

# Human Values

- What is a Value?
  - *“refers to what a person or group of people consider important in life”* [1]
  - Is Ethics an aspect within Theory of Values?
  - Are Ethical Values just one component of Ethics?
- Values relevant for Design [1, 2]
  - human welfare, ownership, property, privacy, freedom from bias, universal usability, trust, autonomy, informed consent, accountability, identity, calmness, and environmental sustainability

# Human Values

see [2]

- Technological innovations implicate human values
- Values can conflict, e.g.
  - awareness vs. privacy in CSCW systems
  - values of privacy / informed consent vs. usability in web browser settings
- Major HCI approaches to the study of human values, ethics, and design:
  - computer ethics, social informatics, CSCW, participatory design, value sensitive design

# Value Sensitive Design see [2]

- VSD seeks to design technology that accounts for human values in a principled and comprehensive manner throughout the design process
- is primarily concerned with values that center on human well-being, dignity, justice, welfare, and rights
- Tripartite Methodology: Conceptual, Empirical, and Technical Investigations [1]

# Value Sensitive Design

see [1]

- Conceptual Investigations
  - Who are the stakeholders? What values are implicated? How to engage in trade-offs among competing values?
- Empirical Investigations
  - Inform the analysis – Evaluation of the success of a particular design – prioritisation of competing values
  - Focus on individuals, groups, larger social systems
- Technical Investigations
  - How can technology support or hinder human values?
  - Focus on technology itself

# Cyberpunk and transhumanism

- As examples of emerging technologies in the last year or so, a couple imaginative inventions in particular, among many, are closing the gap even more between science fiction and the real world.
- “human enhancement” is about boosting our capabilities beyond the species-typical level or statistically-normal range of functioning for an individual (Norm Daniels, 2000).

# Enhanced humans - a new digital divide?

- Regulate and or restrict? (personal freedom, autonomy)
- Possible with both stringent regulation and individual liberty?
- “Holistically, we need a kinder and gentler society, but realistically that is too utopian” (Neumann)

“Too often, we view computers simply as machines and algorithms, and we do not perceive the serious ethical questions inherent in their use” (Spafford)

- The researchers said the test results suggested that too little attention was being paid to security in the growing number of medical implants being equipped with communications capabilities

Pacemakers and Implantable Cardiac Defibrillators: Software  
Radio Attacks and Zero-Power Defenses (2008)

“The risks to patients now are very low, but I worry that they could increase in the future”

Tadayoshi Kohno

# Hackers and Crackers

The results of the act should be considered separately from the act itself, especially when we consider how difficult it is to understand all the effects resulting from such an act (Spafford)

# Technology security and human values

- Technical gap: The initial purpose of a particular device can differ from all the other potential uses.
- Socio-technical gap: Policies regulating technology innovation and use are not always following social policies.
- Social gap: The expected and actual human behavior differences.

# Can the three gaps be narrowed?

- Technical gap: Could be narrowed by careful design.
- Socio-technical gap: Value sensitive design seems a solution.
- Social gap: Human creativity and imagination knows no limits...

- Technology evolving fast, human ethics evolving slowly (if at all).
- This increases the potential of big mistakes and human-caused disasters.
- Therefore need to consider more and more the further future.

# Literature

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- (3) Neumann P.G., Computer Security and Human Values; Computer Security, The Research Center on Computing and Society at Southern Connecticut State University
- (4) Allhoff, Lin, Moor, and Weckert, 2009, Ethics of Human Enhancement: 25 Questions & Answers, [http://www.humanenhance.com/NSF\\_report.pdf](http://www.humanenhance.com/NSF_report.pdf)
- (5) Krystyna Górniak-Kocikowska, xxxx, The Computer Revolution and the Problem of Global Ethics
- (6) Eugene H. Spafford, xxxx, Are Computer Hacker Break-ins Ethical?