiment" (1932-1972)



The report includes 3 main principles:

- ▶ Respect of the subject:
 - ▶ informed consent
- ▶ Beneficence:
 - ▶ favorable risks/benefits balance
- ▶ Justice:
 - ▶ fair selection of the subjects

Definitions

The Question Behind

Virtue Ethics

Deontological (duty) Ethics

Utilitarianism

A Question of Time

To finish

WYHTR: What You Have To Remember

Opening the ethical chakras: not just consequentialism



Ethics in Bricks

@EthicsInBricks

...

What is good?

Kant: Act in line with duties

Aristotle: Strive for excellence

Bentham: Do the math

Arendt: Think

[Traduire le Tweet](#)



7:54 AM · 8 juin 2022 · Twitter for iPhone



(1979).

The Belmont report : Ethical principles and guidelines for the protection of human subjects of research.