Economics, Law and Ethics
Part IB CST
2022-23

Lecture 7: Philosophies of ethics

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with many thanks to Ross Anderson
Overview

• Ethics:
  – An overview of philosophy
  – Philosophies of ethics
  – Professional codes of ethics
  – Co-ordinated vulnerability disclosure
  – Ethics in research
Philosophy overview

• Ethics is just one of six branches of philosophy
• Philosophy provides a tool to address questions of technology ethics; philosophy is ‘the software our minds work on’ (Hare, 2022).
Philosophy overview

• Metaphysics (What is reality?)
  – Misinformation; disinformation; algorithmic decision-making; consciousness; virtual reality; augmented reality

• Epistemology (What does it mean to know?)
  – Knowledge creation and curation; expertise; blackbox; transparency; explainability; accountability

• Political philosophy (What is the nature of power and legitimacy?)
  – Technology companies as political actors; censorship v. freedom of expression; privacy; civil liberties; human rights; data ownership v. data rights
Philosophy overview (cont)

• Logic (How do we know what we know?)
  – CAPTCHA; digital identity; facial recognition and other biometrics technologies; digital health technologies

• Aesthetics (What is experience?)
  – User interface (UI); user experience (UX), accessibility; value-sensitive design; personalisation; data handover between platforms; friction; addiction; data visualisation

• Ethics (How should we live?)
  – Values; utilitarianism; scale, niche; panopticon; mass surveillance; AI warfare technology
Ethics

- In our field, laws are often ten years behind, and even then often don’t fit reality very well
- Practical ethics: in what circumstances should we restrain our actions more than the law requires?
- Analogy: medical ethics (used to) require doctors to observe stricter confidentiality than either the law of confidence or data protection law required
- The philosophy of ethics asks “What are true moral values?” and “Why?”
Philosophies of ethics

• Authority theories mostly derive from religion. But God usually talks via scriptures or a priesthood; so how do you resolve disputes?

• Intuitionist theories say we can tell what’s good and bad, like we can tell something is green. But again, our intuitions can differ, and how do you resolve disputes?

• Egoist theories say we act rationally in our own self-interest. We’ve seen the limits on that…
Philosophies of ethics (2)

• Consequentialism:
  • Whether an act is right or wrong depends only on the results of that act
  • The more good consequences an act produces, the better or more right that act
• Consequentialist theories include Hume, Bentham and Mill’s utilitarianism: maximise $W = \sum U_i$ (or, ‘greatest happiness of the greatest number’)
• But how do you work out consequences in detail?
• Cheney’s ‘ticking bomb’ justification for torture
• Modern debate: act vs rule utilitarianism
Philosophies of ethics (3)

- John Rawls ‘Theory of Justice’: we should make moral decisions about a society behind a “veil of ignorance” of whether we’ll be born high or low.
- Deduces: we should maximise $W = \min U_i$
- Would you rather be reincarnated in the USA or (say) Portugal – poorer but with better welfare?
- Randomised algorithms, anyone?
Philosophies of ethics (4)

- Aristotle: consequentialist theories are ‘for beasts’: you’d be happier if you were stupid
- People should act in accordance with nature and duty: they will do good and be happy
- It’s not just the consequences of actions that make them right or wrong, but the motives of the actors
- The many flavours include Kantian theory of duty: act only on maxims that you’d like to be universal and treat people as ends not means
Professional codes of ethics

• ACM’s code of ethics [https://ethics.acm.org/code-of-ethics/using-the-code/](https://ethics.acm.org/code-of-ethics/using-the-code/)

• A computing professional should…
  – Contribute to society and to human well-being, acknowledging that all people are stakeholders in computing
  – Avoid harm
  – Be honest and trustworthy
  – Be fair and take action not to discriminate
  – Respect the work required to produce new ideas, inventions, creative works, and computing artifacts
  – Respect privacy
  – Honour confidentiality
Co-ordinated vulnerability disclosure

• If vulnerabilities found: range of responses from not disclosing to immediately making public

• Co-ordinated disclosure: Confidential disclosure to those that can remedy or mitigate the impact

• Bug bounty programs
Ethics in research

• 1940s: Nazi human experiments
• 1930s-1970s: Tuskegee syphilis experiment
• 1970s: Stanford prison experiment
• 1960s: The Milgram experiment
• 2010s: Facebook emotional manipulation study
Ethics in research

• Research Ethics Boards:
  – Ethics Committees in UK, Institutional Review Boards (IRBs) in the US

• Research funding bodies

• Program committees and journal editors

• Professional Ethical Guidelines or Codes of Practice

• For computer science: The Menlo Report
  – Core principles: respect for persons, beneficence, justice, and respect for law and public interest.
Ethics in research

• Your Part II project may involve human experimental subjects
• Independent review by uninvolved scientists greatly reduces risks of both civil litigation, and criminal prosecution if things go wrong
• Pay attention to the procedures for ethics committee approval
• And if they say no, don’t do it – unlike in the Cambridge Analytica case!