



THE CENTER FOR ADVANCED STUDIES
IN SCIENCE AND TECHNOLOGY POLICY

POLICY ISSUES FOR SCIENCE AND TECHNOLOGY IN A *Surveillance Society*



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Overview

- Analytic Framework
- A Brief History of “Privacy”
- The Social Construction of Surveillance
- The Role of Science and Technology
- Strategies of Resistance
- Value Sensitive Design *

Analytic framework for surveillance policy

- Unintended consequences
 - Expansion of audit
 - Values audit criteria (reduction to what can be measured)
 - Distorts mandates and institutional decision making (LL#s)
- Stakeholder politics
 - Opposition politics of security vs. liberty
 - Co-option of “privacy” by institutional interests
 - Interaction of synoptic and panoptic surveillance
- Discourses of opposition/resistance
 - Privacy, effectiveness, technology, identity, error, function/mission creep

Methodology for Value Sensitive Design

- Conceptual
 - What are values? (~privacy)
 - C.f. “trust” - likely exposure to harm, intent of counterparty(s), does control lies within/without the trust relationship
- Empirical
 - Investigation of the human context in which the technical artifact is situated
- Technical
 - Code is not law but bounds policy (potentialities)

A Brief History of “Privacy”

- Physical privacy (~universal norm?)
 - Home is your castle
 - Property right
- Information privacy (culturally and technology specific)
 - Ancient Greek world, private persons were *idiotes* since you had to engage in public discourse to have an opinion
- Print created “privacy” by unifying the two
 - Private “thinking” space
 - Modern notion of individuality and privacy
 - Michel de Montaigne (16thC) -- “the back room”
 - Based on enforcing borders or barriers

The U.S. Legal Claim to “Privacy”

- The emergence of “mass media” technologies resulted in violations of social borders (previously enforced through physical space)
- Warren/Brandeis article (Harv. L.R. 1890)
 - Tabloid press and fast/mobile photography
 - Claim to privacy based on property rights (“intrusion”)
- Unpacking the modern notion of privacy
 - Secrecy (don’t know) (4th A)
 - Anonymity (don’t attribute) (1st A)
 - Autonomy (don’t care) (power over use)

Information flows and privacy

- Technologies of communication bound potentialities
 - Oral culture: information exchange is bidirectional
 - Print culture: information exchange is unidirectional
 - Net culture: information exchange is omnidirectional
- In a network the most important characteristics of a node are its connection not its intrinsic properties
- Is ontological separation (*nee* “privacy”) viable
- Compare “confidentiality” based on relationships (protect autonomy directly?) (EU-dignity, UK-conf)

Failure of U.S. Privacy Law

- Authoritarian
 - Based on experts and authorities
- Relevance
 - Aging notions of individuality
 - Privacy vs. personalization
- Subjective perception of violation
 - Personal and contextual
 - Therefore local, not broad based
- Privacy law overly focused on disclosure/collection (secret) rather than use (autonomy)
- Regulatory capture: using privacy claims to render powerful institutional actions opaque while making others transparent

Social ~ Technical privacy

- Social privacy - group awareness v. individual “P”
- Technical privacy - system awareness v. user control
- Value sensitive design - tries to expose all aspects of both those relationships early and throughout the design, development, and implementation of technical systems

Emergence of the Surveillance Society

- Surveillance - collection and analysis of information about populations in order to govern their activities
- Surveillance is the social response to privacy and anonymity
- Surveillance is a social control mechanism to provide accountability for behavior within systems (thru audit)
- Counterparty trust
- Surveillance is a feature of modernity

Characteristics of the Surveillance Society

- No single big brother -- ability to harness the surveillance efforts of otherwise disparate technologies and organizations (info sharing)
- Power is in taking advantage of existing systems *
- Interaction of the panoptic and synoptic
 - Panoptic - few watching the many
 - Fear and uncertainty about the unseen observer
 - Classifying populations for management
 - Or discursively, by constructing subjects
 - Synoptic - many watching the few
 - Seduction and enticement rather than coercion

Consequences of a Surveillance Society

- Surveillance technologies do not monitor people qua individuals but instead operate thru process of disassembling and reassembling data points (audit)
- Creates a subject/identity - data double, surveillant assemblage, digital dossier, virtual self
- To use for social sorting, a technique of power to shape destinies
- Based on what is measurable/auditable in system
- Can lead to autonomy trap if not made visible

The evolution of modern social control

- Sovereign model based on arbitrary decree
- Beccarian model based on punishment and deterrence of deviant acts after they are committed
- Foucauldian model (panoptic) of general social compliance through ubiquitous preventative surveillance and control through systems constraints
- Deleuzian model of a “control society” based on seduction and enticement rather than coercion

What is “control society”

- Control/security is not achieved primarily by law enforcement through arrest and prosecution (“low policing”) but by risk management through surveillance, information exchange, auditing, communication, and classification (“high policing”)
- Result is not homogenization but infinitely fine-tuned differentiation/personalization (*Matrix* not *1984*)
- The endpoint is to eliminate the potential for deviance by managing opportunities (fix potential outcomes)

The Social Construction of the “Surveillance Society”

- Why are surveillance systems/technologies developed and deployed when “privacy” is such a big fear?
- Why, when there is little demonstrable evidence of success in security performance?
- Why, when many of the “solutions” are worse than the problems?

The National Security State

- Government funding
 - DOD
 - DHS
 - Other
- Industry opportunities
 - The “homeland security” industry
 - The “security” industry
- Media - viewer society

The Viewer Society

- Scopophilia (the love of watching)
 - Reality TV, CCTV in news, 24/7 coverage
 - Face of evil (9/11)
 - Celebrity (and the monetization there of)
- Efficiency
 - Small harm, large gain at POS
- Convenience/personalization
 - Is target marketing (or targeted government service) something done FOR you or TO you?

The Role of Science and Technology

- Science and technology
 - To make the unknown known
 - To make the invisible visible
- Social deification of technology/the silver bullet (~experts)
- Rationality, its own ideology
 - value-free, neutral, and objective scientific methodology applied to other areas, even to values themselves (producing an oxymoron: value-free values)
- Code is not law but it bounds what policy can do
- Technology creates the reality it describes (thus, it cannot be value free as it enables and constrains opportunity/potentialities)

The Transparent Society - an alternative?

- Do you know this man?



Discourses of Opposition/Resistance

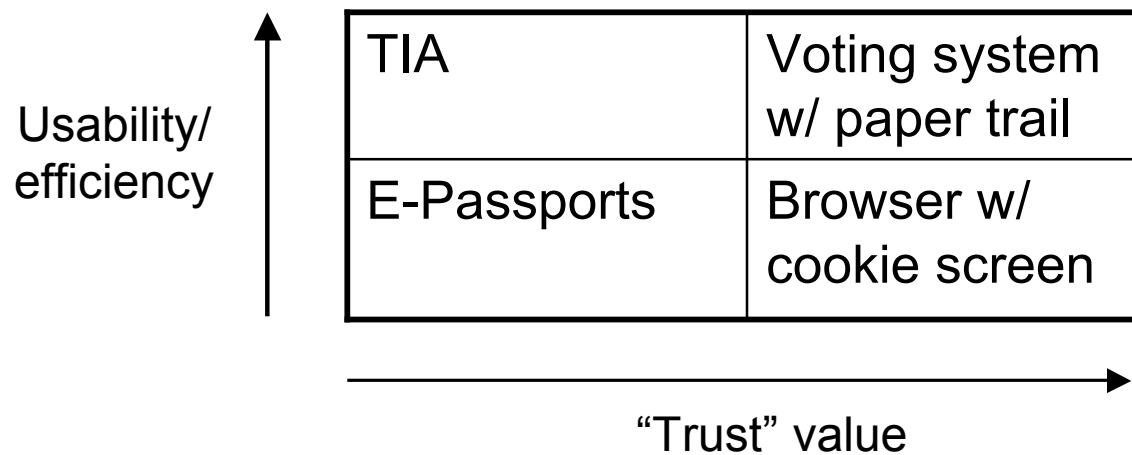
- Privacy (connections are not individual privacy violations but a new mode of social organization)
- Effectiveness (paradoxically results in need for more intensive surveillance)
- Technology (battle of the experts)
- Identity (profile or reputation?)
- Error (input and threshold)
- Function/mission creep
 - Slippery slope and desensitization
 - “Terrorism” and “Child exploitation”

Strategies of Opposition/Resistance

- Luddism
 - whack-a-mole (“privacy lobby” v. TIA)
- Techno-fix PET (privacy enhancing technologies)
 - Strategies of consent (notice, P3P, etc.)
 - Strategies to separate kn of identity from kn of behavior
 - Selective revelation and rules-based processing
 - Reintroduce cost/inefficiency as a brake on power
 - Process intervention points - policy appliances
 - Audit * (accountability strategies)
- *Value* sensitive design
 - Expose the social construction to *democratic* process

Value Sensitive Design

- Purpose is to expose systems development (and the power relationships) to *democratic* process
- Efficiency/usability vs. “trust” value



Formal Value Sensitive Design theory

- ~Computer ethics (is divorced from technical implementation)
- ~Social informatics (provides socio-technical analysis of deployed technology)
- ~Computer supported cooperative work (focused on the workplace)
- ~Participatory design (gives no guidance for resolving POVs)
- VALUE Sensitive Design - makes moral claims

VSD engages all stakeholders

- Expose requirements process to stakeholders as early and broadly as possible (~PIS) (proxy)
- Match data requirements to business process needs
 - E.g., don't collect what you don't need because you can
- Require stakeholders to develop new business process or policy where capabilities are beyond requirements
- Identify and expose consequences and power relationships

My [value-free?] design values

- Assume error
- Design for elegant failure
- Expose process to as many [approp.] stakeholders as early and broadly as possible (democratic value)
- Iterative policy and system design/development
- Build in error discovery and correction
- Open source/peer review, subject to falsification
- Observe and expose power relationships
- Use Rawlsian fairness as guidance

A word about power

- Power is neither good nor bad (after Foucault) but is a tool to accomplish particular interests
- Attend to how power is exercised, over whom, and towards what end (~TSA)
- VSD conundrum: abstraction/universal (but miss local power) v. concentration/specific (but miss big picture)

Ideas have consequences

- Science, technology concerned with ideas
- Policy, politics concerned with consequences
- Einstein: “*Science as [as an end] is the most objective thing known to man. But science in the making, science as an end pursued, is ... subjective ... so much so, that the question 'What is the purpose and meaning of science?' receives quite different answers at different times and from different sorts of people.*”

Value Sensitive Design

- VSD -- A formal method to bridge the gap between ideas and their consequences

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