Economics, Law and Ethics

Part IB CST

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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)

Six branches of philosophy

- 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

Six branches of philosophy (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

Philosophies of 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?"

Authority, Intuition & Ego

- 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…

Consequentialism

- Principles of consequentialist approaches:
  - 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

Deontology

- 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?

Deontology (cont)

- Aristotle: consequentialist theories are ‘for beasts’: you’d be happier if you were stupid
- Deontological approaches:
  - 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/
- 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
- 1960s: The Milgram experiment
- 1970s: Stanford prison 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!