Computer Ethics
Normative Argumentation
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October 25th 2016
Normative argumentation

- Purpose of argumentation is to **justify or refute a statement**
  - Argument is a set of **statements**, of which one (the **conclusion**) is claimed to **follow** from the others (the **premises**)
  - Conclusion of an argument is the statement that is affirmed on the basis of the argument
  - Premises are the statements which are affirmed (or assumed) as providing support or reasons for accepting the conclusion
  - Valid argument (logic) is an argument whose conclusion follows with necessity from the premises: if the premises are true, the conclusion must be true
  - Valid argument are of a **deductive nature**, that is the conclusion is enclosed in (implied by) the premises
Many arguments from daily practices are not constructed deductively at all, since we often change our conclusions when new information is added.

In non-deductive arguments the conclusion is logically stronger than the premises (the premises if true give a limited amount of support to the conclusion).

The conclusion that John inherits the money of his wife, from the premises “if John’s wife dies, John will inherit her money (and nothing else is known)” and “John’s wife dies” will change if we add the information that John has killed his wife.
Sound argumentation

- **Sound** argumentation is an argumentation for which the corresponding **critical questions** can be answered positively and which therefore makes the conclusion plausible if the premises are true.

- Critical questions are those belonging to a certain type of non-deductive argumentation to check the **degree of plausibility** of a conclusion.

- Due to the **indirect nature** of non-deductive argumentation, there always is a small degree of **uncertainty**, whereas deductive argumentation completely excludes any possible doubt.
Argumentation by analogy

- Often used in **ethical discourse** to fill policy or moral vacuum surrounding modern technologies
- Type of non-deductive argumentation **based on comparison** with another situation in which the judgment is clear
  - The judgment is supposed also to apply to the analogous situation
- Ex.: discussion on hacking in the early 1990s
  - A number of hackers felt their behavior as morally acceptable because they wanted to help system managers to trace errors
  - Opponents used an argumentation by analogy: “You do not go to a clothing store and set fire to the clothing there to see whether fire safety procedures are in place”
Critical questions

- Are the two situations comparable?
  - Are there important relevant similarities?
  - Are there no important relevant differences?

- In the example about hacking the question whether there are no important and relevant differences is problematic
  - In the case of hacking no damage is caused, whereas in the example situation there is damage to clothing
  - As this difference is highly relevant, the analogy fails (false analogy)
Arguments in a utilitarian plea

- An action is morally acceptable if and only if that action can be reasonably expected to produce the greatest happiness for the greatest number of people.
- The **means-end argumentation** is at the forefront.
- Type of **non-deductive argumentation** in which from a given end the means are derived to realize that end:
  - If you wish to achieve end X, then you must carry out action Y.
Arguments in Kantian reasoning

- An action is morally acceptable if and only if the action meets the first/second categorical imperative
  - **Universality principle**
    "Act only on that maxim which you can at the same time will that it should become a universal law"
  - **Reciprocity principle**
    "Act as to treat humanity, whether in your own person or in that of any other, in every case as an end, never as a means only"

- Based on showing that the negation of the action leads to a contradiction as soon as you make a general law of it

- This a **proof from the absurd**, namely a **deductive argumentation** in which a certain proposition is proved by showing that the negation of the proposition leads to a contradiction
An action is morally acceptable if and only if that action is what a virtuous agent would do in the circumstances

- How do we define a virtuous person?

**Characteristic-judgment argumentation** is a type of non-deductive argumentation based on the assumption that a certain judgment about a thing or a person can be derived from certain characteristics of that thing or person

- To show that an employee is a virtuous employee, we need to demonstrate that the employee possesses the virtues responsibility, loyalty and trust
Informal fallacies are based on the consideration of the context and content of the arguments and are often used in ethical discussions.

- **Attack on the person** is an attempt to discredit an argument by bringing into question in some negative ways the presenter of the argument instead of attacking the argument itself.

- **Confusion of law and ethics**: "if it isn’t illegal, it is ethical" without recognizing that ethics is more compassionate than law.

- **Wishful thinking** occurs when a person interprets fact, events, etc. according to what she/he would like the case rather than according to the actual or rational evidence ("Surely God exists, because I have complete belief that He does").

- **The privacy fallacy** ("If you have done nothing wrong, you have nothing to worry about").

- **Fallacies of ambiguity** when words or phrases are used unclearly.
Specific fallacies on the acceptability of technological risks in public debates

- The sheer size fallacy: *you must accept nuclear energy because the risks are smaller than that of driving a car*”
- The fallacy of naturalness: *X is unnatural, so X should not be accepted*
- The ostrich’s fallacy: *X does not give rise to any detectable risk, so X does not give rise to any unacceptable risk*
- The delay fallacy: *if we wait we will know more about X, so no decision about X should be made now*
- The technocratic fallacy: *it is an engineering issue how dangerous X is, so engineers should decide whether or not X is acceptable*
- The fallacy of pricing: *we have to weight the risks of X against its benefits so we must put a price on the risks of X*
References