

Privacy



Image courtesy of: <http://www.truste.com/blog/2011/12/05/what-companies-can-learn-from-ftc-privacy-cases-in-2011/>

Coverage of Privacy so far

- Some discussion with respect to data breach
- Several Federal government laws
 - HIPAA, FERPA, USA PATRIOT

From last week

- Chinese cybersecurity laws
- <http://blogs.wsj.com/chinarealtime/2016/06/03/untangling-chinas-cybersecurity-laws/>
- "Many of these measures involve the concept of '**secure and controllable**' technology, a loosely defined term that involves government security checks and data storage within the country."

Chinese Cyber laws (2)

- Generally a requirement for vendors to share source code
- Ask companies for help in decryption
- Legislation
 - National Security Law (7/2015)
 - Counterterrorism Law (12/2015)
 - Banking Sector IT guidelines (1/2015, but suspended)
 - Insurance Sector IT Guidelines (currently draft)

Anonymity versus privacy

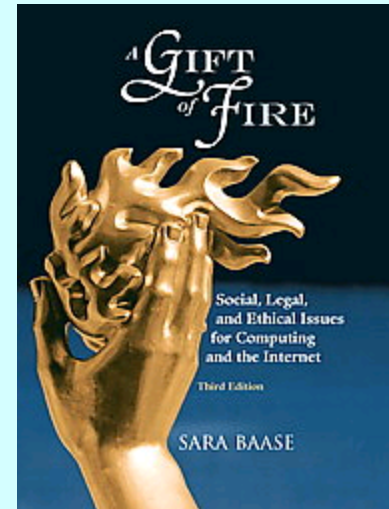
- What is the difference between privacy and anonymity?
- How are they related?

What is privacy?

- And what does it include

Three aspects of privacy

- Freedom from intrusion
- Control of information about oneself
- Freedom from surveillance



Sara Baase, 2008. A Gift of Fire. Pearson

Legal origins of privacy

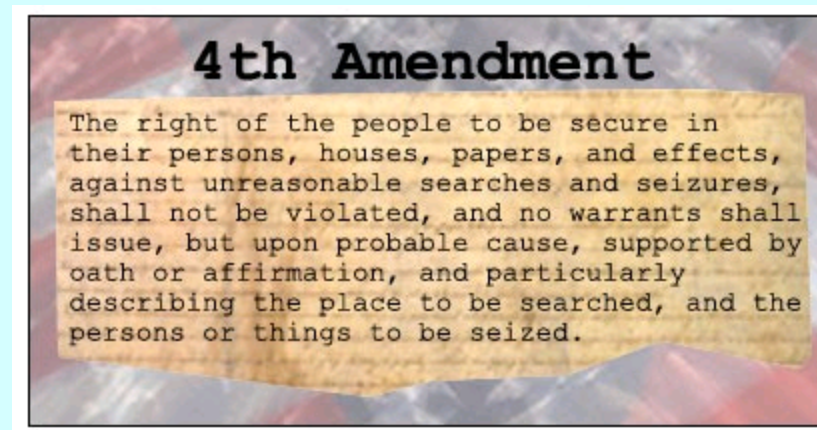


Image from: <http://mediacriminaljustice.blogspot.com/2011/05/4th-amendment-is-on-life-support.html>

Early Legal Writing about Privacy

- Justices Warren and Brandeis
 - “The Right to Privacy”
 - 1890
 - Concerned about the impact of photography

The need for laws

- Typical progression (in the US)
 - Technology erodes personal/public barriers
 - Civil libertarians and privacy academics grumble
 - Absent case law or legislation, commercial and government consumers of technology push the limits of what is acceptable
 - Until something catastrophic happens...
 - Congress responds

- How government handles data in information systems is primarily due to one man:

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 - Richard Nixon



Image courtesy of: <http://ghostsofdc.org/2012/01/13/nixon-i-am-not-a-crook/>

Federal legislation

- Fair Information Practice Principles (FIPPs)
 - Notice/awareness
 - Choice/consent
 - Access/participation
 - Integrity/security
 - Enforcement/redress
- The Church Committee report

FIPPs

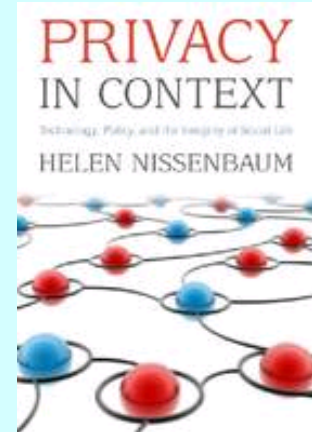
- Privacy Act of 1974
- Family Educational Rights and Privacy Act - 1974
- Right to Financial Privacy Act 1978
- Electronic Communications Privacy Act 1986
- Video Privacy Protection Act 1988
- Health Insurance Portability and Accountability Act of 1996

FIPPs Problems

- Trying to fit information systems into the filing cabinet paradigm (government paper records)
- Laws largely unchanged since the 70s and 80s

Why discuss privacy as part of computer ethics?

“Information technology is considered a major threat to privacy because it enables pervasive surveillance, massive databases, and lightning-speed distribution of information across the globe”



Speaking at Stanford, 3/2011

- The Google maps street view vans
- Tracking customers' click streams
- Photograph tagging

Technology: Tracking and monitoring

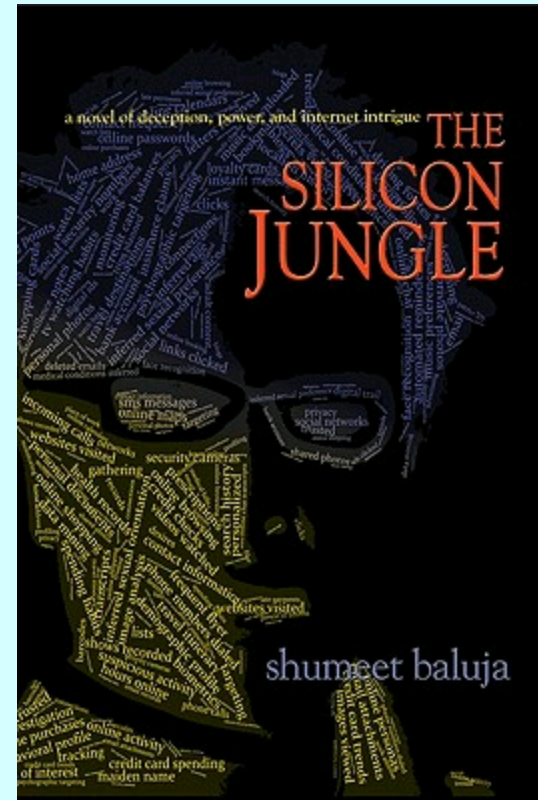
- CCTV
- Chemical sensors
- RFID
- Dataveillance
- Mobile phones
- “Black boxes” in cars
- GPS systems
- Airport body scanners
- License plate readers
- Online
 - Transactions
 - Clicks
 - Cookies
 - Search queries

Technology: Aggregation and analysis

- Democratization of database technologies
 - Information mobility
 - Information aggregation
 - Contributions of AI
 - Omnibus information providers
 - E.g. Axicom, ChoicePoint, FirstAdvantage

Information Aggregation: A novel?

- The story of several summer interns at Ubatoo (Google) and what they learn about individuals through data mining
- How much can Google do now? Or in the near future?



Technology: Dissemination and publication

- Public records online
- Social networks
 - Self-reporting
 - Reporting information about others
 - Monitoring/tracking

Societal challenges to privacy

- Credit cards
- EZ Pass
- Discount shoppers cards
- Caller ID
- Traceable search engines
- Media exhibitionism

International challenges

- Differing countries have differing rules concerning each of the aspects of privacy
 - E.g. CCTV
 - E.g. data mining
- In an increasingly “flat” world, this poses yet another series of challenges

My own data mining story

- Insurers pose a particular problem

Solutions

- Creating theoretical models for privacy
- Technical solutions
 - Anonymity, Do not track, encryption
- Policy
 - A right to be forgotten?
- Regulation/legislation