

Today's Class

- Thinking about technology and society
- Social Science views on privacy

What is *technology*?

- Complicated, involved question...
- Need to understand that complex technical systems have many interacting components
 - In this class, we will use “technical” set in opposition to non-technical aspects
 - But the technical and non-technical are not always easy to separate.

Two perspectives on technology and society

How should we begin to think about technological systems?

- Social Constructionism
- Technological Determinism

- Each stems from long discussions in social theory
- Neither view is complete, but both are useful

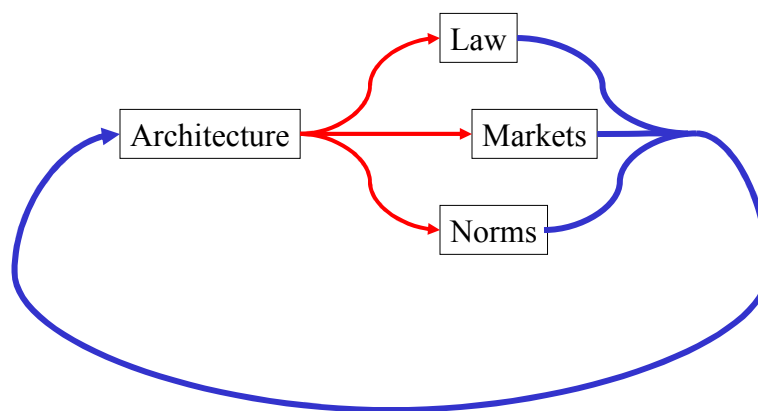
Technological Determinism

- Strong form: Society is shaped by an ever-evolving set of technologies.
"In acquiring new productive forces men change their mode of production, and in changing their mode of production they change their way of living-they change all their social relations. The hand-mill gives you society with the feudal lord; the steam-mill, society with the industrial capitalist."
- Weak form: In order to examine a technology, we must look at what it makes possible.

Social Constructionism

- Strong Form: The world around us is merely a function of what everyone “knows”.
- Weak form: In order to examine a technology, we must explore the social/legal/economic contexts from which that technology emerged.

Regulating Technology



Stakeholder Analysis

- “Where you stand depends on where you sit.”
- Many technological systems require the participation of many different actors.
 - Identify all interested parties
 - Firms, industries, individual managers
 - Governments, agencies
 - Affected citizens, professions, “public interests”
 - Define the relevant interests of stakeholders
 - Assess capabilities of each party to affect outcome
- This is not a means of achieving a definite answer, but a good place to start to look for the questions we should ask.

Thinking about technology and society

- Technologies are complex systems with social, political and economic components
- Both social constructionism and technological determinism are helpful but incomplete lenses for analysis.
- Society shapes technology, and technology shapes society.
- Stakeholder analysis can unpack complex webs of interests.

Social Science and Privacy

Demand for data protection

- Do people want privacy?
- Survey says... Yes!
 - Overwhelming support for privacy, majority of Americans are “very concerned”, etc.
 - Problems with surveys: talk is cheap

Demand for Data

- Price discrimination
 - Example: Suppose iThings cost \$99 to make
 - Alice will pay up to \$100, but Bob will pay up to \$200.
 - If Apple can identify and target both Alice and Bob, everyone is better off
 - Identify how much consumer values a good, and offer that consumer a personalized price.
 - Most people genuinely resent P.D. when it is framed as such.
 - BUT: most people like discounts.

Demand for Data (2)

- Search costs
 - How to match buyers with products they will like?
 - Assume: no one makes a transaction that they don't want.
 - If there were perfect information about everyone, it would be possible to only target interested buyers and ignore everyone else.
- Personalization - need personal information to cater to your tastes.
- Identification - All of these things require knowing who you are.

Privacy externalities

- Externality: The cost of an action is not borne exclusively by the actor.
- Privacy externality: Actions taken do not take into account the privacy values of a third party.
- Correct externalities by assigning property rights to bring left out parties into the transaction.

A Privacy Paradox?

- People say they want privacy, but no one seems to do much about it.
- Why?
 - There isn't anything we can do.
 - People don't really want privacy.
 - Its not an easy connection from wanting to doing.

Behavioral Obstacles to Privacy

- Bounded Rationality - we have finite “processor power” to think through a decision.
- Overconfidence in risk assessment.
- Availability bias - value things we can visualize or anticipate more than less concrete examples.
- Time-inconsistent discounting - value immediate gains far more than future gains.

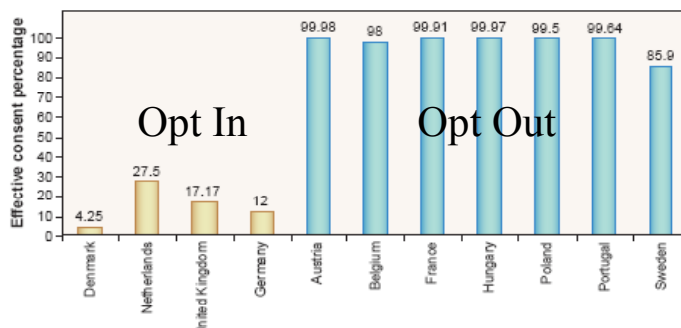
Behavioral Obstacles to Privacy (2)

- Loss aversion / endowment effect
 - I will not accept any offer less than \$X to reveal that information.
 - I will pay up to \$X to keep my information private.
 - *How you assign privacy property rights matters.*
- Taboo tradeoffs - there are some transactions that people ‘should’ be able to make, but react very strongly against trying.

Social Psychology of Privacy

- Privacy as a mediator of relationships
 - Demarcation and prioritization of boundaries
 - Allows intimacy to be a choice
- Privacy as an enabler of roles.
 - Public roles are easier if we have private time/space to step out of role.
- Privacy as a luxury or status good.
 - Taken away as punishment.

The Power of Defaults



Consent to be an organ donor in Europe

Social science views on privacy

- Demand for privacy conflicts with a demand for data, producing a market externality.
- Human nature presents many obstacles to creating markets for privacy.
- Privacy is critical for many aspects of human relationships.
- The default options can explain much of observed behavior.