

Privacy in a Networked World

Instructor: Antonio R. Nicolosi

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Administrivia

- Meet the new TA: **Onur Kardes**
 - email okardes@stevens.edu
- Onur's office hours
 - Mondays, 3:00pm–5:00pm
 - Location: TA room in CS Lab, Burchard 127
- DIMACS Workshop on Data Privacy
 - February 4–7, 2008, Rutgers University
 - \$15/day (\$10/day if registering **today**)
 - <http://dimacs.rutgers.edu/Workshops/DataPrivacy/>

Class Project Timeline (Review)

- Before **January 31**:
Come and see the TA or me for group formation and project brainstorming
 - I've only seen 4–5 of you—you are *all* supposed to come
 - Please drop by, or email us with your group formation & project idea

- **February 4**: One-par project proposal (**5 pts**)

Class Readings

- Books on reserve at Williams library
 - **Database Nation: The Death of Privacy in the 21st Century**, *S. Garfinkel*
 - **No Place to Hide**, *R. O'Harrow*
- You can read them *in the library*—on-reserve material can't be taken on library loan

Other Recommended Readings

- Texts on privacy
 - The Limits of Privacy, *A. Etzioni*
 - The Transparent Society, *D. Brin*
 - How Patriotic is the PATRIOT Act?, *A. Etzioni*
- Novels dealing with privacy
 - Nineteen Eighty-Four, *G. Orwell*
 - The Trial, *F. Kafka*
 - Earth, *D. Brin*
 - Snow crash, *N. Stephenson*

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

Privacy in Your Words

- Privacy relates to ...
 - ... making room for myself
 - ... the ability to keep others out
 - ... severing the **actions** ↔ **identity** link
 - ... my security & my autonomy of thought
 - ... things I do not want to share with others
 - ... the ability to share discretionally
 - ... having control over info that is unique to me (personal/identifying or o/w sensitive)

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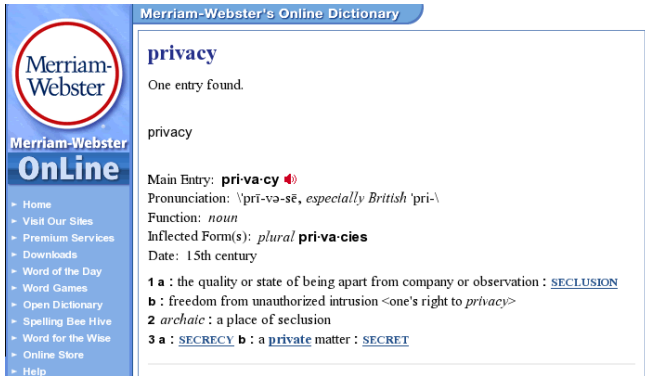
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A Dictionary's Definition of Privacy




Merriam-Webster's Online Dictionary

privacy

One entry found.

privacy

Main Entry: **pri-va-cy** 

Pronunciation: \ˈprī-və-sē, especially British ˈpri-\

Function: *noun*

Inflected Form(s): *plural pri-va-cies*

Date: 15th century

1 a : the quality or state of being apart from company or observation : [SECLUSION](#)

b : freedom from unauthorized intrusion <one's right to *privacy*>

2 archaic : a place of seclusion

3 a : [SECRECY](#) **b** : a [private](#) matter : [SECRET](#)

Merriam-Webster Online

- Home
- Visit Our Sites
- Premium Services
- Downloads
- Word of the Day
- Word Games
- Open Dictionary
- Spelling Bee Hive
- Word for the Wise
- Online Store
- Help

Privacy as an Individual Right

- *S. Warren and L. Brandeis*
 - Privacy as “the right to be let alone”
 - Privacy “[..] a part of the more general right [..] to one’s personality”
- The Universal Declaration of Human Rights
 - “Everyone has the right to the protection of the law against [..] arbitrary interference with his privacy”

Why Privacy Matters

Privacy & Personal Growth

Privacy



Freedom to experiment with ideas;
Space for self expression;
Creativity outlet



Self confidence;
Public life



Personal growth

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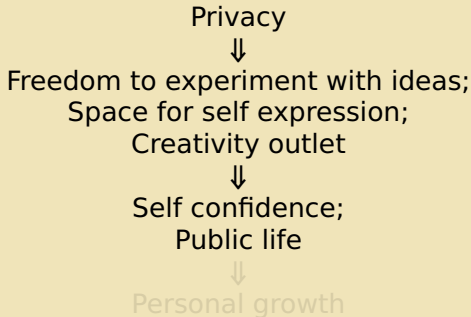
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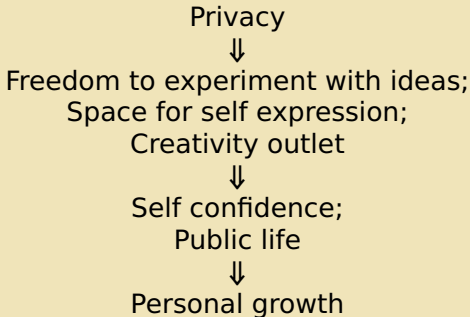
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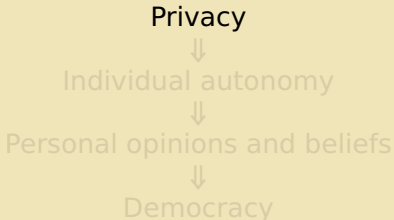
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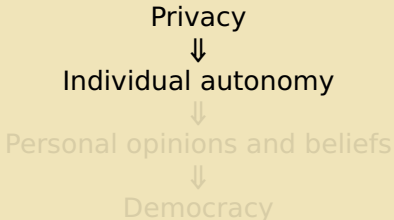
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Privacy & Democracy



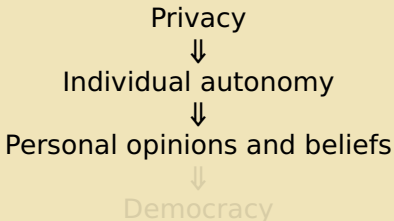
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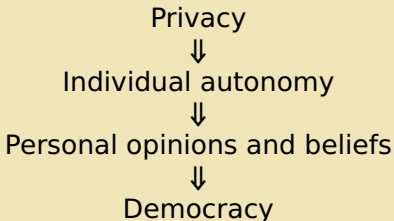
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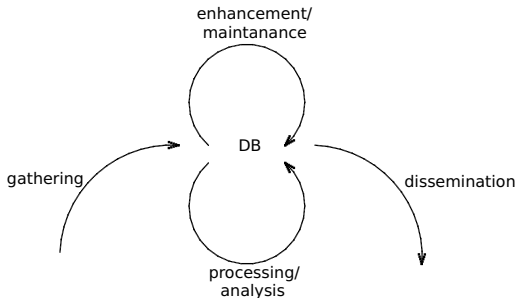


Dimensions of Privacy

- Informational privacy
- Bodily privacy
 - Biometrics
- Privacy of communication
- Territorial privacy
 - Privacy in the workplace

Informational Privacy

The Lifecycle of Personal Information



Solove's *Taxonomy of Privacy*

General categories of privacy problems

- Information Collection
- Information Processing
- Information Dissemination
- Intrusion

Solove's *Taxonomy of Privacy* (1)

Information Collection

- Surveillance
 - Closed-circuit TV & cameras
 - Network monitoring
- Interrogation
 - "Tough" law enforcement
 - Product registration
 - On-line surveys & promotions

Solove's *Taxonomy of Privacy* (2)

Information Processing

- Aggregation
- Identification
- Insecurity
 - Unauthorized access and data leakage
- Secondary Use
- Exclusion
 - Correcting inaccuracies in one's own profile

Solove's *Taxonomy of Privacy* (3)

Information Dissemination

- Breach of Confidentiality
- Disclosure
- Exposure
- Increased Accessibility
- Blackmail
- Appropriation
- Distortion

Solove's *Taxonomy of Privacy* (4)

Invasion

- Intrusion
 - SPAM and Ad-ware
 - Junk mail
 - Phone solicitation
- Decisional Interference
 - On-line ads (Google, Yahoo!, MSN)
 - Product recommendations (Amazon)

The Skeptic's Arguments

"I've got nothing to hide"

- Privacy is not just about hiding things
 - It's about dignity & autonomy
 - It's about self-determination
 - It's about control
- Unwarranted surveillance, wiretaps, and email interception violate the above *especially* when there is nothing to hide
 - Need for warrant ensures due process

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The Skeptic's Arguments (2)

"Privacy has to die for security to flourish"

- "After all, security is a common good; privacy is at best an individual right"

A: Security is *not* a social goal. It should free us from preoccupation and fear—not create uneasiness by killing our privacy

"Those who would give up essential liberty to purchase a little temporary safety, deserve neither liberty nor safety," B. Franklin

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The Skeptic's Arguments (3)

"You have zero privacy anyway"

- "Info about you is easily found everywhere"

A: Sure; we should push to change the balance: let's make it easier for people to maintain control over their info

- Consumer awareness
- Suitable technology (e.g., encryption)
- Laws/regulations on information privacy
- Enforcement of existing norms

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"Privacy is the price of modern comforts"

- "You've given up your privacy when you . . ."
 - "... signed up for free on-line accounts"
 - "... entered the *Mall-of-Mall* sweepstake"
 - "... got your free-membership credit cards"
 - "... enrolled at this school"
 - "... [*your favorite example here*]"

A: "Privacy vs. Comfort" is a false choice

- Have your **privacy** and eat it too

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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

Readings for Next Class

- **Database Nation**, Chapters 3–5

- **Identity and Anonymity**, *G. Marx*, 2001
 - <http://web.mit.edu/gtmarx/www/identity.html/>