# Ethics for Nerds

## An Advanced Course in Computer Science
## Summer Semester 2020

## Current Topics 1
## Introduction

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# What are we going to do?

# INTRO

concerned with the moral status of a certain (maybe hypothetical) technology or product

only “what?”


**Technology Assessment**

concerned with designing and implementing morally acceptable technologies and products and doing research in a morally acceptable manner

“how?” and “what?”


**Responsible Technology Design and Research**

# INTRO

enough diverse knowledge about the world

sufficient intelligence

competent speaker

sufficient expertise in philosophy

expertise in computer science

**you**

output

output

moral judgements

morally good and responsible products/research

Technology Assessment

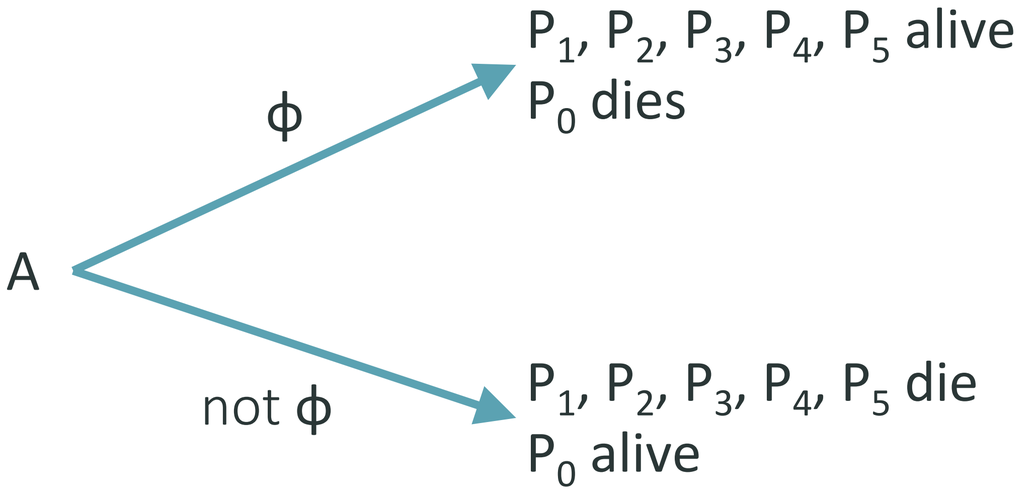
Responsible Technology Design and Research

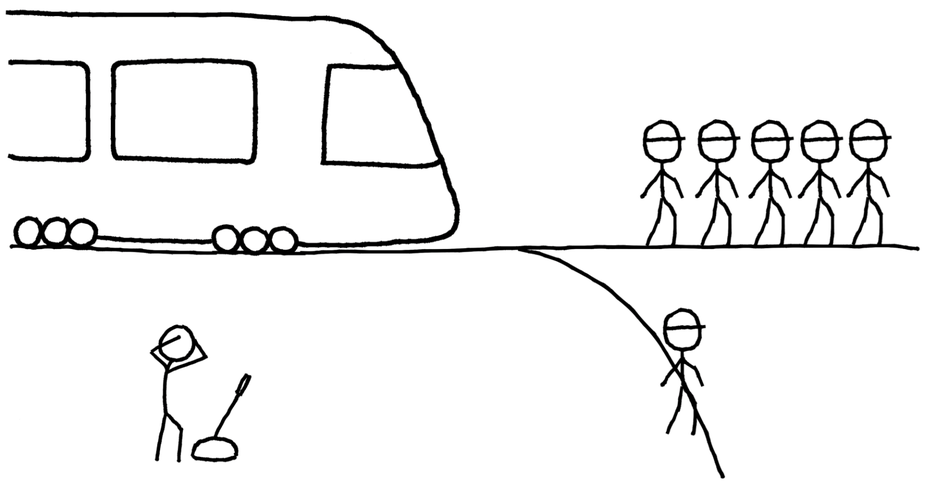
# INTRO

two additional things in our toolbox to help you navigate the real world

# FEASIBLE MORAL ASSESSMENTS

feasible moral assessments

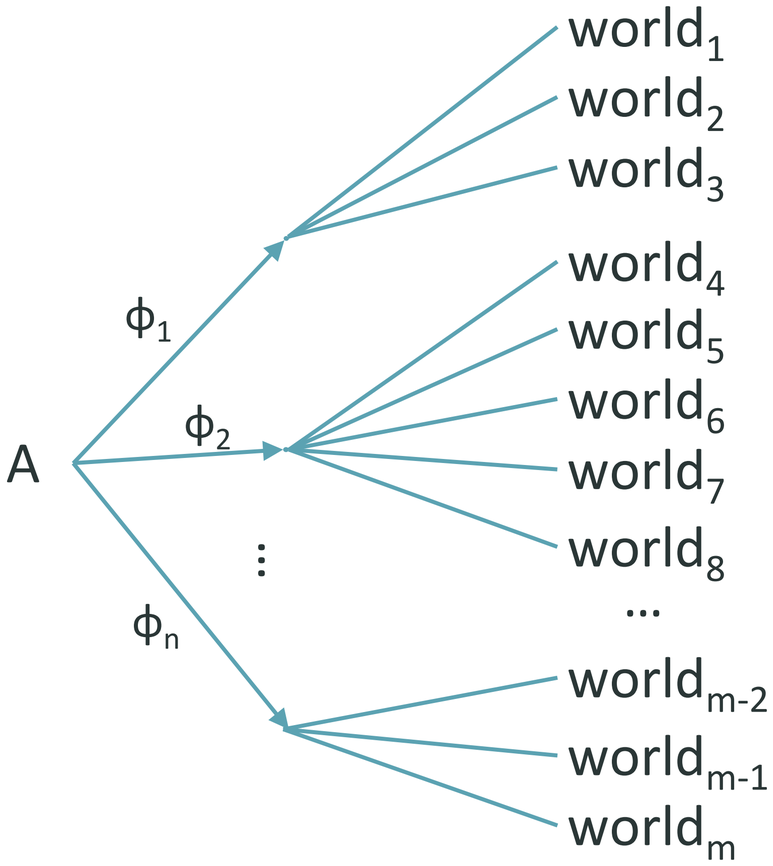


Usually, real-life decision situations are not that simplistic.

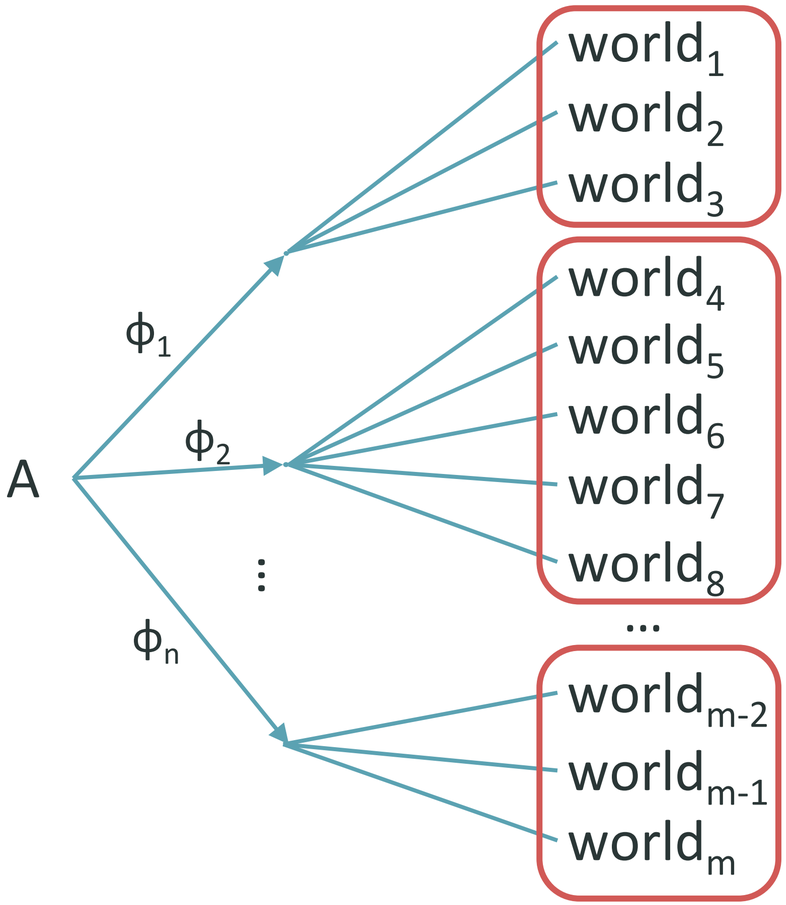
# FEASIBLE MORAL ASSESSMENTS

feasible moral assessments




# FEASIBLE MORAL ASSESSMENTS

feasible moral assessments




find out both

potentially morally relevant key aspects

and

potentially morally relevant key differences

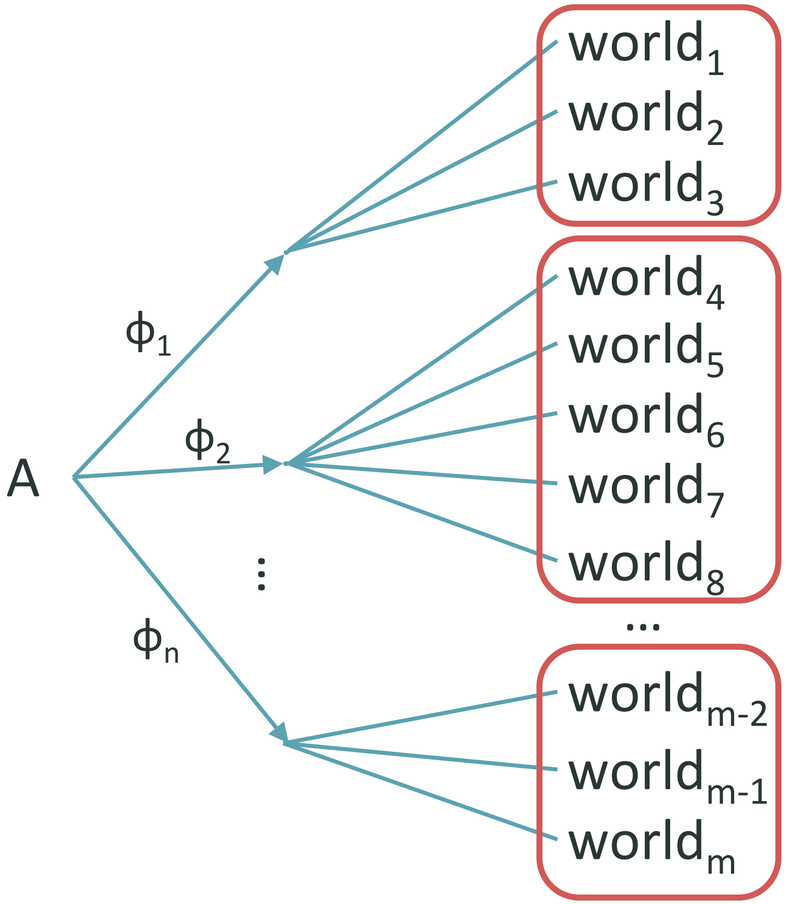
and make a case analysis on different levels, which include:

- how would one assess them intuitively?
- how would they be assessed in the spirit of different families of moral theories?
- what are relevant differences between proponents of these families in the light of this case and how would they assess the case?

→ **give a (slightly tentative) overall verdict**

# FEASIBLE MORAL ASSESSMENTS

feasible moral assessments




**Upside**

if one knows moral theories very well and manages to cover all relevant differences, then one can often analyse even very complicated cases in a manageable amount of time

**Downside**

you need to have great expertise in both applied ethics and the case that you are assessing to do this in a proper way

# INTRO

two additional things in our toolbox to help you navigate the real world


concepts and their analysis

## Different kinds of terms

| ‘natural’ terms | terms in between | technical terms |
|---|---|---|
| love | software doping | graph |
| water | fake news | Abelian group |
| book | cybersecurity | Consequentialism |

**conceptual work needed**

**given by definition**
**(or at least should be given by definition)**

concepts and their analysis

**Example: Anonymity**

How is anonymity defined?

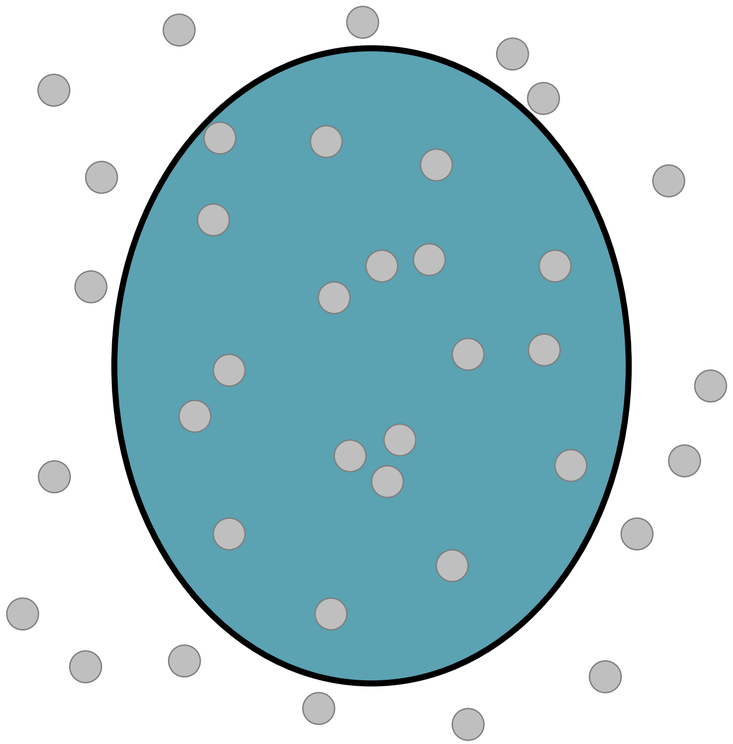
- k-Anonymity? (i.e. every individual in a dataset cannot be distinguished from k other ones)

Questions to answer:

- Is that really how we understand “anonymity”? → No.
- Does the definition really fit the concept and not only some of the examples we cherry-picked? → No.
- And wait… could this even be a *definition* of anonymity? → Let’s see.

# CONCEPTUAL WORK

concepts and their analysis



## Definition

- inventing a new term by assigning a meaning

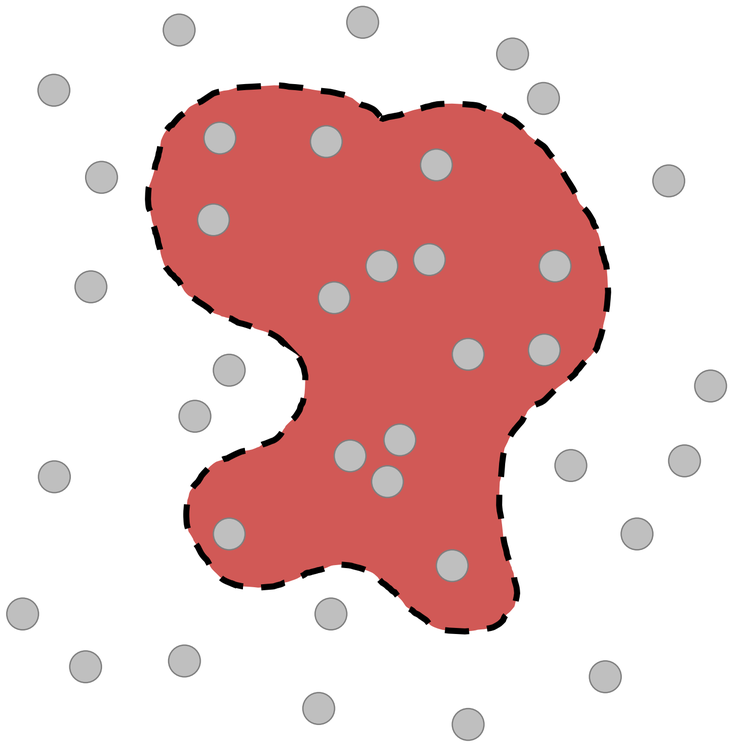
  or

- using an already existing term and assigning a meaning for a context in which this term was not used yet

  or

- using an already existing term and assigning a new meaning in a context where the term is already used, which results in an overloaded term (everyone rightfully hates people who do that)

concepts and their analysis



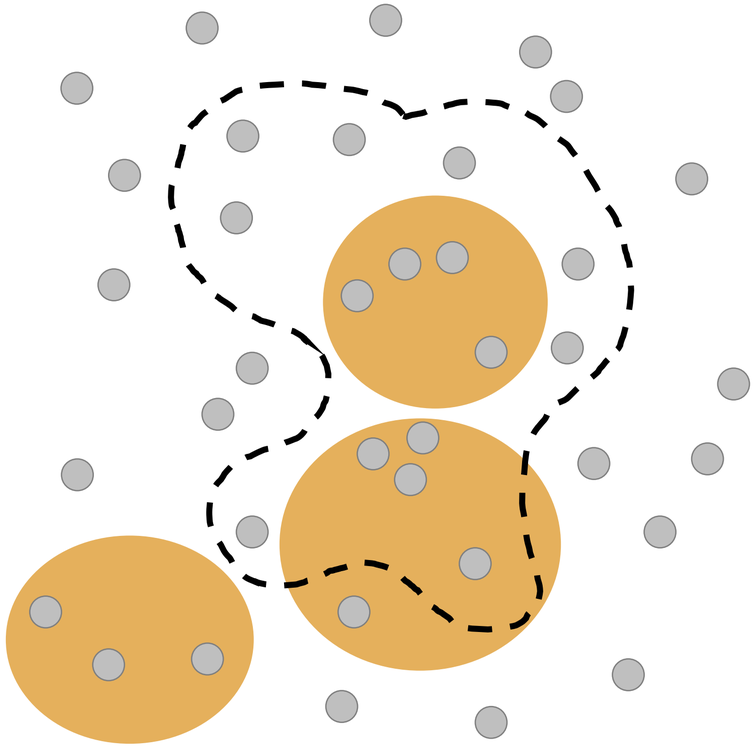
## Explication

- grasping the agreed meaning of an already existing term by finding necessary and sufficient conditions for it (at best)

looks like a definition in the end but isn't!

An explication might be wrong and inadequate – a definition just sets a rule and, thus, cannot be wrong. (Rather it can be more or less useful and useless.)

concepts and their analysis



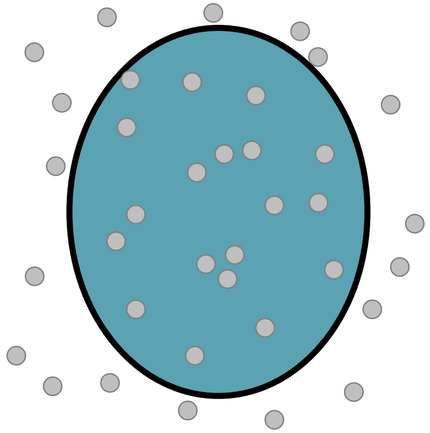
## Operationalization

- taking a (sometimes fuzzy) concept and making it measurable by *defining* some indicators for it that make sense in the context where the operationalization will be used

looks somewhat like a definition in the end, but certainly is no definition of the concept!

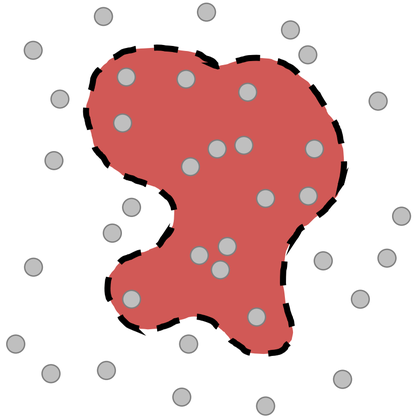
concepts and their analysis

## Example: Anonymity



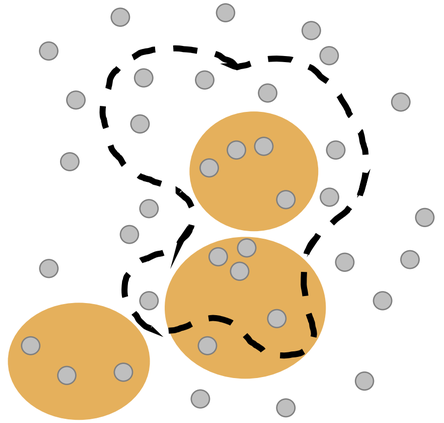
**Definition**

none!
(“anonymity” has been around as a natural term for a very long time)



**Explication**

multiple approaches
(not covered in this lecture)



**Operationalization**

k-Anonymity