

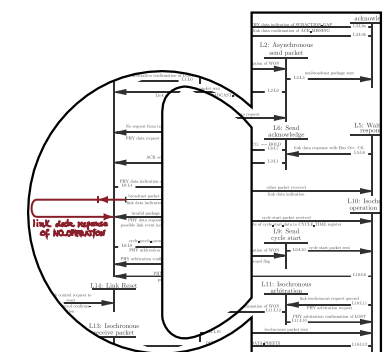


Ethics for Nerds

An Advanced Course in Computer Science
Summer Semester 2020

Ethics 6.1
Wrap-up

Morals and Law



Prof. Holger Hermanns,
Kevin Baum, Sarah Sterz



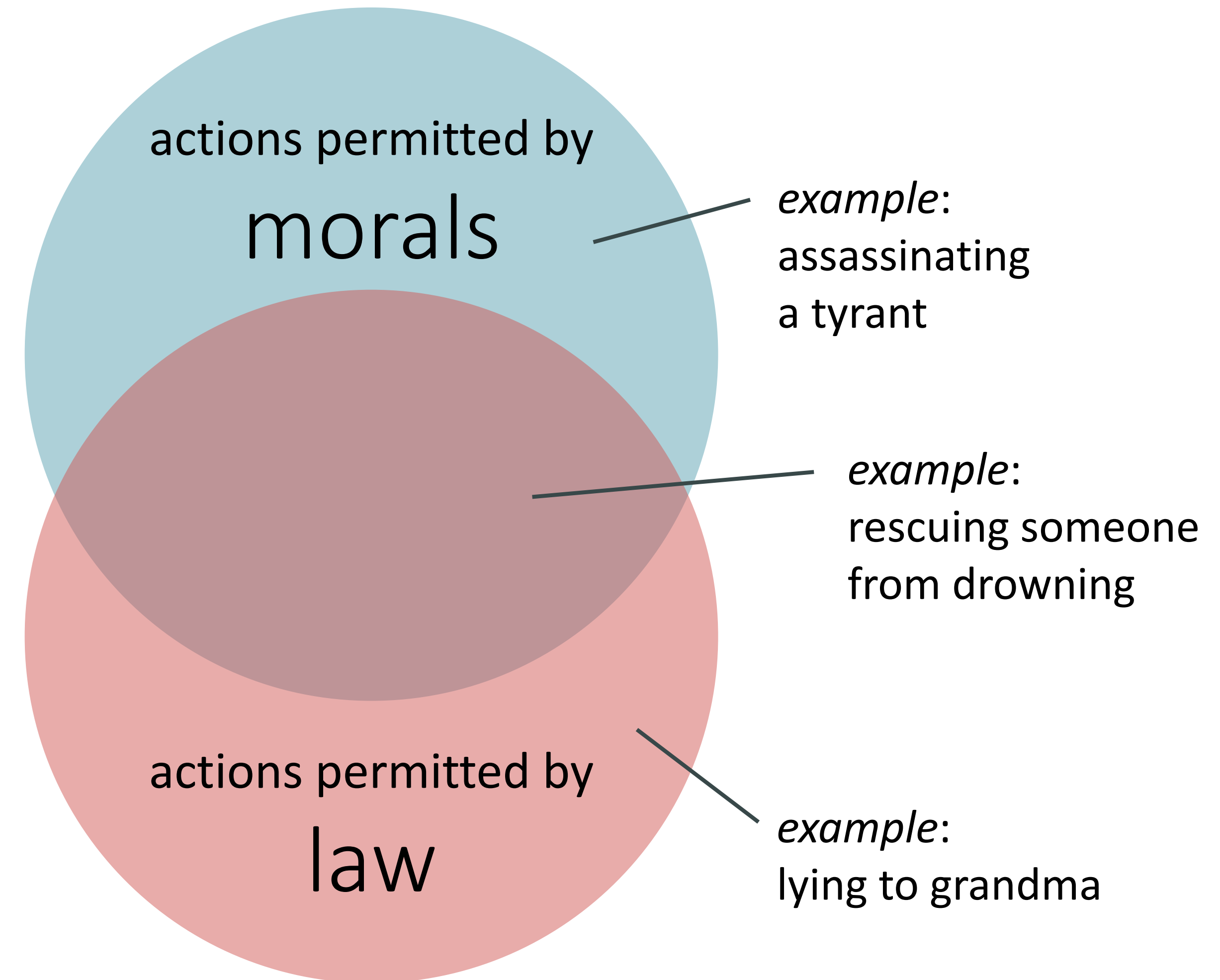
UNIVERSITÄT
DES
SAARLANDES

Morals



Law

but still
(even if some
laws are justified)



MORALS AND LAW



Why does law need to be justified?



Anything can be made a law, but not everything should be a law.

Example: Nazi laws



Source: Deutsches Bundesarchiv

He is a good reminder of why you should not use laws to argue for the moral status of an action!



For what do we then need law?



Law helps to prevent that people do what we do not want them to do.

Example: Hannibal Lecter



Source: kino.de

Ethics for Nerds



Can good laws substitute morals?

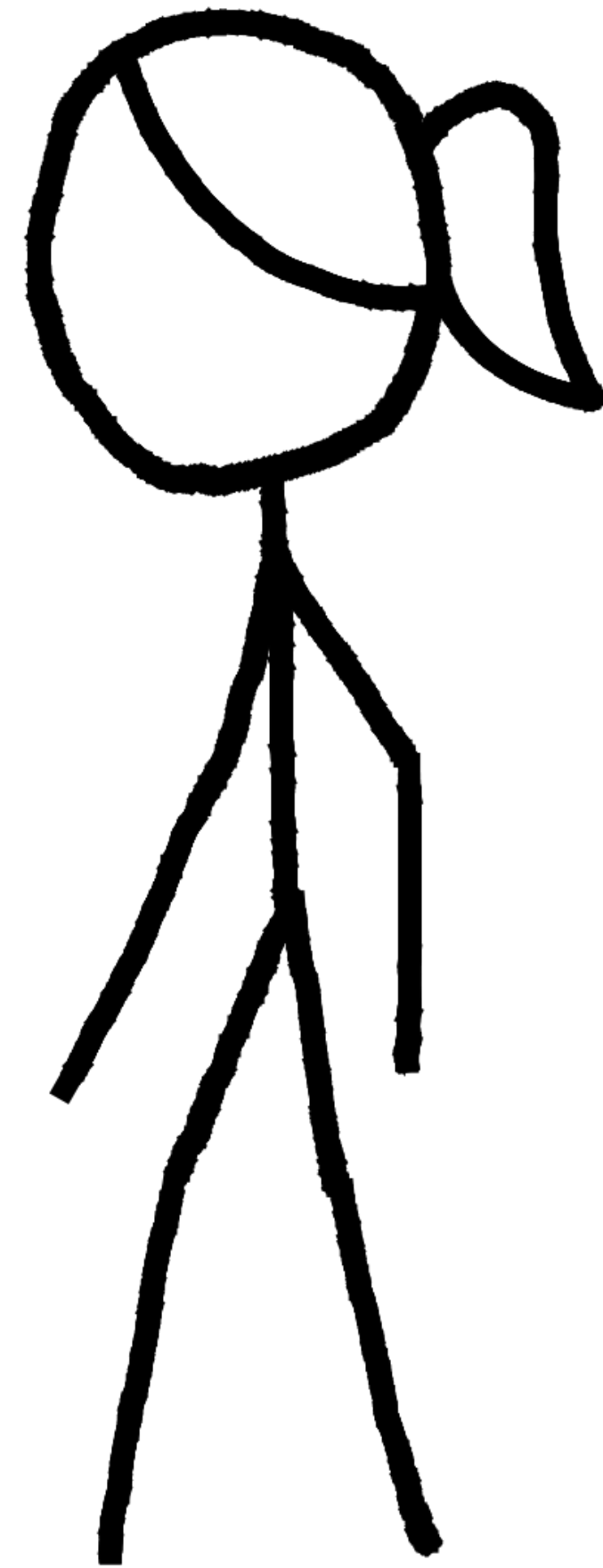


No, because not everything that is morally right or wrong should be regulated by law.

Example: lying at grandma

Susie is very poor, and can either

- steal unreasonably expensive medicine to save her pet hamster, or
- refrain from stealing the medicine and let her pet hamster die



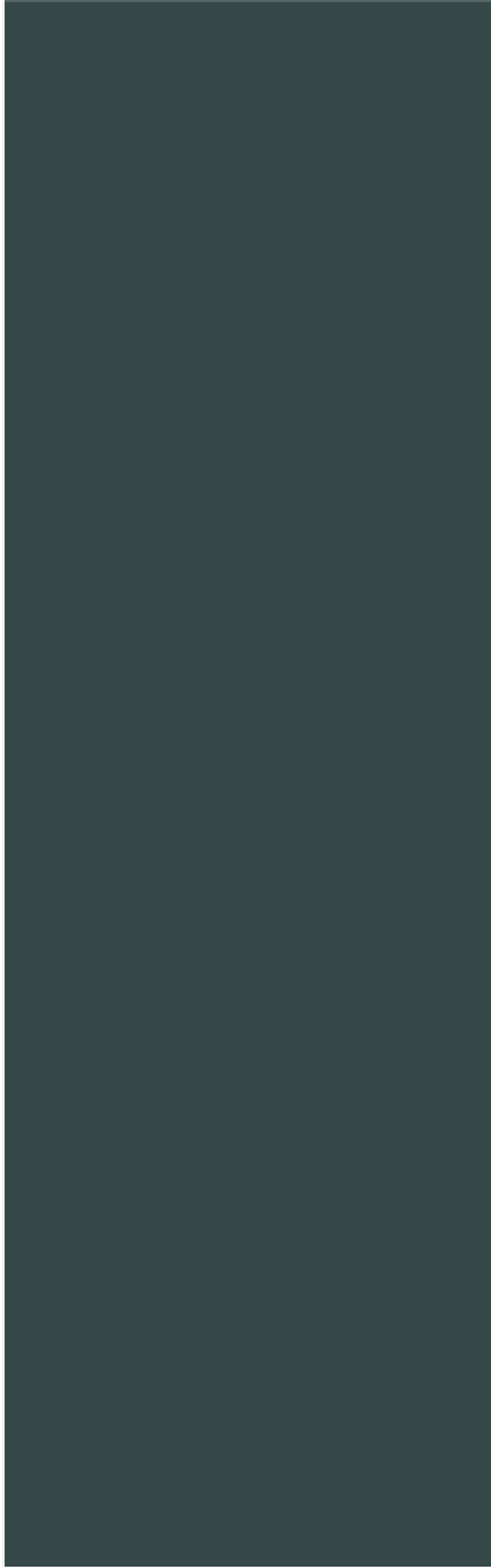
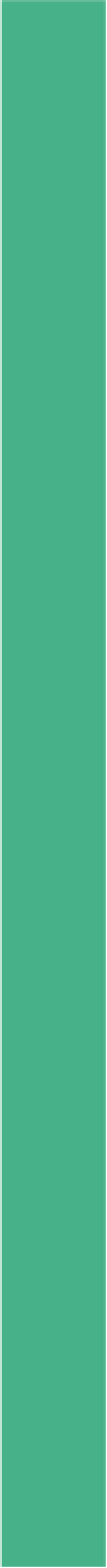
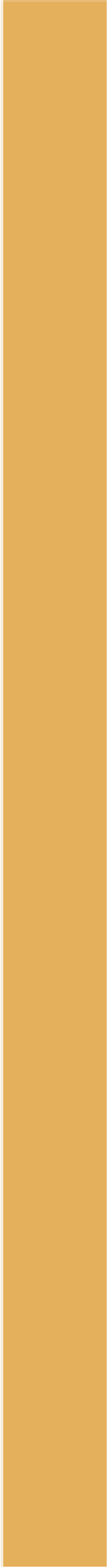
Taking into account the legal consequences of actions is ok and even necessary sometimes

“[...] Susie probably has to face punishment if she is caught, as stealing is illegal. If the benefit of saving the hamster is outweighed by the harm of the punishment Susie would have to face, she ought not to steal the medicine. [...]”



Using the law itself as a reason is not ok

“[...] Stealing is forbidden by law, thus Susie ought not to steal the medicine for her pet hamster. [...]”



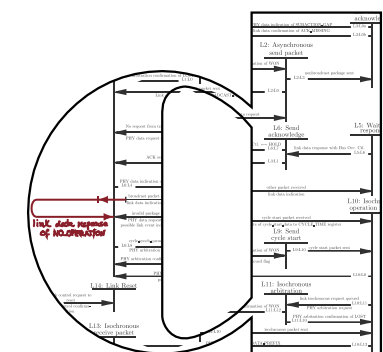


Ethics for Nerds

An Advanced Course in Computer Science
Summer Semester 2020

Ethics 6.2
Wrap-up

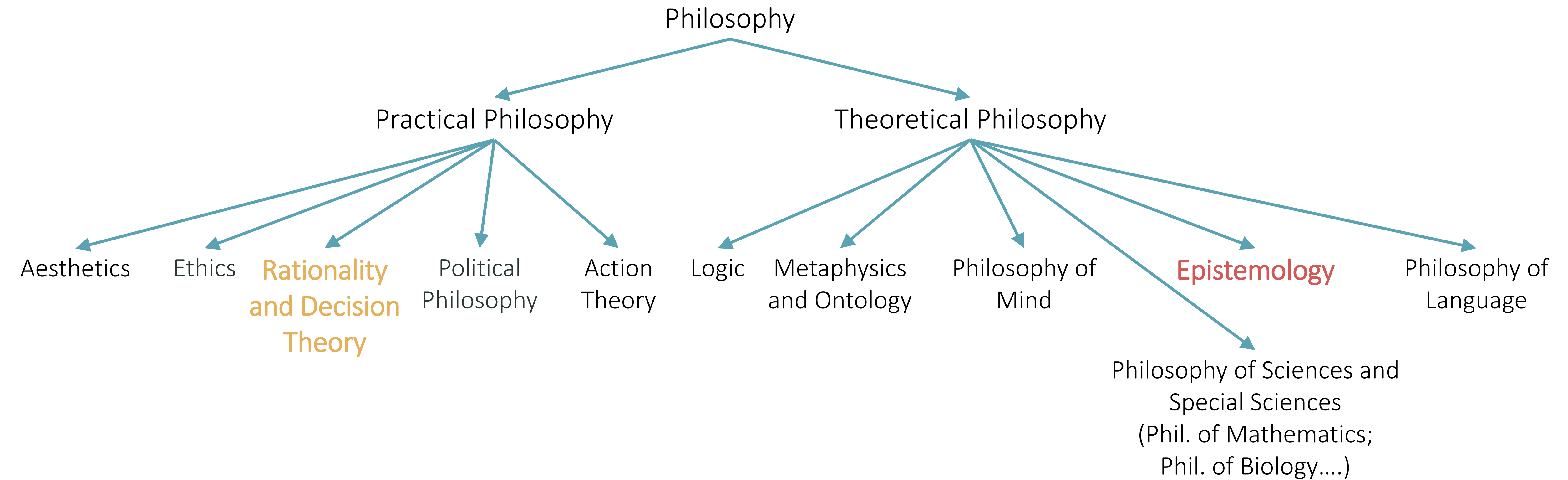
Rationality



Prof. Holger Hermanns,
Kevin Baum, Sarah Sterz



UNIVERSITÄT
DES
SAARLANDES



What are characteristic uses of the term “rational”?

- “Calm down! Your emotions stop you from making a *rational* decision.”
- “There has to be a *rational* explanation for this phenomenon other than supernatural creatures!”
- “It’s irrational to think that Bill Gates is responsible for the Covid-19 outbreak.”
- “Cauchy sequences can be used to construct the real numbers from the *rational* numbers.”
- “Humans are *rational* beings.”
- “My aunt isn’t a very *rational* person.”
- “The quotient of two polynomials is a *rational* function.”
- “ π is not a *rational* number, but 42 is.”
- “The *rational* numbers include the integers.”
- “If you take homeopathy, you are not acting very *rationally*.”
- “It was *rational* for her to undergo surgery.”

What are characteristic uses of the term?

- “Calm down! Your emotions stop you from making a *rational* decision.”
- “There has to be a *rational* explanation for this phenomenon other than supernatural creatures!”
- “It’s irrational to think that Bill Gates is responsible for the Covid-19 outbreak.”
- ~~“Cauchy sequences can be used to construct the real numbers from the *rational* numbers.”~~
- “Humans are *rational* beings.”
- “My aunt isn’t a very *rational* person.”
- ~~“The quotient of two polynomials is a *rational* function.”~~
- ~~“ π is not a *rational* number, but 42 is.”~~
- ~~“The *rational* numbers include the integers.”~~
- “If you take homeopathy, you are not acting very *rationally*.”
- “It was *rational* for her to undergo surgery.”

What are characteristic uses of the term?

- “Calm down! Your emotions stop you from making a *rational* decision.”
- “There has to be a *rational* explanation for this phenomenon other than supernatural creatures!”
- “It’s irrational to think that Bill Gates is responsible for the Covid-19 outbreak.”
- “Humans are *rational* beings.”
- “My aunt isn’t a very *rational* person.”
- “If you take homeopathy, you are not acting very *rationally*.”
- “It was *rational* for her to undergo surgery.”

So what could “rational” mean?

- having a good understanding of the world and acting accordingly? → No.
- acting in accordance with reason and evidence? → No.
- acting based on reason and evidence? → No.
- being in accordance with reason and evidence? → No.
- being based on reason and evidence? → No.

What are characteristic uses of the term?

- “Calm down! Your emotions stop you from **making a rational decision.**”
- “There has to be **a rational explanation** for this phenomenon other than supernatural creatures!”
- “It’s **irrational to think** that Bill Gates is responsible for the Covid-19 outbreak.”
- “Humans are **rational beings.**”
- “My aunt isn’t **a very rational person.**”
- “If you take homeopathy, you are **not acting very rationally.**”
- “**It was rational for her** to undergo surgery.”

A distinction is necessary (very rough, but sufficient for the lecture)

being rational (for e.g. beliefs or explanations)

being rational (for agents)

deciding/acting rationally

RATIONALITY

Practical Rationality (working definition)

A's φ -ing is practically rational iff φ -ing is in her best interest.

Instrumental Rationality (working definition)

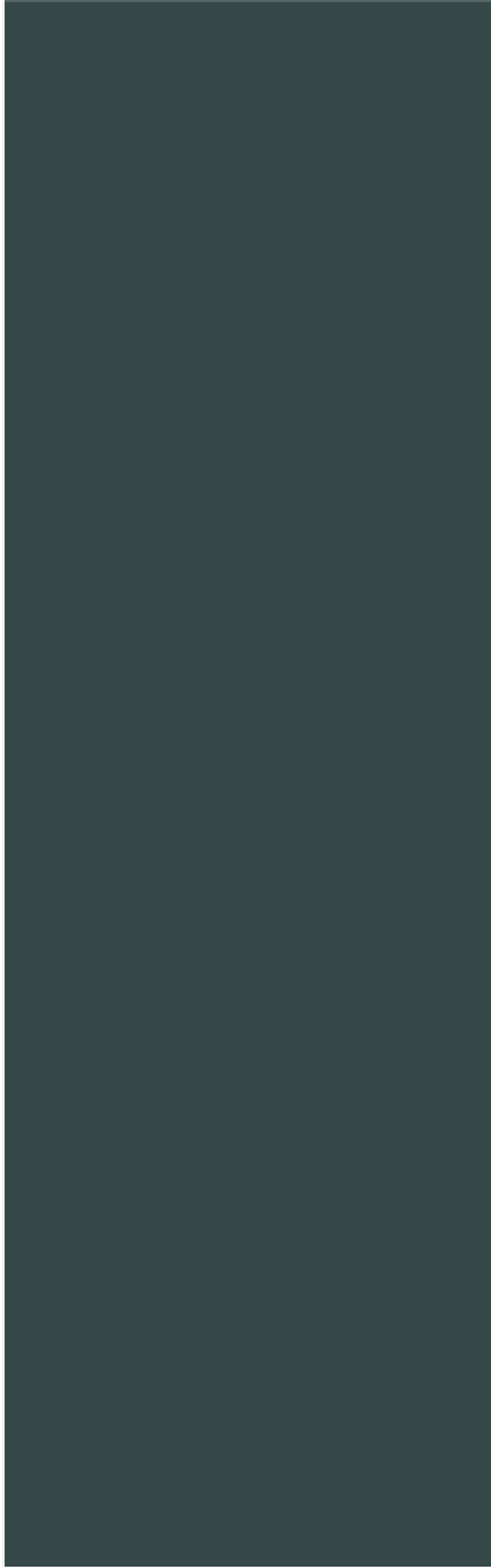
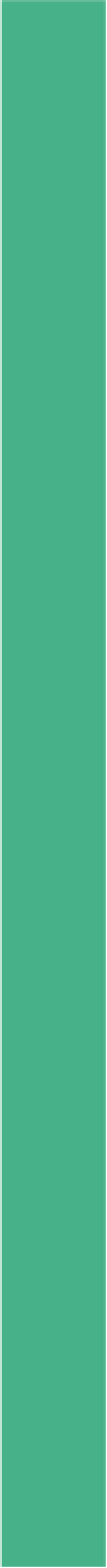
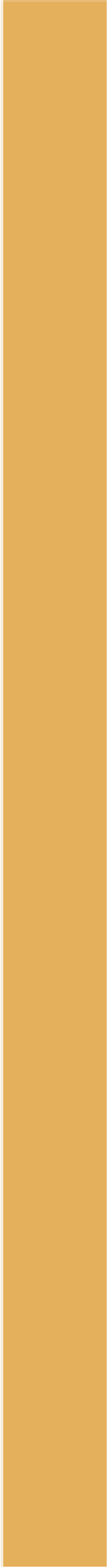
A is instrumentally rational with regard to C iff she adopts suitable means to her ends with regard to C.

Epistemic rationality (working definition)

A is epistemically rational with regard to C iff she is sufficiently responsive to reason and evidence with regard to C.

mainly from
practical
philosophy

mainly from
theoretical
philosophy





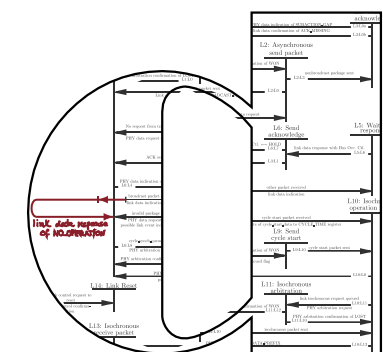
Ethics for Nerds

An Advanced Course in Computer Science
Summer Semester 2020

Ethics 6.3

Wrap-up

Codes of Ethics

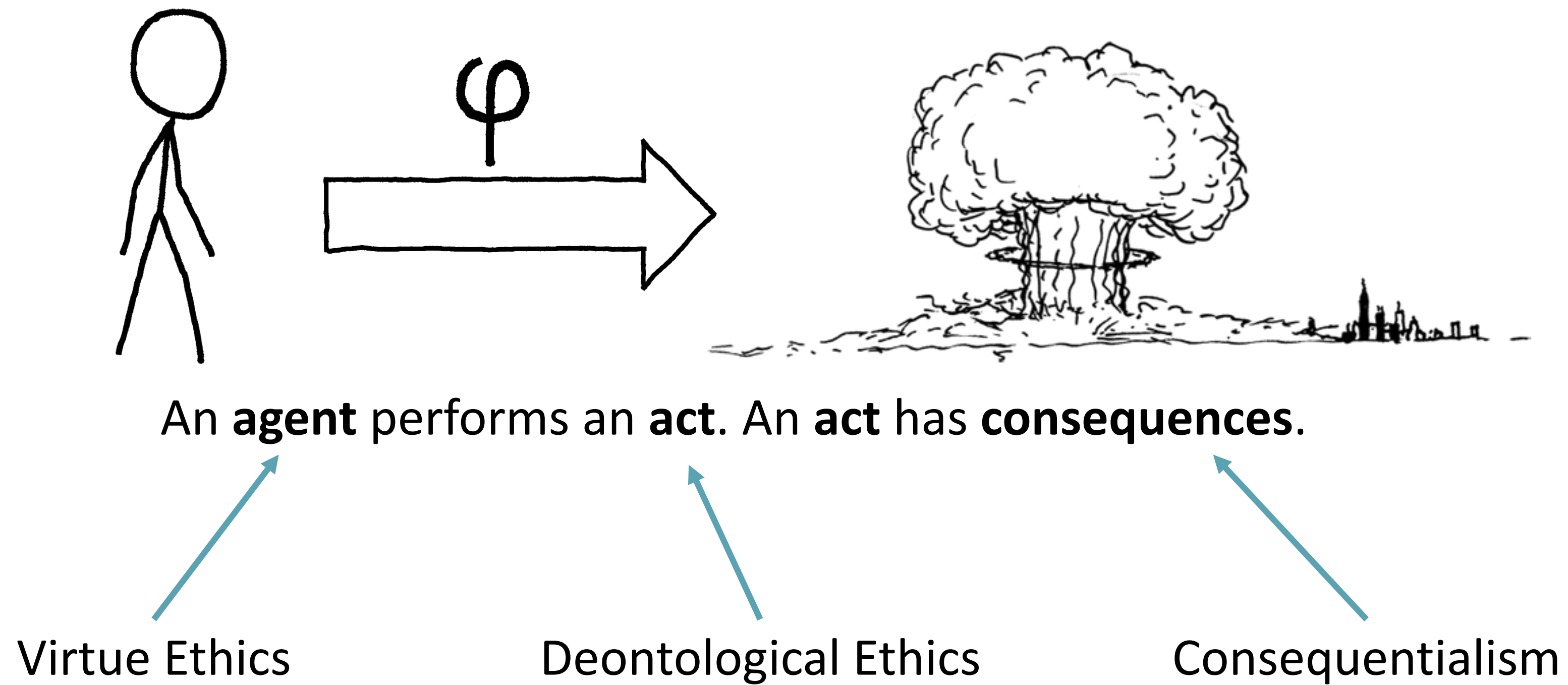


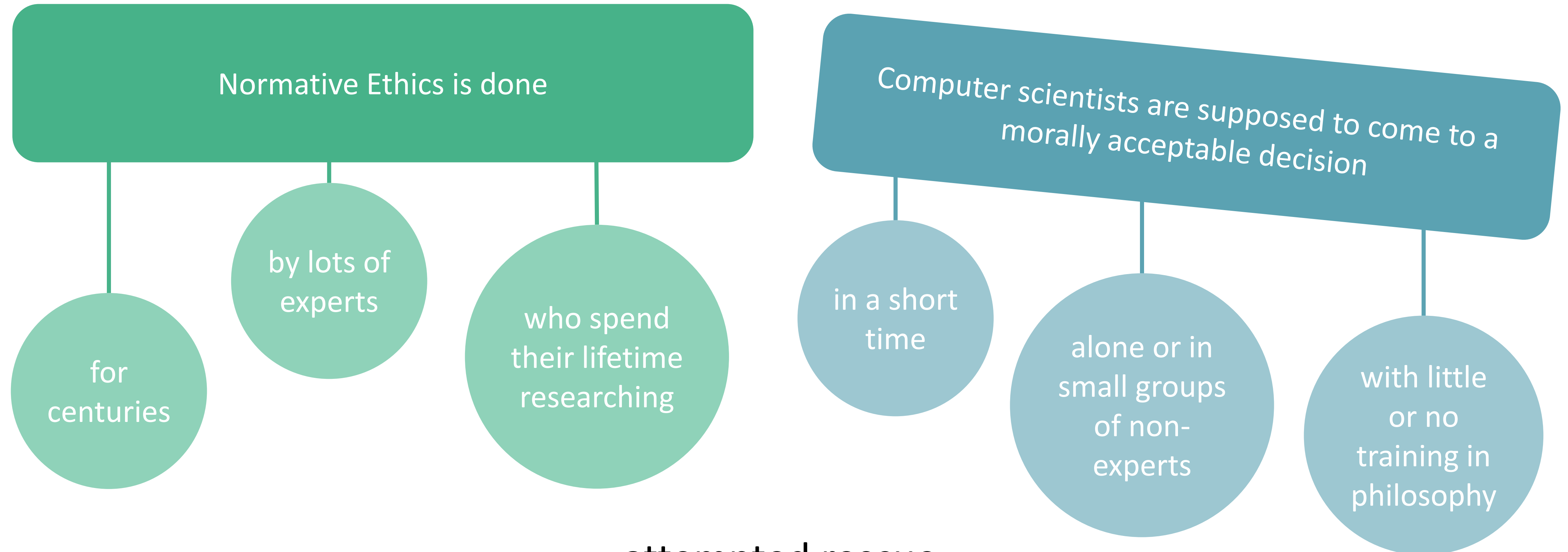
Prof. Holger Hermanns,
Kevin Baum, Sarah Sterz



UNIVERSITÄT
DES
SAARLANDES

A Classical Diagram

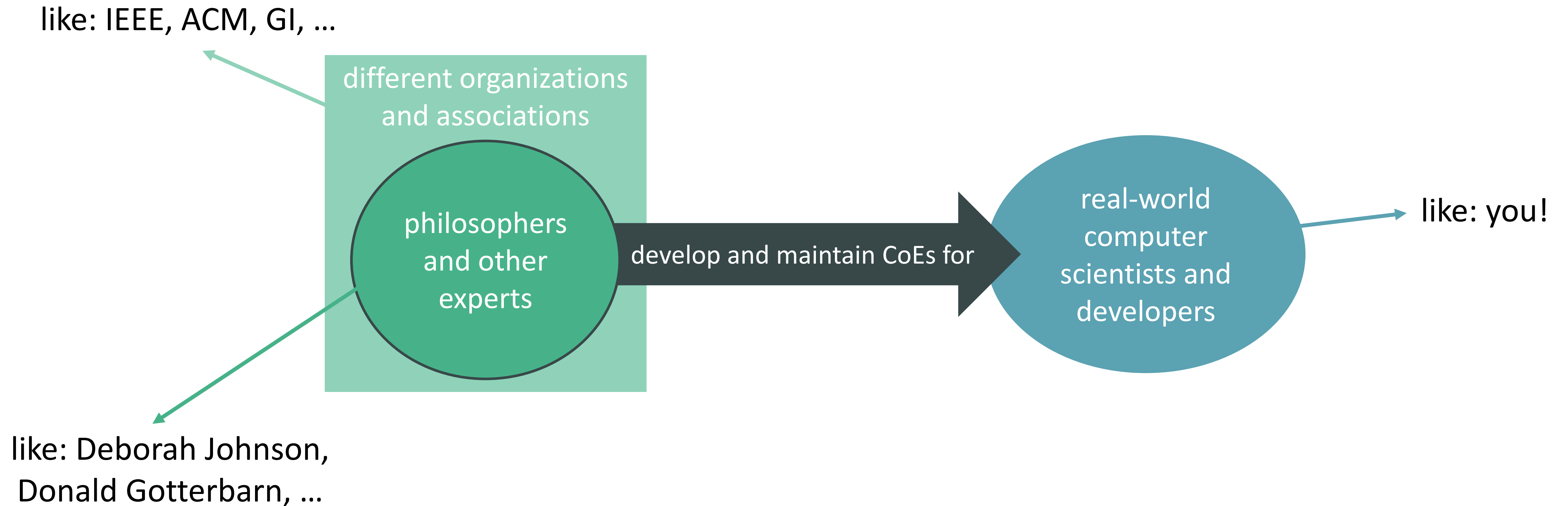




attempted rescue:
Codes of Ethics

set of rules and principles for a professionals

CODES OF ETHICS



https://www.ieee.org/about/corporate/governance/p7-8.html

[Home](#) > [About](#) > [Corporate](#) > [Governance](#)

IEEE Code of Ethics

[Related information](#) >

The following is from the IEEE Policies, Section 7 - Professional Activities (Part A - IEEE Policies).

7.8 IEEE Code of Ethics

We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members, and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:

1. to hold paramount the safety, health, and welfare of the public, to strive to comply with ethical design and sustainable development practices, and to disclose promptly factors that might endanger the public or the environment;
2. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;
3. to be honest and realistic in stating claims or estimates based on available data;
4. to reject bribery in all its forms;
5. to improve the understanding by individuals and society of the capabilities and societal implications of conventional and emerging technologies, including intelligent systems;
6. to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;
7. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;
8. to treat fairly all persons and to not engage in acts of discrimination based on race, religion, gender, disability, age, national origin, sexual orientation, gender identity, or gender expression;

Governance Procedures

- > [Board 30-Day Review/Approval Process](#)
- > [Revisions to IEEE Governing Documents](#)
- > [Glossary of Terms \(PDF, 62 KB\)](#)
- > [IEEE Email Terms and Conditions](#)

CODES OF ETHICS



The screenshot shows the ACM website's 'Code of Ethics and Professional Conduct' page. The browser address bar displays 'https://www.acm.org/code-of-ethics'. The page header includes the ACM logo, the text 'Association for Computing Machinery', the tagline 'Advancing Computing as a Science & Profession', and links to 'Digital Library', 'CACM', 'Queue', 'TechNews', and 'Career Center'. A navigation bar contains links for 'Join', 'Volunteer', 'myACM', and a 'Search' button. Below this is a dark navigation menu with links for 'ABOUT ACM', 'MEMBERSHIP', 'PUBLICATIONS', 'SIGS', 'CONFERENCES', 'CHAPTERS', 'AWARDS', 'EDUCATION', 'LEARNING CENTER', 'PUBLIC POLICY', and 'DIVERSITY & INCLUSION'. The main content area has a breadcrumb trail 'Home > Code Of Ethics' and a large blue banner with the title 'ACM Code of Ethics and Professional Conduct'. Below the banner, the title is repeated, followed by the 'Preamble' section. The preamble text states that computing professionals' actions change the world and that the Code expresses the conscience of the profession. It also explains that the Code is designed to inspire and guide ethical conduct. A sidebar on the right titled 'On This Page' lists the 'Preamble' and '1. GENERAL ETHICAL PRINCIPLES', with the latter containing sub-points 1.1 through 1.5. The bottom of the page shows the start of 'Section 1' which outlines fundamental ethical principles.

https://www.acm.org/code-of-ethics

Association for Computing Machinery *Advancing Computing as a Science & Profession*

Digital Library CACM Queue TechNews Career Center

Join Volunteer myACM Search

ABOUT ACM MEMBERSHIP PUBLICATIONS SIGS CONFERENCES CHAPTERS AWARDS EDUCATION LEARNING CENTER PUBLIC POLICY DIVERSITY & INCLUSION

Home > Code Of Ethics

ACM Code of Ethics and Professional Conduct

ACM Code of Ethics and Professional Conduct

Preamble

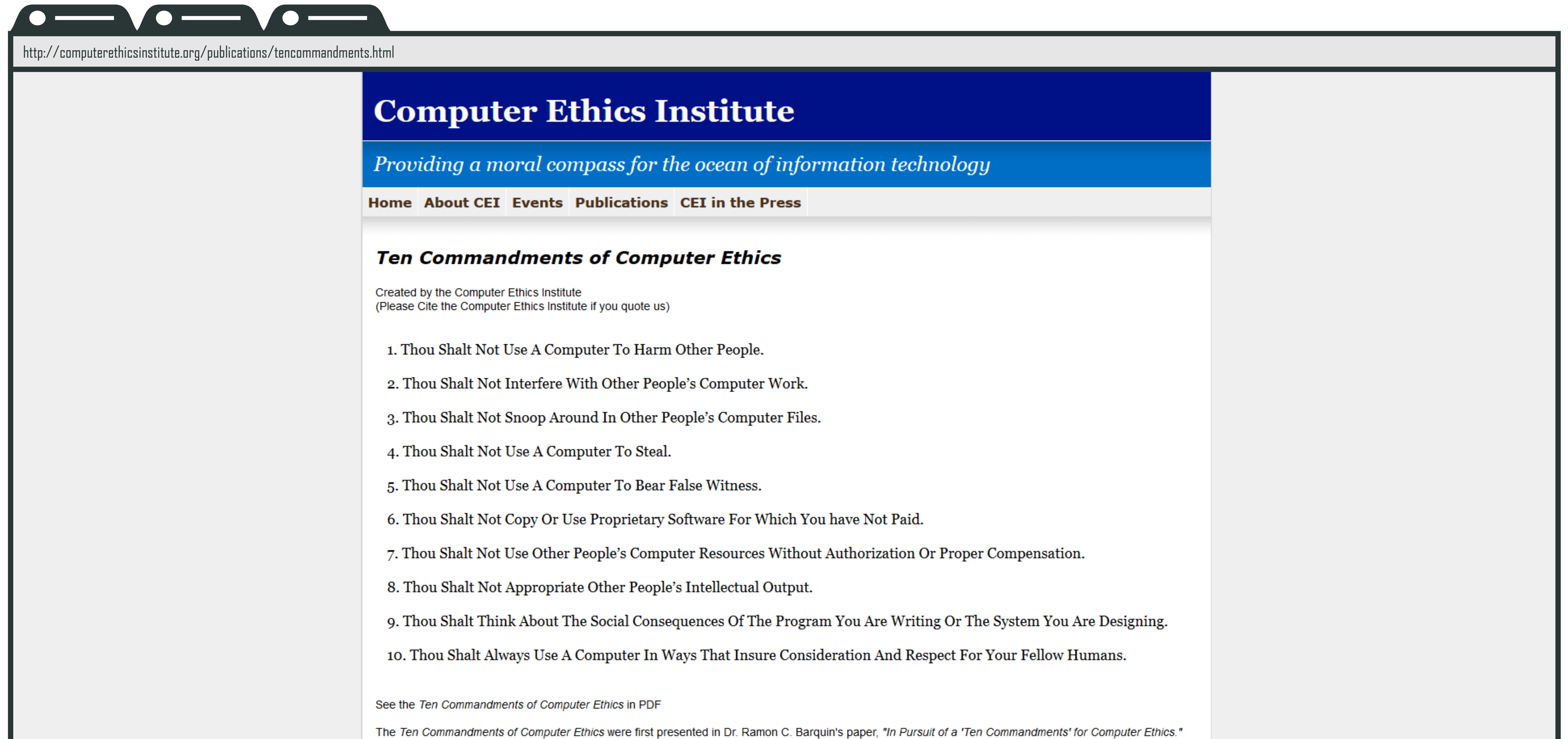
Computing professionals' actions change the world. To act responsibly, they should reflect upon the wider impacts of their work, consistently supporting the public good. The ACM Code of Ethics and Professional Conduct ("the Code") expresses the conscience of the profession.

The Code is designed to inspire and guide the ethical conduct of all computing professionals, including current and aspiring practitioners, instructors, students, influencers, and anyone who uses computing technology in an impactful way. Additionally, the Code serves as a basis for remediation when violations occur. The Code includes principles formulated as statements of responsibility, based on the understanding that the public good is always the primary consideration. Each principle is supplemented by guidelines, which provide explanations to assist computing professionals in understanding and applying the principle.

Section 1 outlines fundamental ethical principles that form the basis for the remainder of the Code.

On This Page

- Preamble
- 1. GENERAL ETHICAL PRINCIPLES.
 - 1.1 Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing.
 - 1.2 Avoid harm.
 - 1.3 Be honest and trustworthy.
 - 1.4 Be fair and take action not to discriminate.
 - 1.5 Respect the work required to produce new ideas, inventions, creative works, and innovation artifacts.



The screenshot shows a web browser window with the address bar displaying `https://gi.de/ueber-uns/organisation/unsere-ethischen-leitlinien`. The website header includes the logo 'GESELLSCHAFT FÜR INFORMATIK GI' and a navigation menu with links: AKTUELLES, THEMEN, NETZWERK, SERVICE, ÜBER UNS, and a search icon. Two yellow buttons are visible: 'MITGLIED WERDEN' and 'MEINE GI'. A large blue banner with a geometric pattern features a yellow box with the text 'ÜBER UNS'. Below the banner is a secondary navigation bar with links: Leitung, Organisation (highlighted), Gliederungen, Personen, Partner, Historie, Jobs, and Kontakt. The main content area is titled 'Ethische Leitlinien' and contains a paragraph: 'Die Ethischen Leitlinien der Gesellschaft für Informatik e.V. (GI) wurden am 29. Juni 2018 vom Präsidium der GI verabschiedet. Sie ersetzen die 1994 erstmals formulierten und 2004 überarbeiteten Leitlinien und wurden maßgeblich von der Fachgruppe „Informatik und Ethik“ unter Beteiligung der Mitglieder der GI entwickelt.' At the bottom of the content area are two blue buttons: 'Go to english version >' and 'Zum Glossar'.

https://gi.de/ueber-uns/organisation/unsere-ethischen-leitlinien

GESELLSCHAFT FÜR INFORMATIK **GI** AKTUELLES THEMEN NETZWERK SERVICE ÜBER UNS 🔍

MITGLIED WERDEN 🔒 MEINE GI

ÜBER UNS

Leitung ▾ **Organisation** ▾ Gliederungen ▾ Personen ▾ Partner ▾ Historie Jobs Kontakt

Ethische Leitlinien

Die Ethischen Leitlinien der Gesellschaft für Informatik e.V. (GI) wurden am 29. Juni 2018 vom Präsidium der GI verabschiedet. Sie ersetzen die 1994 erstmals formulierten und 2004 überarbeiteten Leitlinien und wurden maßgeblich von der Fachgruppe „Informatik und Ethik“ unter Beteiligung der Mitglieder der GI entwickelt.


[Go to english version >](#)

[Zum Glossar](#)

https://ethics.acm.org/code-of-ethics/software-engineering-code/

ACM Ethics


The Official Site of the Association for Computing Machinery's Committee on Professional Ethics



AboutCode of EthicsEnforcementIntegrity Project

The joint ACM/IEEE-CS Software Engineering Code was published as: Don Gotterbarn, Keith Miller, and Simon Rogerson. 1997. Software engineering code of ethics. *Commun. ACM* 40, 11 (November 1997), 110-118. DOI: [10.1145/265684.265699](https://doi.org/10.1145/265684.265699)

Note that this code is for anyone that is a member of the software engineering profession, regardless of ACM membership status. You may also wish to consult [The Code for all ACM members](#) (regardless of profession).

Thanks to [SEERI](#) for these translations of the SE Code: 

Want to contribute a translation? Get it touch via the [Contact Us](#) page.

The Software Engineering Code of Ethics and Professional Practice

Search site

Search

[Follow @ACM_Ethics](#)

https://www.isc2.org/Ethics#

REGISTER FOR EXAM

SIGN IN

(ISC)²

ABOUT

CERTIFICATIONS

EXAM PREPARATION

MEMBERS

CONTINUING EDUCATION

COMMUNITY

(ISC)² Code Of Ethics

Ethics Complaint Procedures

Ethics Committee Members

Universal Ethics Workgroup

Code

All information security professionals who are certified by (ISC)² recognize that such certification is a privilege that must be both earned and maintained. In support of this principle, all (ISC)² members are required to commit to fully support this Code of Ethics (the "Code"). (ISC)² members who intentionally or knowingly violate any provision of the Code will be subject to action by a peer review panel, which may result in the revocation of certification. (ISC)² members are obligated to follow the ethics complaint procedure upon observing any action by an (ISC)² member that breach the Code. Failure to do so may be considered a breach of the Code pursuant to Canon IV.

There are only four mandatory canons in the Code. By necessity, such high-level guidance is not intended to be a substitute for the ethical judgment of the professional.

Code of Ethics Preamble:

The safety and welfare of society and the common good, duty to our principals, and to each other, requires that we adhere, and be seen to adhere, to the highest ethical standards of behavior.

Ethics for Nerds

23

https://www.ccc.de/en/hackerethics

home

Club

Regional CCC

Media

Events

Topics

Publications

Contact

Support

Imprint

Datenschutz

Deutsch

Calendar

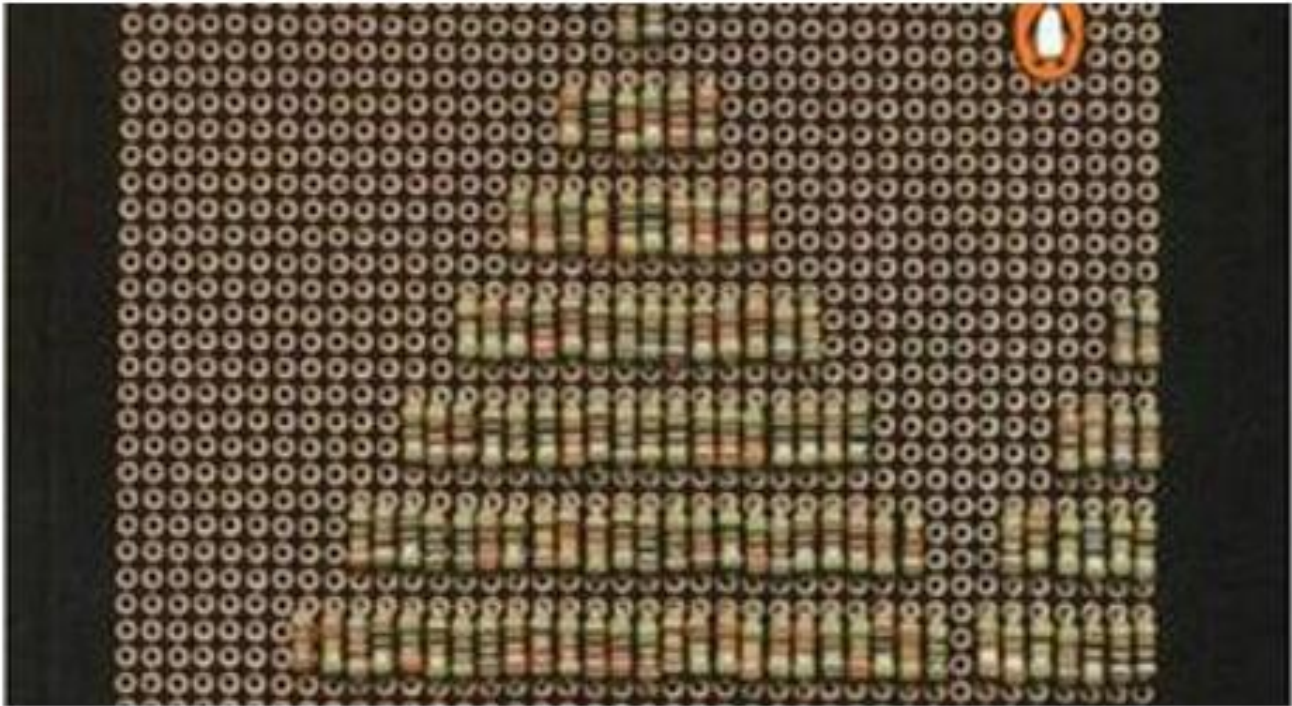
CCC

Chaos Computer Club

beta

SEARCH

Hacker Ethics



What are the ethical principles of hacking - motivation and limits


- Access to computers - and anything which might teach you something about the way the world really works - should be unlimited and total. Always yield to the Hands-On Imperative!
- All information should be free.
- Mistrust authority - promote decentralization.
- Hackers should be judged by their acting, not bogus criteria such as



Tags


hackerethik

hacker


Featured







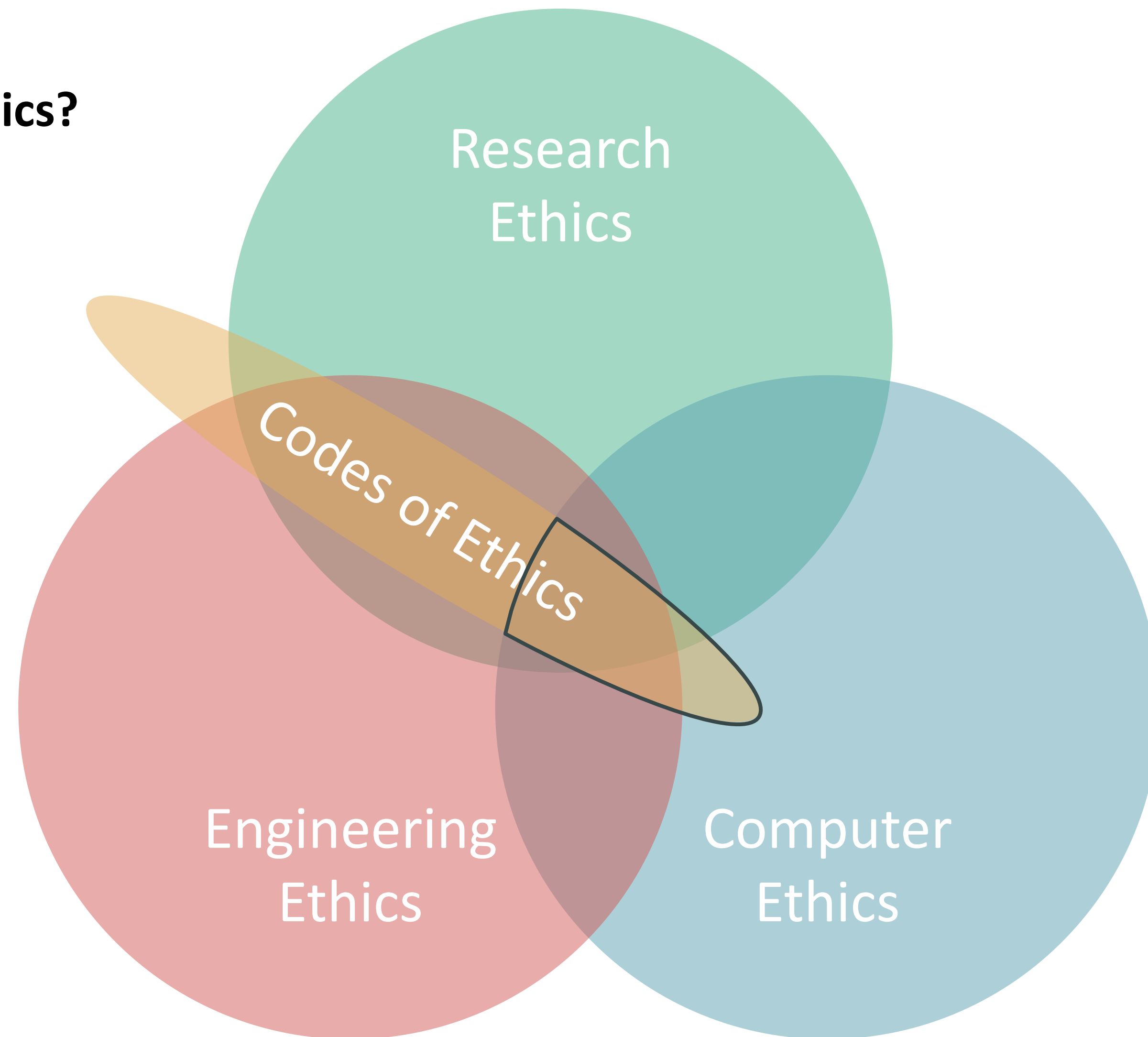
follow us



Ethics for Nerds

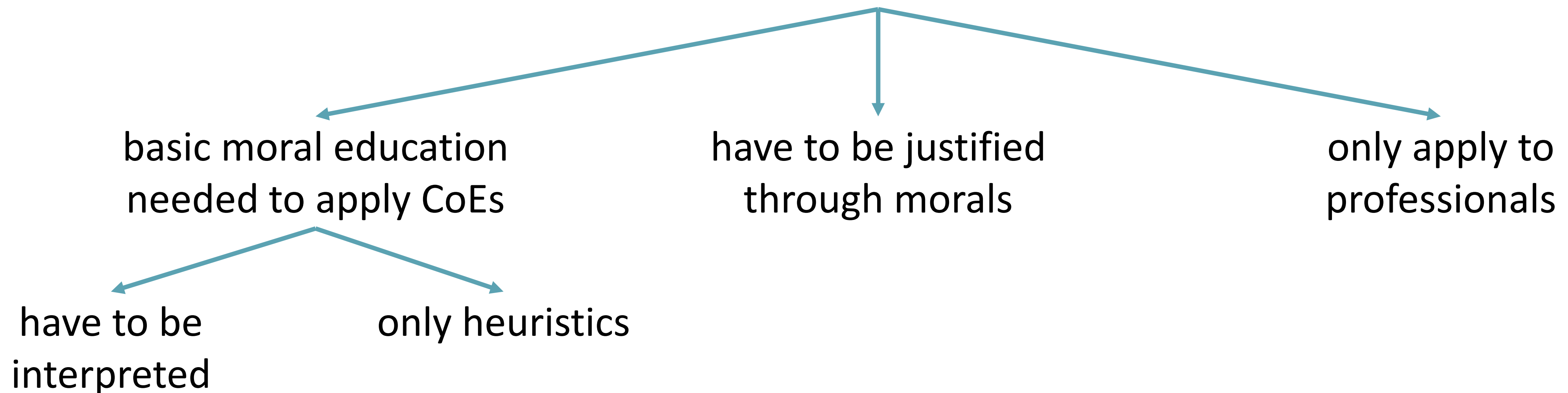
24

Where do CoEs belong in Ethics?



Are CoEs a Replacement for Normative Theories or Moral Education?

No.

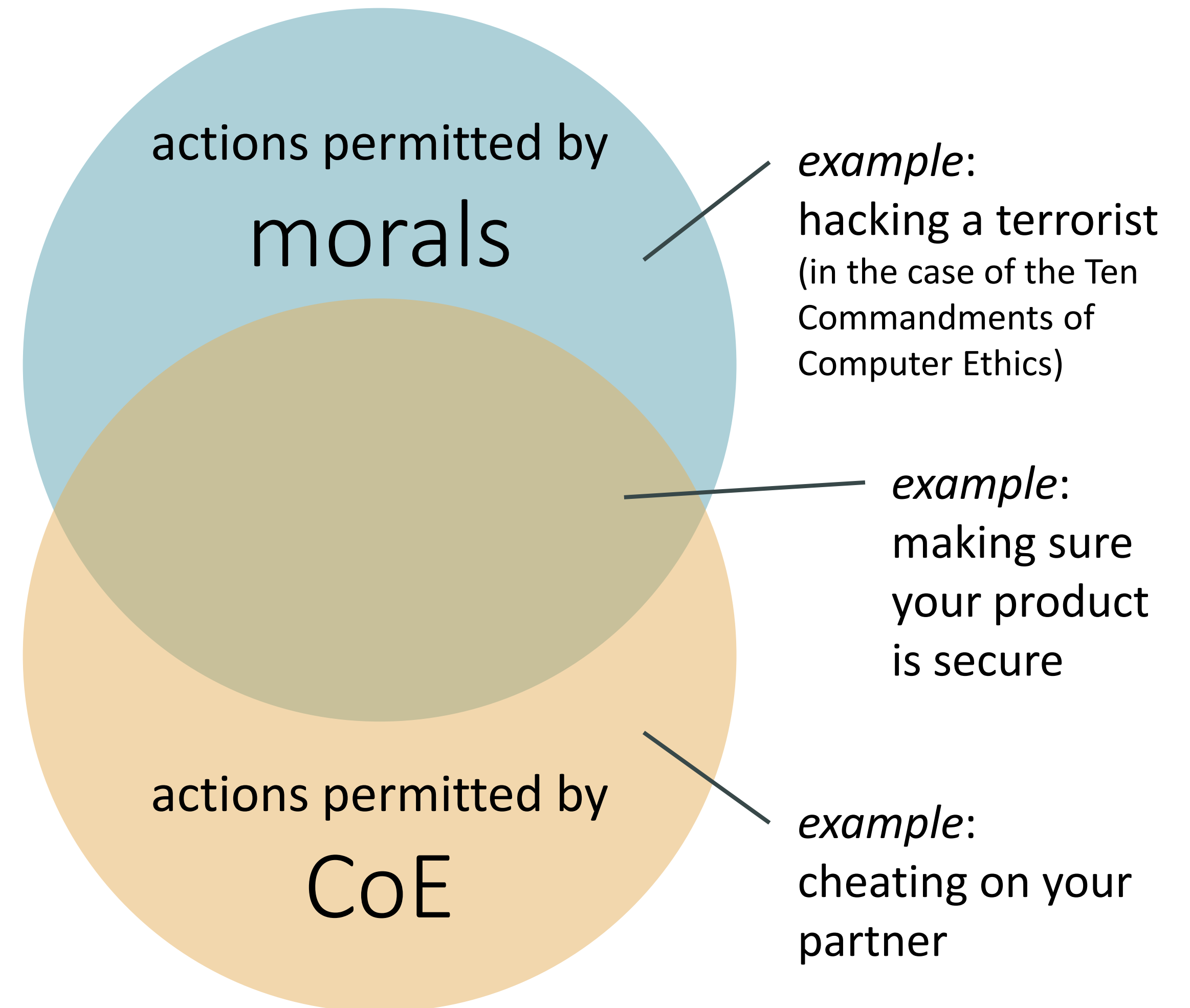


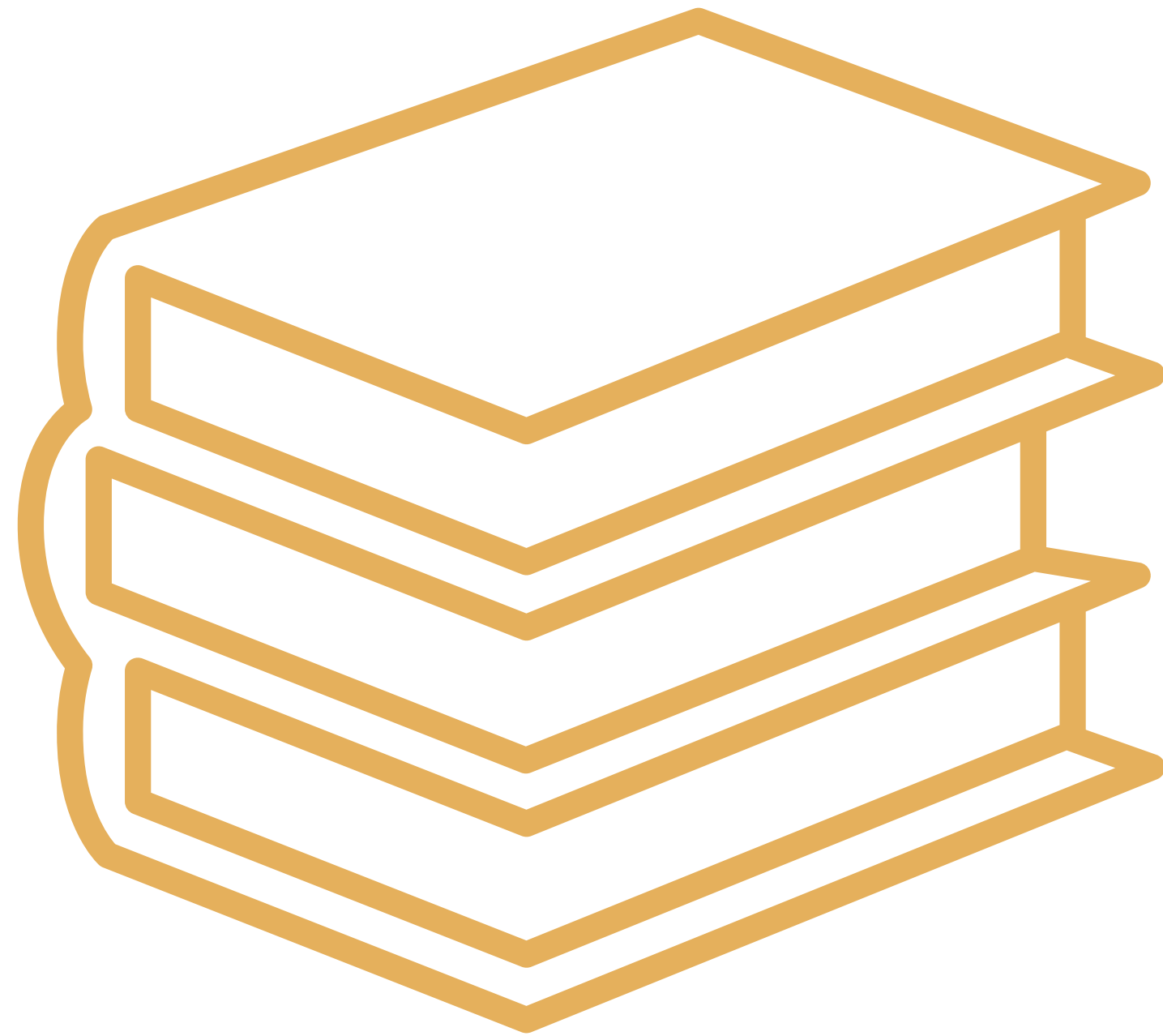
Morals



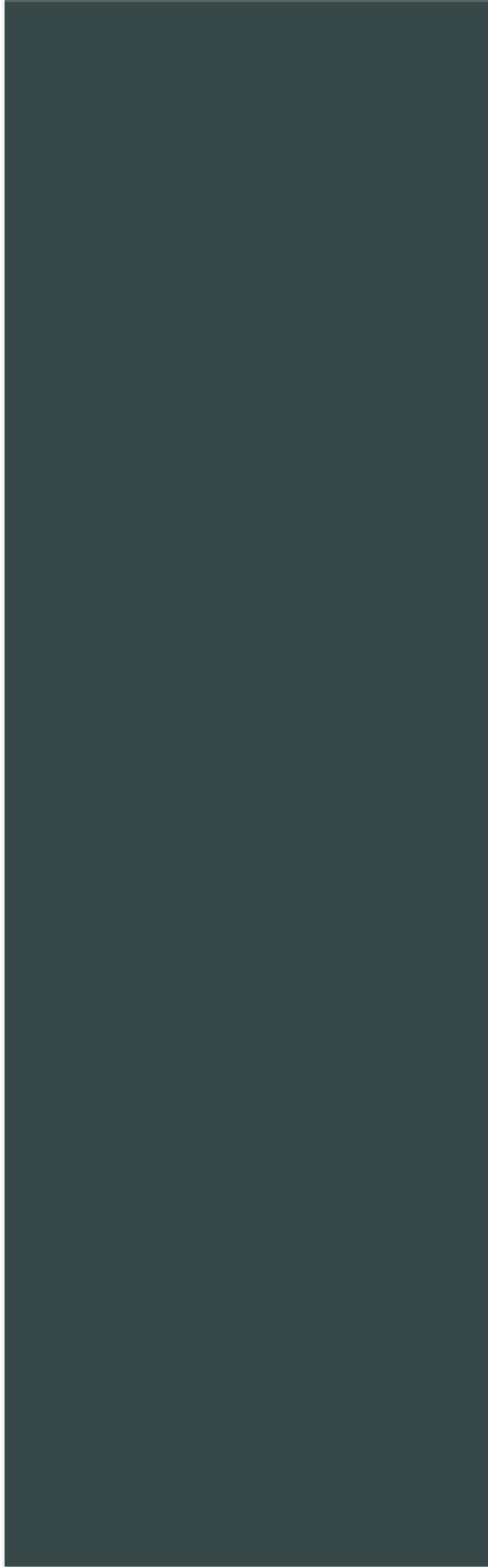
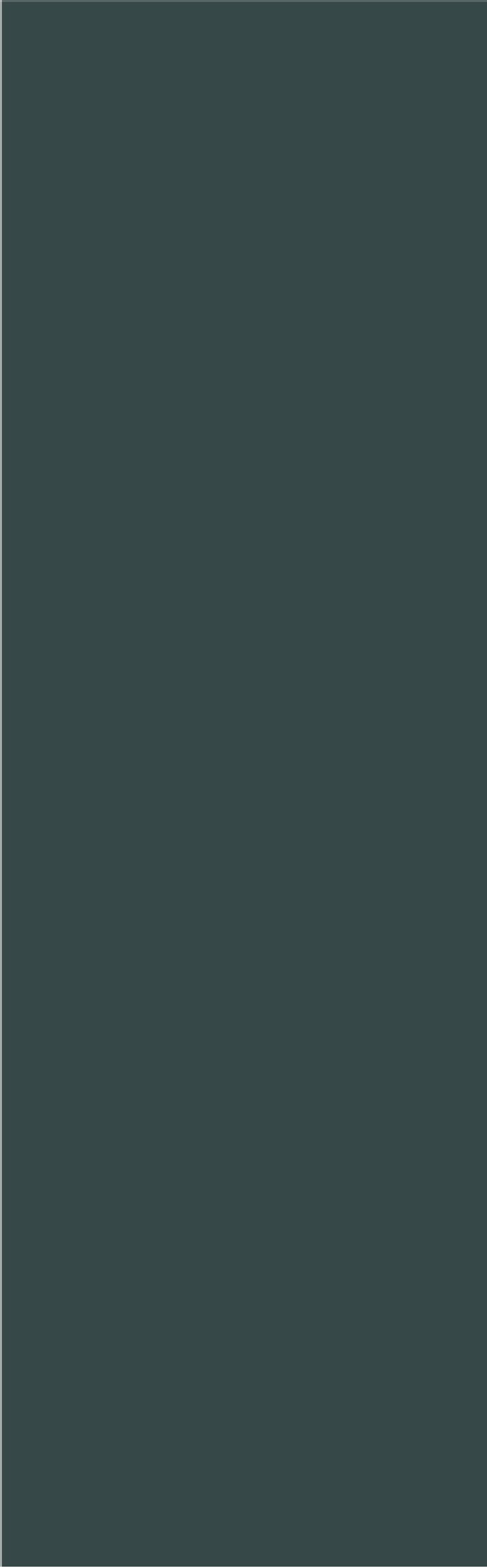
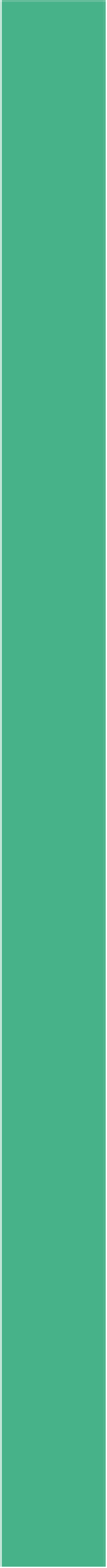
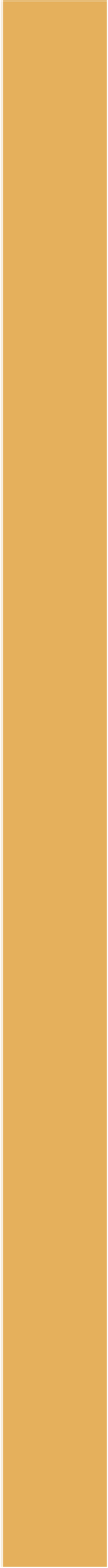
CoE

but still
(even if CoEs are
morally justified)





Next: Read the Codes of Ethics yourself!



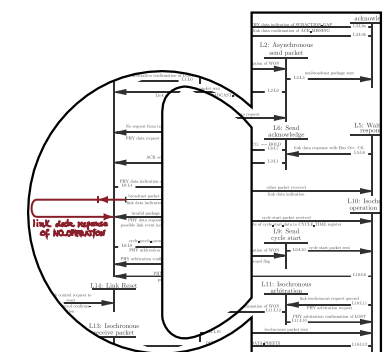


Ethics for Nerds

An Advanced Course in Computer Science
Summer Semester 2020

Ethics 6.4
Wrap-up

Summary

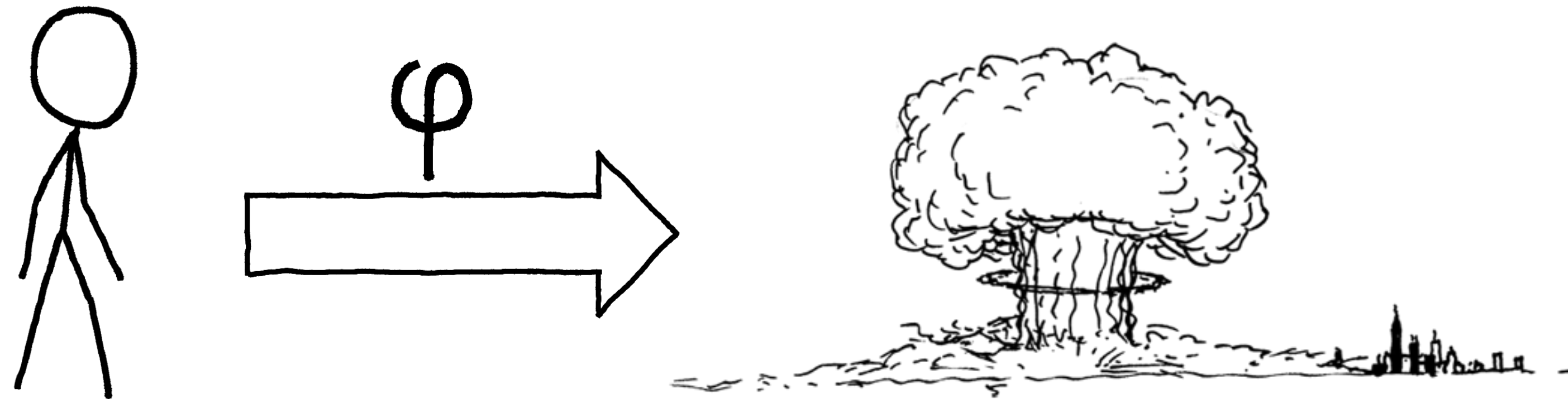


Prof. Holger Hermanns,
Kevin Baum, Sarah Sterz



UNIVERSITÄT
DES
SAARLANDES

A Classical Description

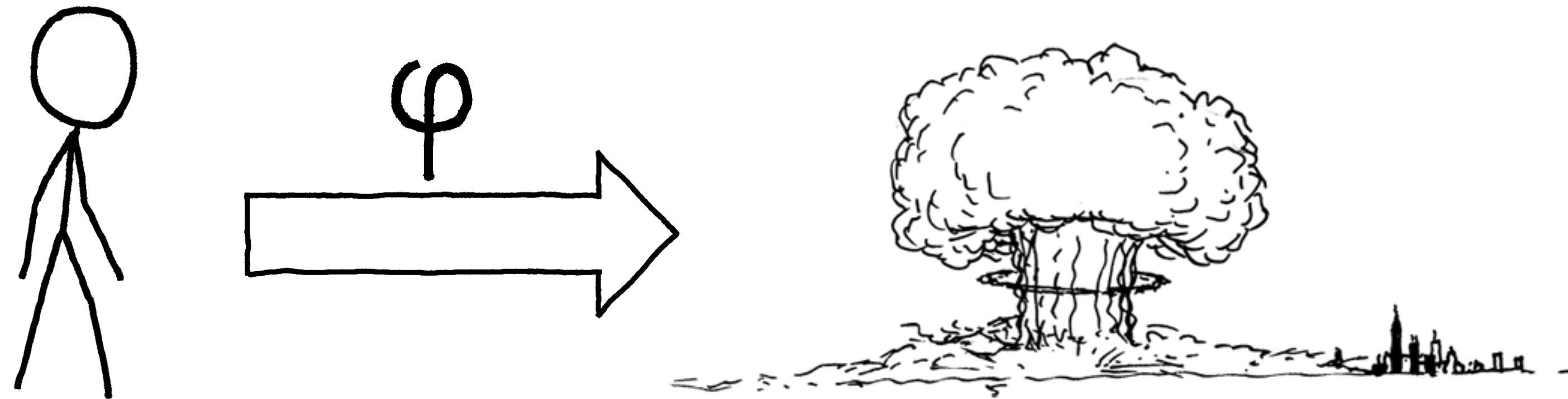


An **agent** performs an **act**. An **act** has **consequences**.

What is the right (or wrong) thing to do and why?

THE FAMILIES OF THEORIES OF NORMATIVE ETHICS

A Classical Description



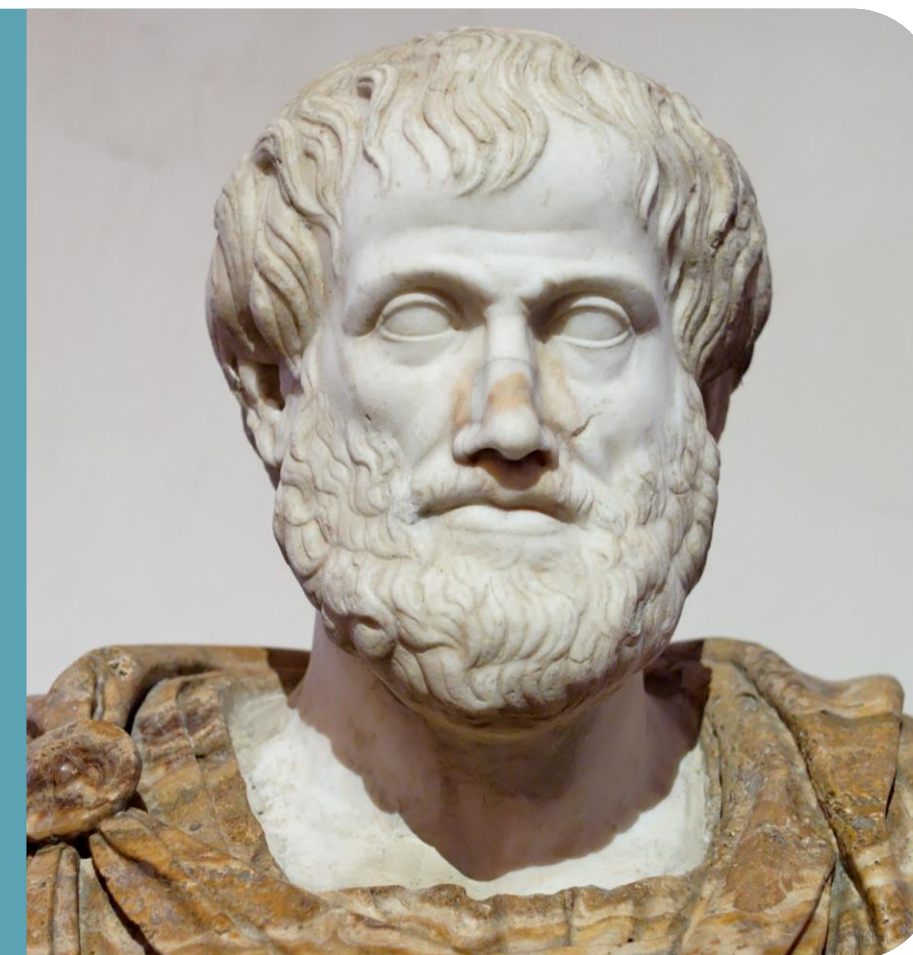
An **agent** performs an **act**. An **act** has **consequences**.

Virtue Theories

most famously: Aristotle

384–322 BC

Nicomachean Ethics



The moral/normative/deontic status of an action depends on the (character of the) agents themselves.

Possible 'framework': Eudaimonism

Agent A ought to perform one of the right actions.

An option ϕ is right in context C (for agent A) if only if a **virtuous** person (a **virtuous** version of A) would ϕ in C .

If a **virtuous** person would ϕ in C , then because of the *right*, i.e., **virtuous** reasons.

An agent should be **virtuous**.

Note: This allows doing the right thing for the wrong reasons (meaning: motives).
In such a case, one would *do* the right thing, but one would still not *be* right.

What are virtues (and vices)?

Which virtues and vices?

What does it mean to be virtuous?

- The moral/normative/deontic status of an action depends on the (character of the) agents themselves.

Possible 'framework': Exemplarism/Agent-Based Virtue Ethics

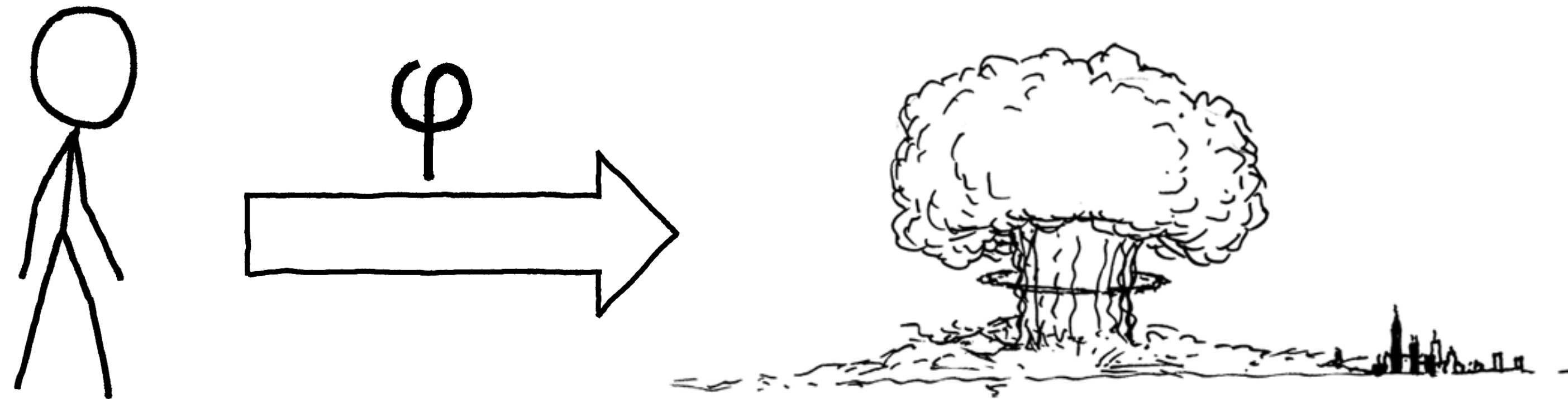
Agent A ought to perform one of the right actions.

An option ϕ is right in C only if ϕ expresses a **virtue**.

An option ϕ is wrong in C only if
 ϕ in C is an act that expresses a vice / is an act against a requirement of virtue.

Note: This does *not* allow doing the right thing for the wrong reasons (meaning: motives).
If it is a right action, then precisely because it is done for virtuous reasons
(i.e., it is expressing a virtue).

A Classical Description



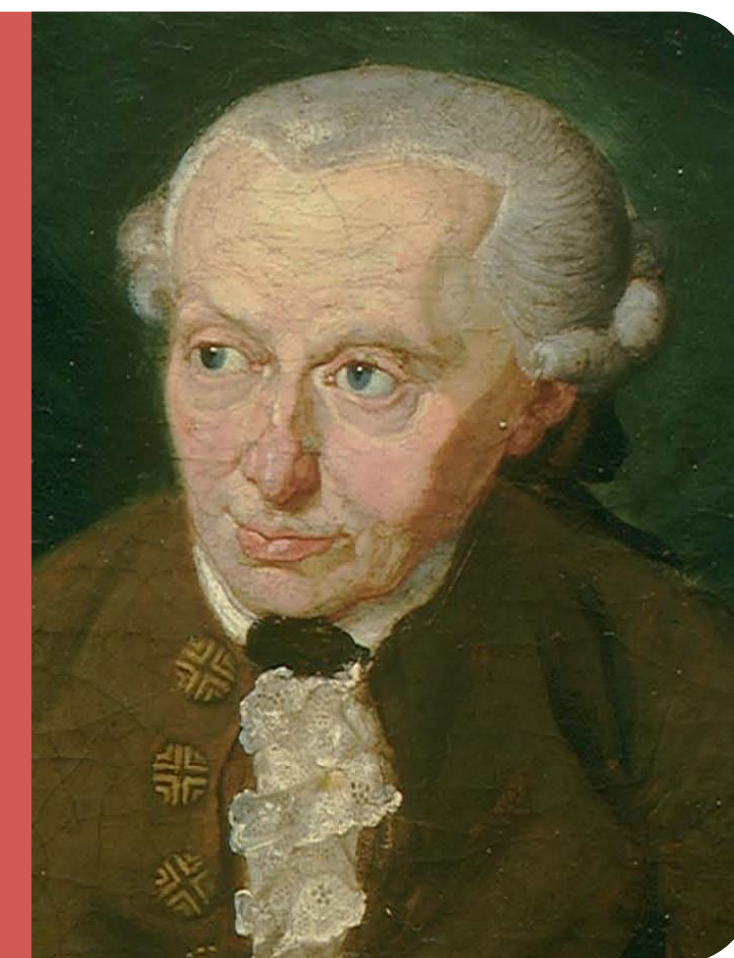
An **agent** performs an **act**. An **act** has **consequences**.

Deontological Theories

most famously: Immanuel Kant

1748–1832

Grundlegung zur Metaphysik der Sitten



The moral/normative/deontic status of an action solely depends on its adherence to a rule or rules.

Standard 'framework':

Agent A ought to perform one of the right actions.

An action ϕ is a right iff ϕ ing adheres to/follows/respects **certain (universal) rules**.

Which rules?

Golden Rule

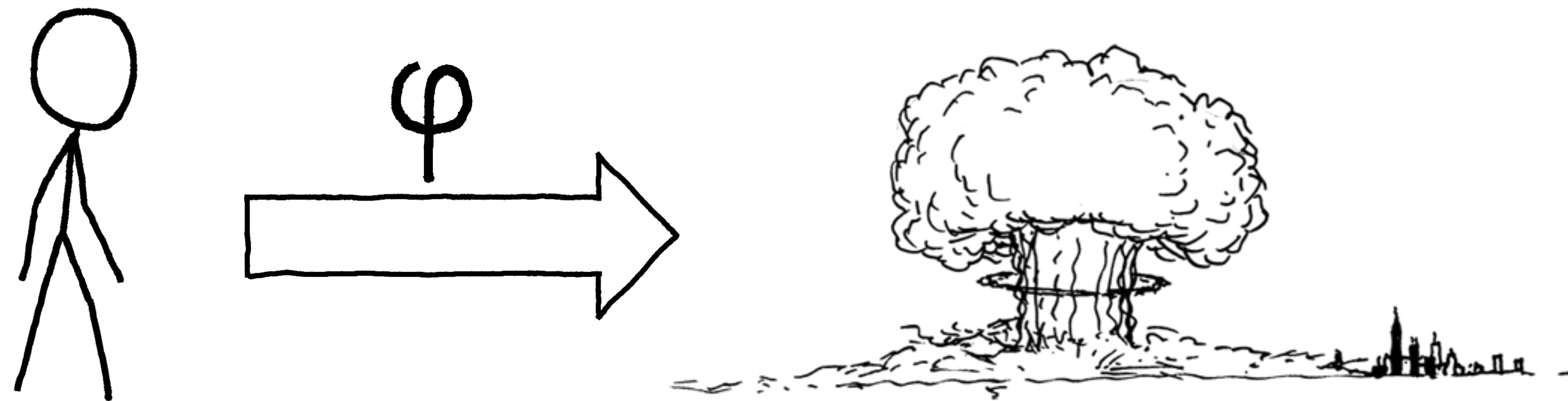
Categorical Imperative

Contractualistic rules

...

THE FAMILIES OF THEORIES OF NORMATIVE ETHICS

A Classical Description



An **agent** performs an **act**. An **act** has **consequences**.

Consequentialist Theories

most famously: John Stuart Mill

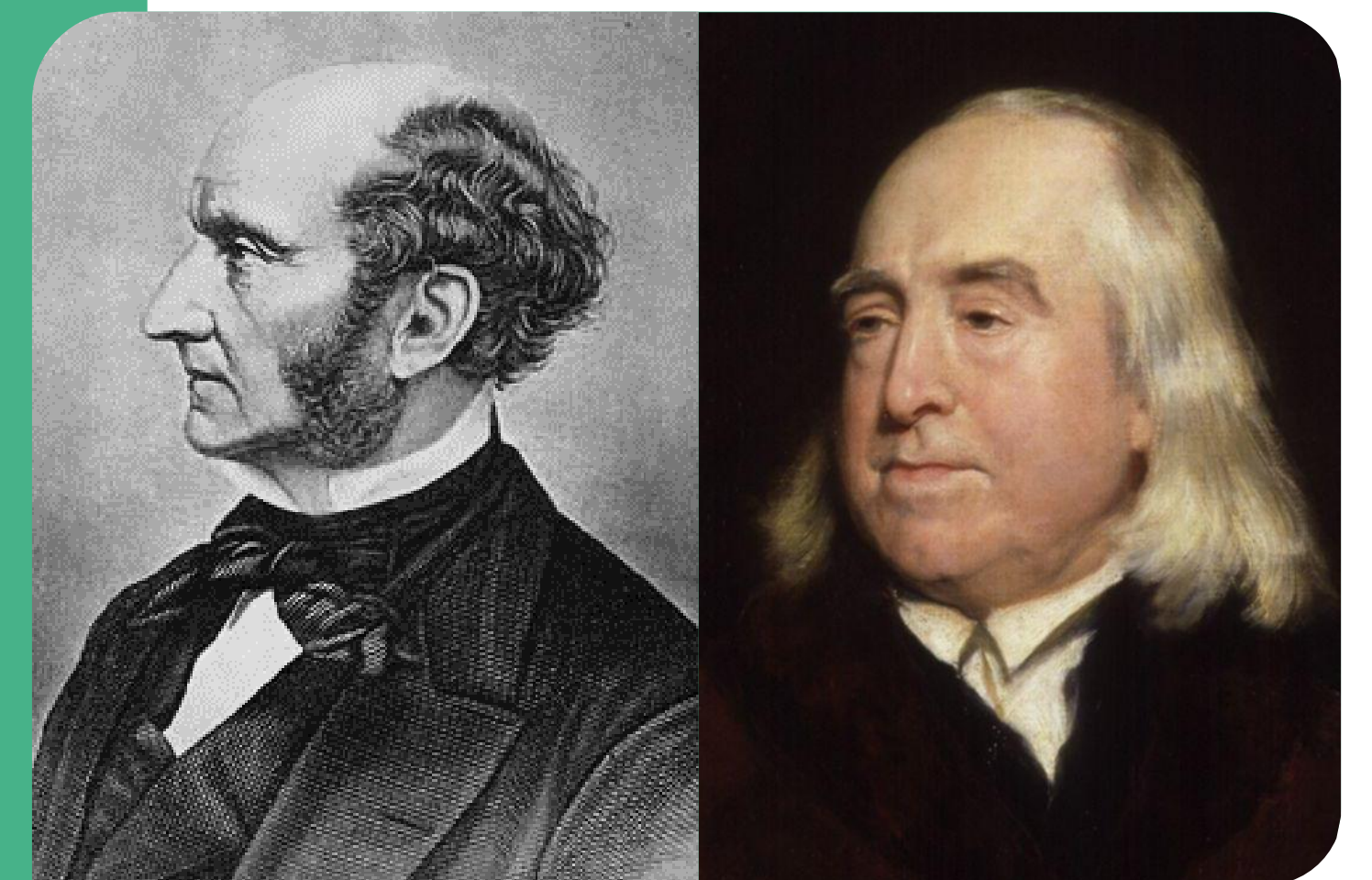
1806 –1873

Utilitarianism

Jeremy Bentham

1724–1804

*An Introduction to the Principles
of Morals and Legislation*



CONSEQUENTIALISM

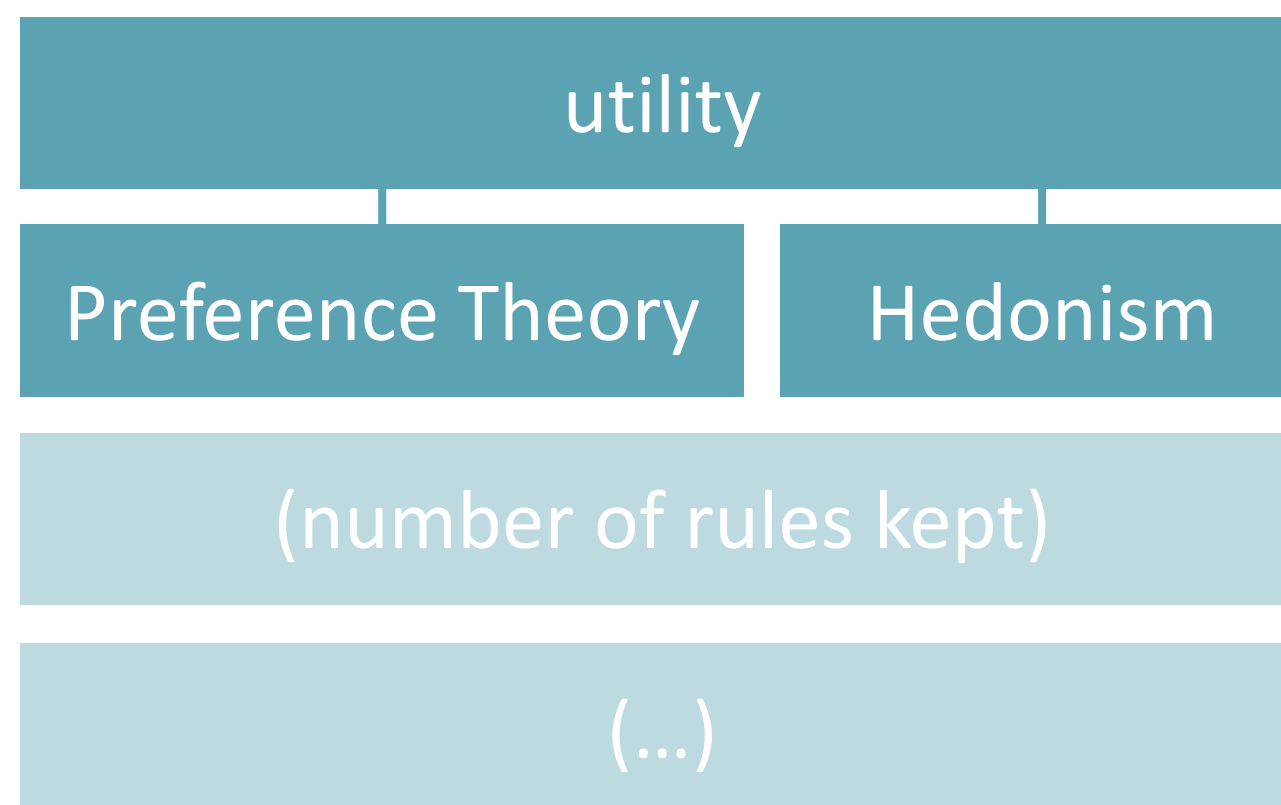
The moral/normative/deontic status of an action solely depends on its consequences (and the consequences of the alternative actions)

Standard 'framework':

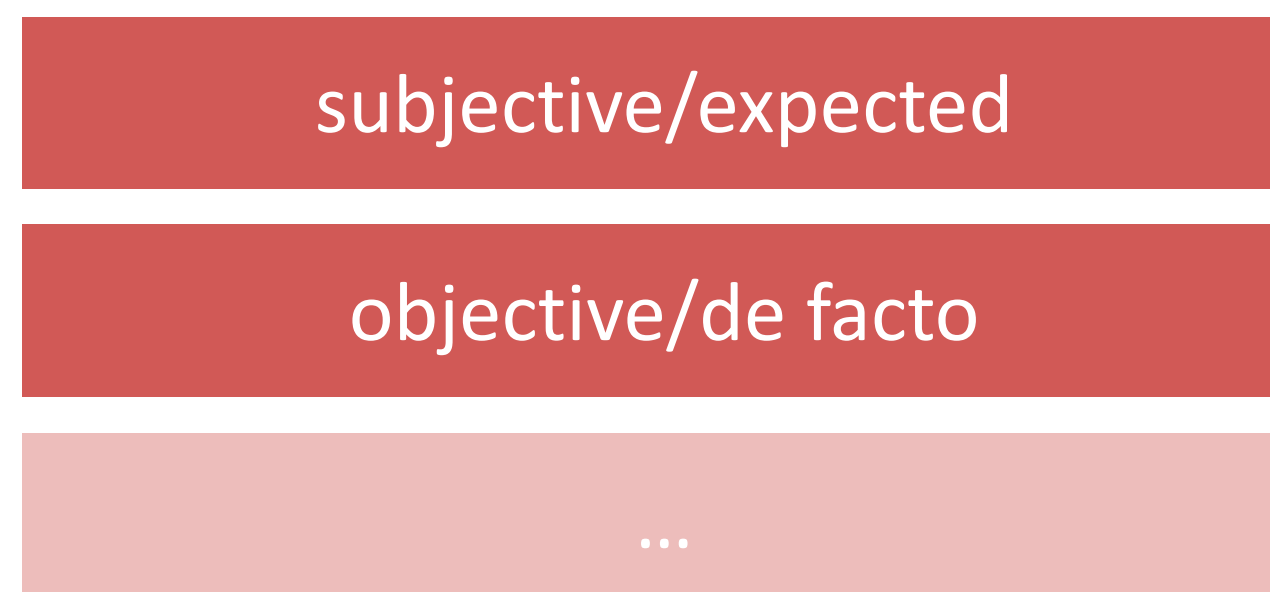
Agent A ought to perform one of the right actions.

An action ϕ is a right action iff the **relevant qualities** of the **consequences** of ϕ fulfill a **specific condition**.

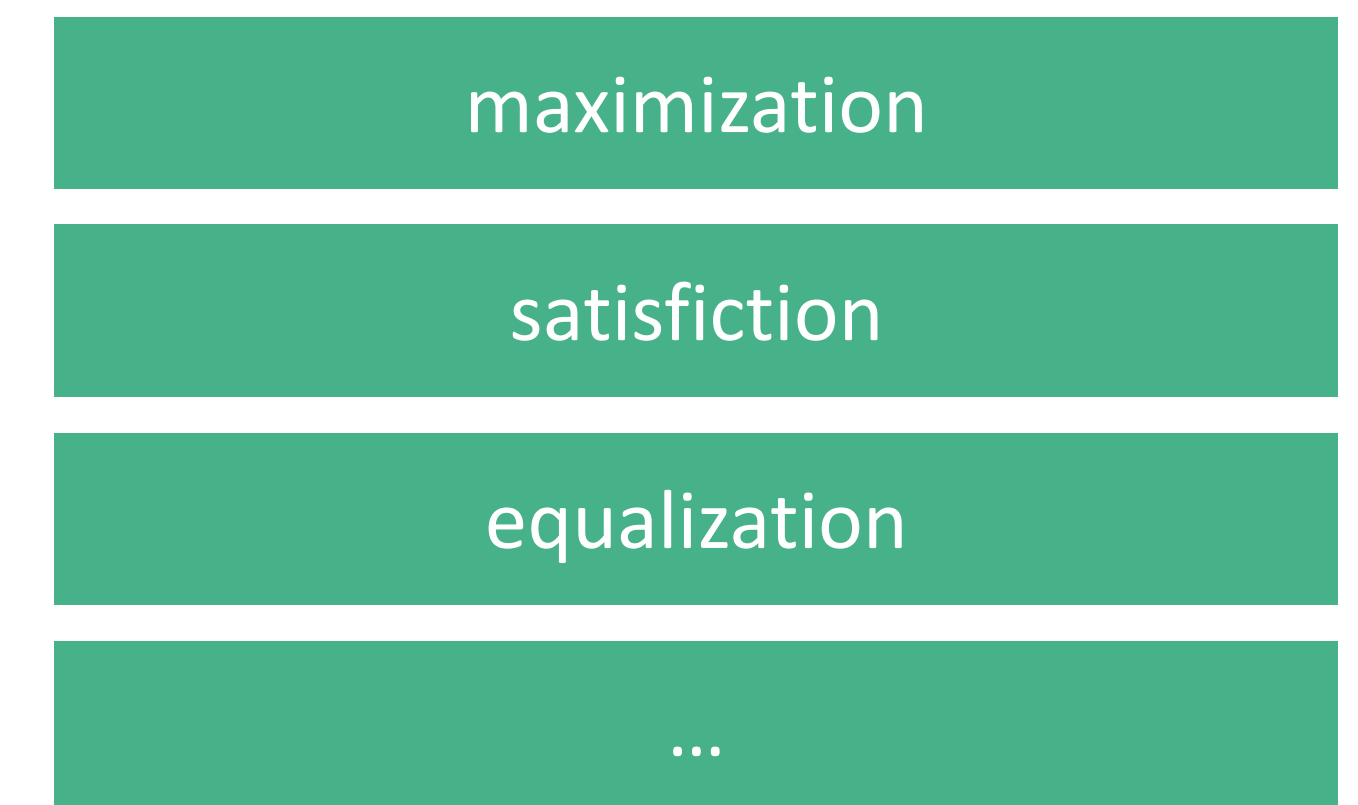
Which qualities? (Axiology)



Which consequences?

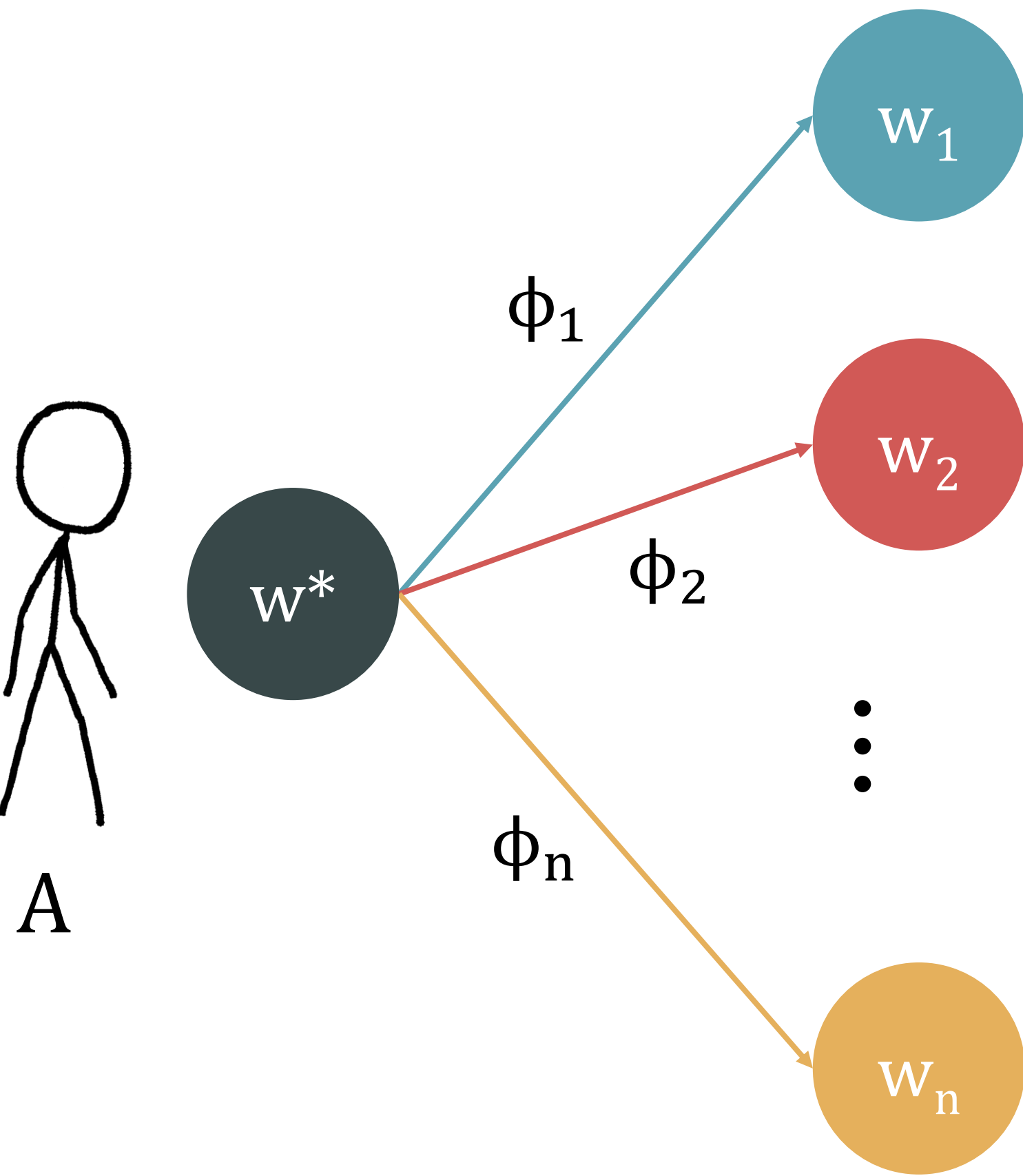


Which condition?

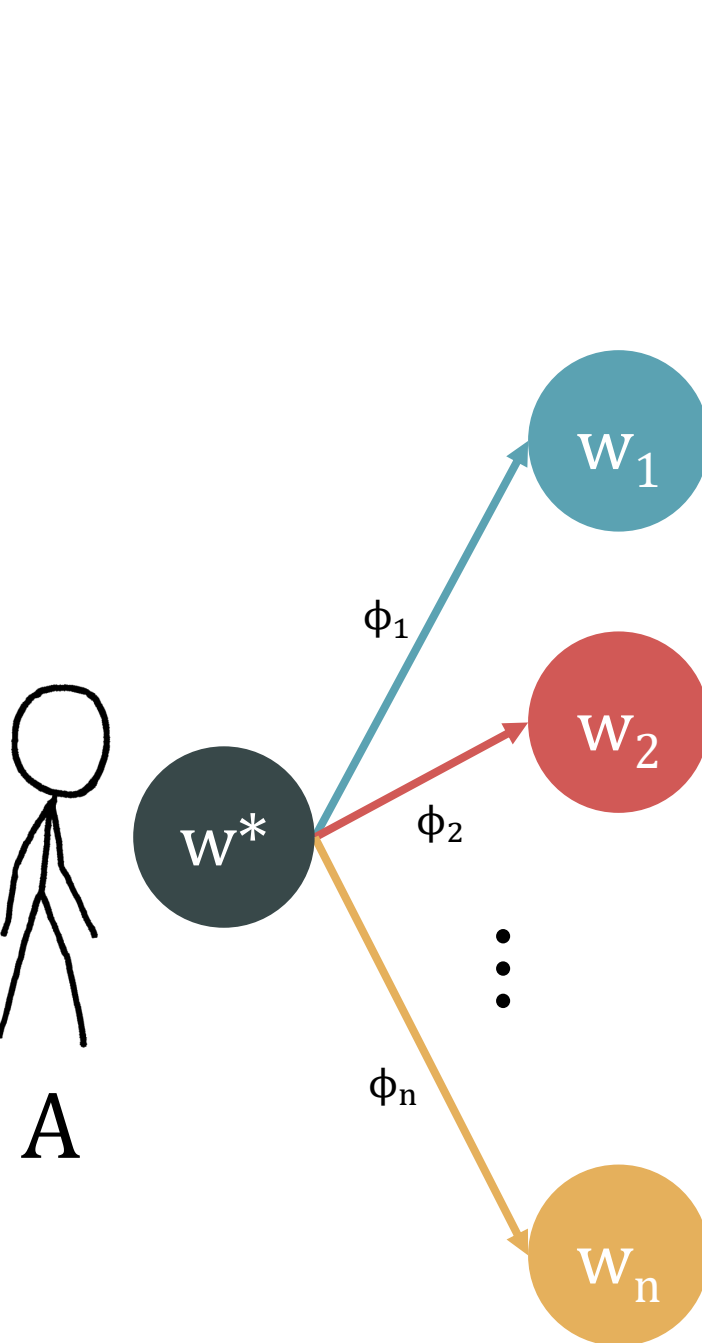


DECISION SITUATIONS

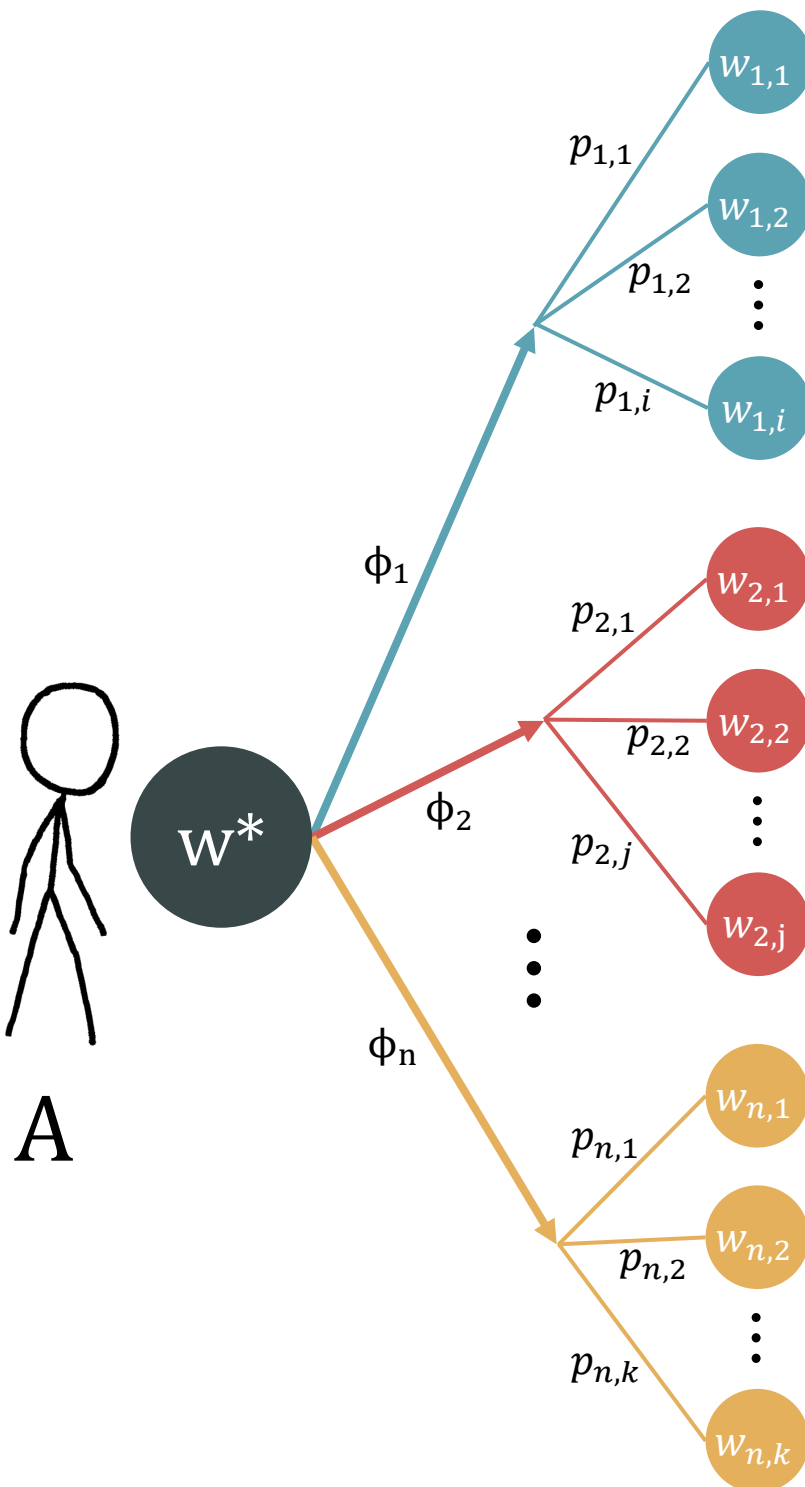
Usual model from an objective perspective:



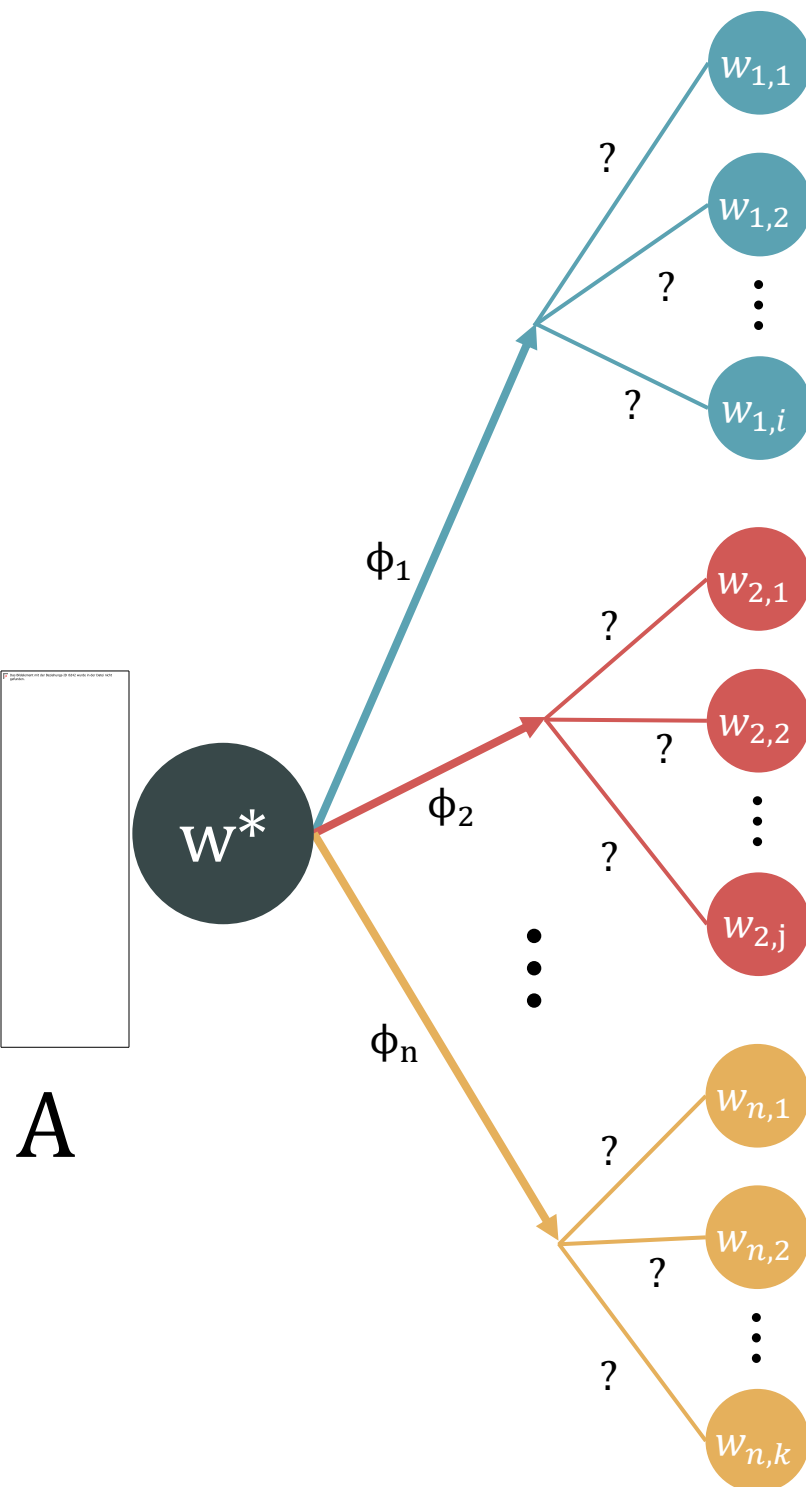
Usual models from a subjective perspective:



under certainty

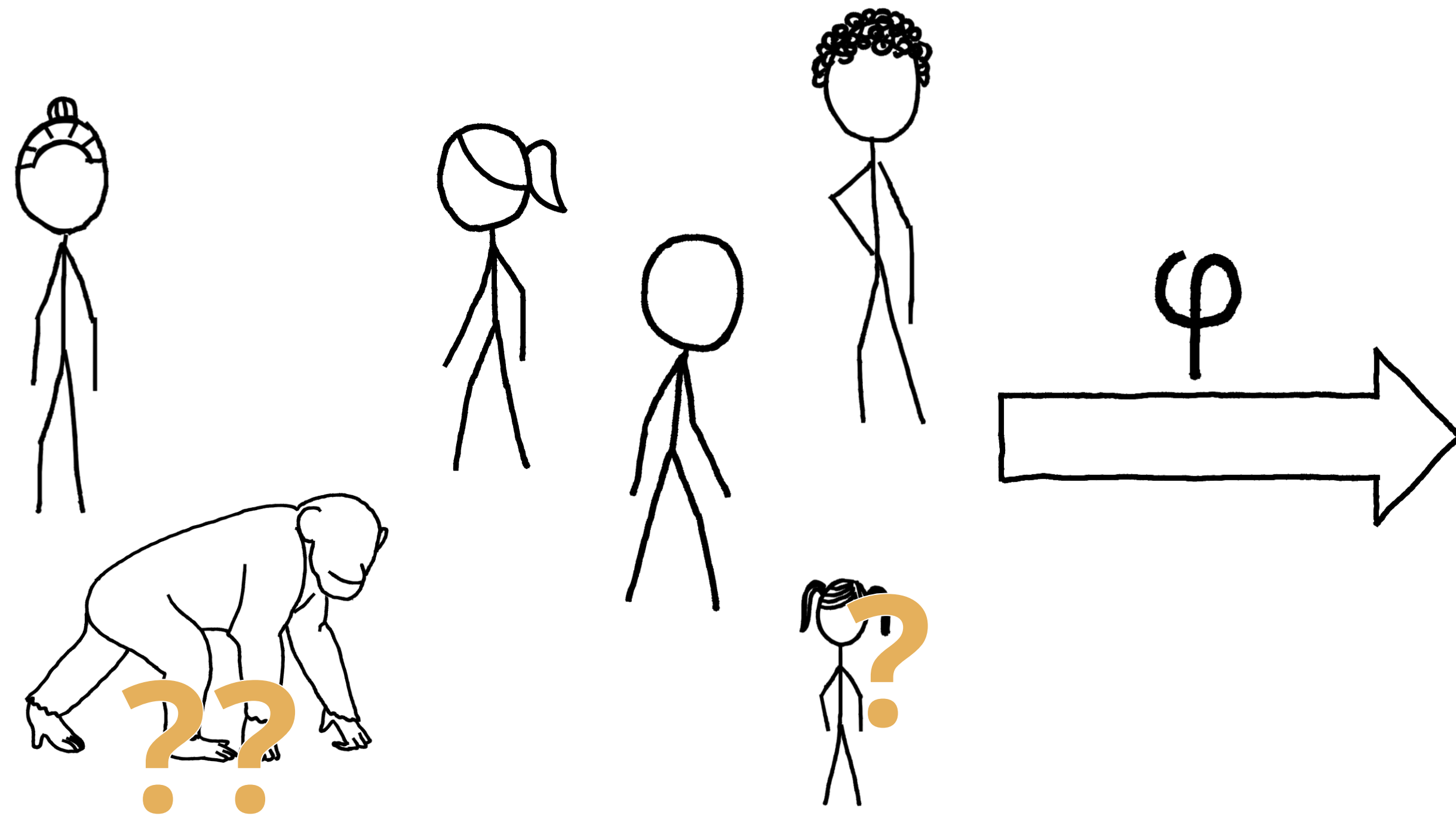


under risk

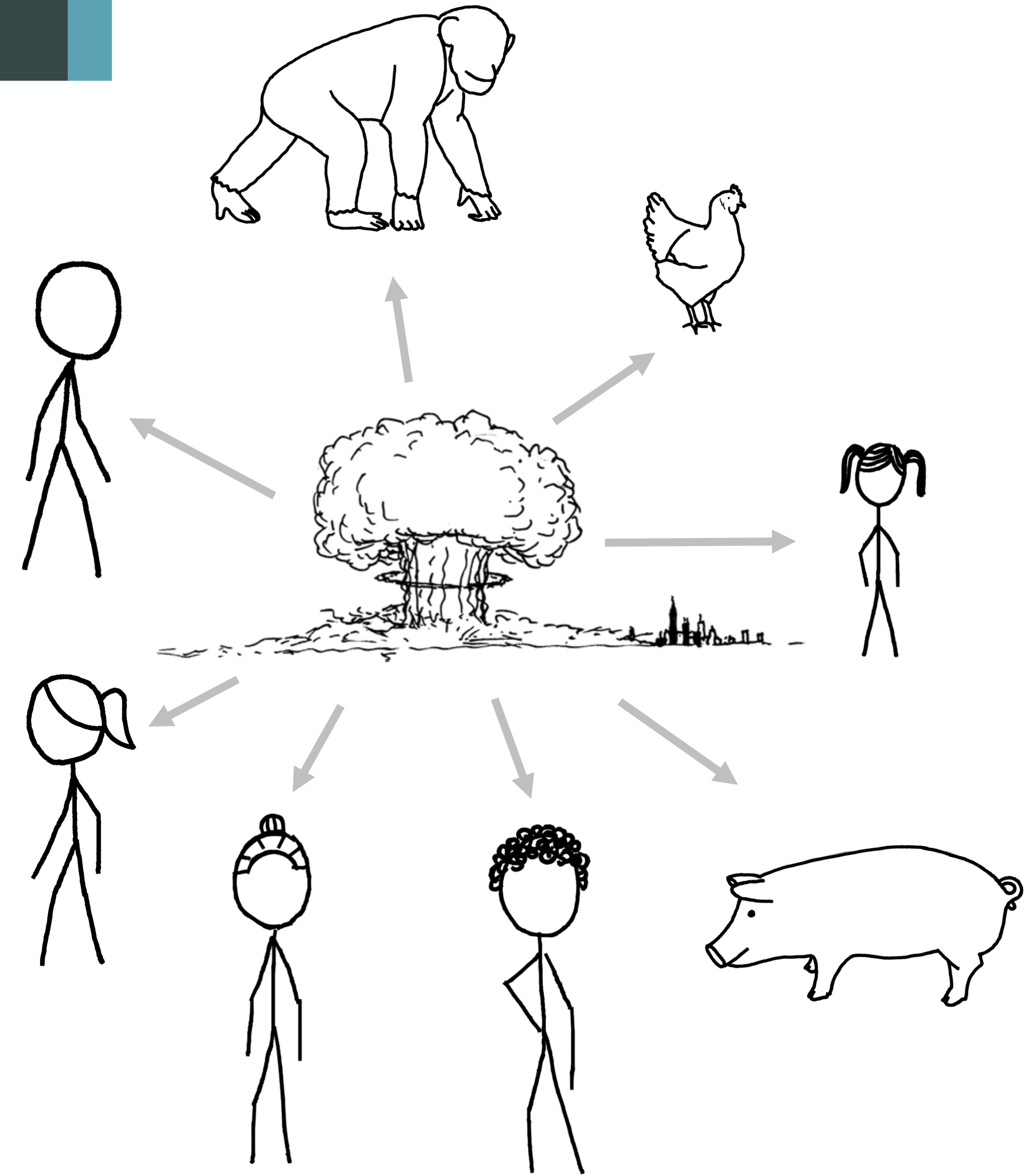


under uncertainty

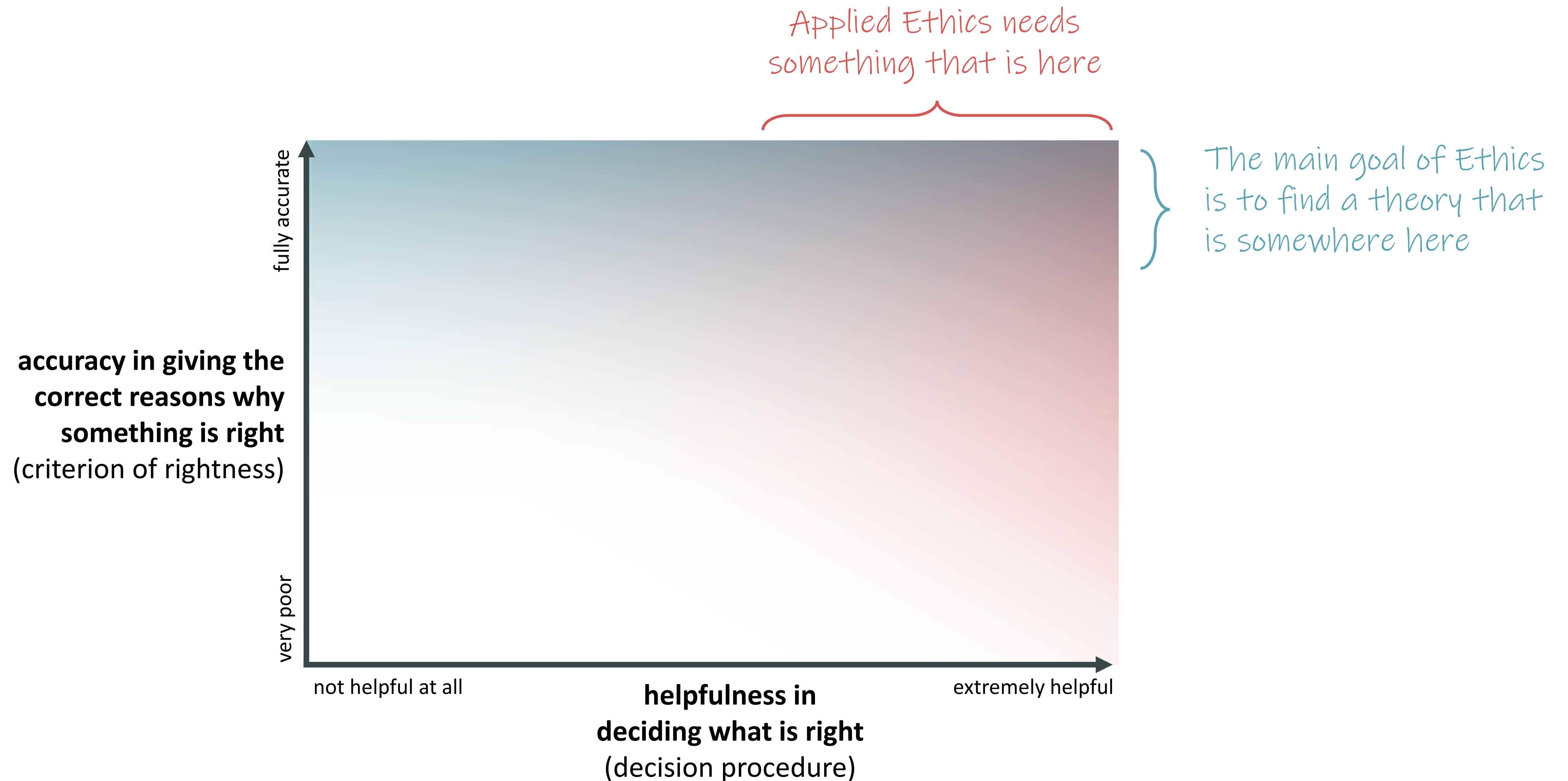
THE SCOPE OF MORALITY: MORAL AGENTS AND PATIENTS



An **agent (moral subject)** decides for an **action** and performs it.
This may affect **patients (moral objects)**.
Moral subjects and objects are what has **moral status**.



CRITERIA VS DECISION PROCEDURES

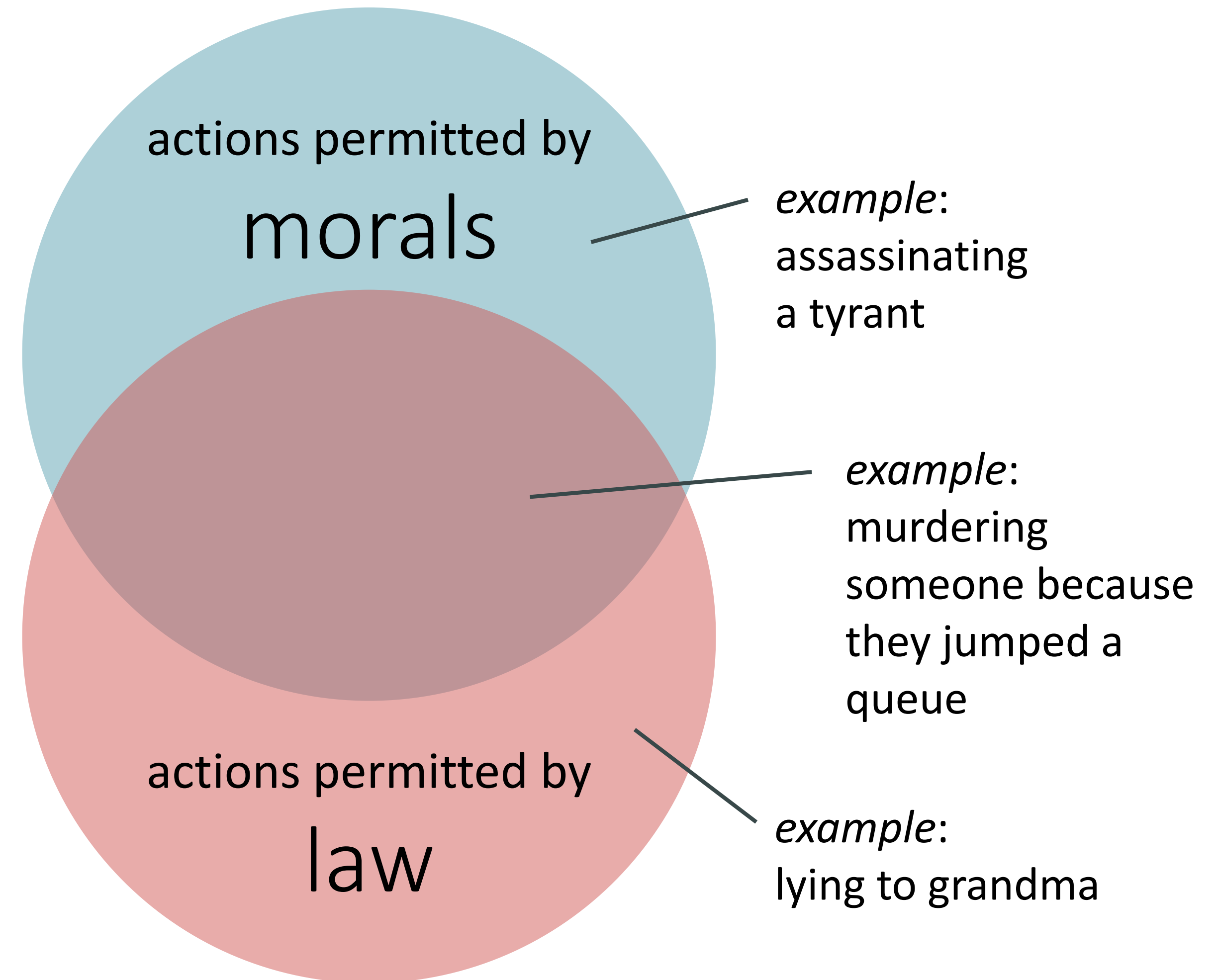


Moral



Law

but still
(even if some
laws are justified)



RATIONALITY

Practical Rationality

A's φ -ing is practically rational iff φ -ing is in her best interest

Instrumental Rationality

A is instrumentally rational with regard to C iff she adopts suitable means to her ends with regard to C.

Epistemic rationality

A is epistemically rational with regard to C iff she is sufficiently responsive to reason and evidence with regard to C.

mainly from
practical
philosophy

mainly from
theoretical
philosophy

CODES OF ETHICS

like: IEEE, ACM, GI, ...

different organizations
and associations

philosophers
and other
experts

write CoEs for

real-world
computer
scientists and
developers

like: you!

like: Deborah Johnson,
Donald Gotterbarn, ...

like: IEEE Code of Ethics,
ACM Code of Ethics and Professional Conduct,
Software Engineering Code of Ethics and
Professional Practice (IEEE/ACM), ...

