

# Privacy in a Networked World

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## Clarification Points

- Is blackmail a privacy violation?
- Franklin's quote
- Constitutional protections of Privacy
- Privacy as contextual integrity

## Blackmailing as Privacy Violation

- Solove's Taxonomy of improper information dissemination
  - Breach of Confidentiality; Disclosure; Exposure; Increased Accessibility; **Blackmail**; Appropriation; Distortion
- Is it really about privacy?
- "The threat is stronger than the execution"

## Blackmailing as Privacy Violation

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## Franklin's Quote

“Those who would give up essential liberty to purchase a little temporary safety, deserve neither liberty nor safety”

- Privacy & Security: Which one is it?
  - Privacy  $\wedge$  Security
  - Privacy  $\vee$  Security
  - Privacy  $\oplus$  Security
  - Privacy  $\Rightarrow$  Security
  - Privacy  $\Leftarrow$  Security

# Constitutional Protections of Privacy

## *Amendment IV*

“The right of the people to be **secure** in their **persons, houses, papers, and effects**, against **unreasonable searches** and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the **place to be searched**, and the persons or things to be seized”

# Constitutional Protections of Privacy

## *Amendment I*

“Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances”

# Constitutional Protections of Privacy

## *Amendment IX*

“The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people”

## Privacy as Contextual Integrity

- Three-principle framework
  - i. Protection from Government intrusion
  - ii. Protection of sensitive data
  - iii. Protection of intimate places
- Contexts and regulating norms
  - i. Norms of appropriateness
  - ii. Norms of distribution/flow
- Violation of norms  $\Rightarrow$  violation of privacy
- The case of surveillance

## What's this course about?

### *Privacy*

- What is privacy and why it matters
- Threats to privacy
- Protecting privacy

### *Technology*

- How technology changed the “privacy game”
- How technology can *hurt* privacy
- How technology can *help* privacy

## Social Security Numbers

Year	Authorized Uses of SSN
1935	SSN introduced
1943	SSN used to identify fed employees
1962	IRS uses SSN to ID taxpayer
1965	Feds propose to aggregate their DBs
1967	DoD uses SSN as AF Id
1972	INS assigns SSNs to foreigners
1975–1977	SSN for national & state assistance
1983	SSN for interest-bearing accounts
1986	SSN for employment eligibility
1989	SSN in Student Loan System
1996	SSNs to go on Driver's licenses

## Social Security Numbers (cont'd)

- Why did the Soc. Sec. Admin. introduce SSN?
- What was the rationale for aggregating DBs?
- And behind the other suggested usages?
- Which concerns arise from this other usages?
- Which lessons can be learned from this?
  - Identification  $\neq$  Authentication
  - The dangers of "Mission Creep"

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## What Did You Do Today?

- The information crisis
- The false data syndrome
- The tracking process
- The biggest database in the world
- The age of public statements

## Surveillance: The View from Above

- Satellite imaging
- Closed-circuit TV
- Wire-tapping
- Fumbling for the "off" switch
- Surveillance in the Web 2.0: "Netaveillance"

## Absolute Identification

- Fingerprints, face recognition, retina scans
- The pitfalls of absolute identification
  - Identifying bodies, not people
  - Identification  $\neq$  Authentication
- Q: Can we have Privacy with Absolute Identification?

## Identity and Anonymity

*The Death Ship, B. Traven*

“You ought to have some papers to show who you are.” The police officer advised me.

“I do not need any paper. I know who I am,” I said.

“Maybe so. Other people are also interested in knowing who you are.”

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## Identity and Anonymity (2)

- Why identification?
  - Accountability
    - Enforcing laws and social norms
  - Reciprocity
    - Linking interactions at different times/places
    - *E.g.*, tit-for-tat, *do ut des*
  - Reputation
    - Linking interactions w/ different entities
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## Identity and Anonymity (2)

### *Seven Forms of Identity*

1. Legal name (**who?**)
2. Reachability (**where?**)
3. Linkable pseudonyms
4. Unlinkable pseudonyms
5. Pattern knowledge (**unnamed vs. unknown**)
6. Social categories
7. Eligibility (**what?**)

## Identity and Anonymity (3)

- Why anonymity?
- Facilitate reporting/auditing
  - “If you kill the messenger, you won’t hear bad news”
- Encourage attention on speech, not on speaker
  - See Bellovin’s post on RISKS
  - Anonymous grading?!
- Encourage info seeking
  - Alcoholics Anonymous, HIV testing

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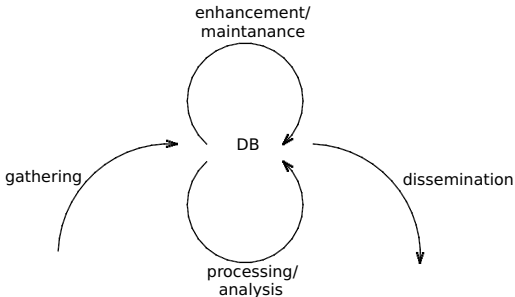
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## The Evils of a Database Nation

- Your “data shadow”
- The “false data syndrome”
- Identification  $\neq$  Authentication
- Identity Theft
- Profiling
  - Decisional interference
  - Thought-crime
  - Profile-based discrimination

## Readings for Next Class

- **Achieving Electronic Privacy**, *D. Chaum*, '92  
- [See [WebCT/eLearn](#)]
- **Better Password Practices**, *S. Granger*, '02  
- <http://www.securityfocus.com/infocus/1537>
- **Password Security**, *U.Mich. IT*, '97  
- [See [WebCT/eLearn](#)]