



## Chapter 3: Networking

# Chapter Overview

- Spam
- Internet interactions
- Text messaging
- Censorship
- Freedom of expression
- Children and inappropriate content
- Breaking trust
- Internet addiction

# Far More People Have Access to Cell Phones than Electricity or Clean Water



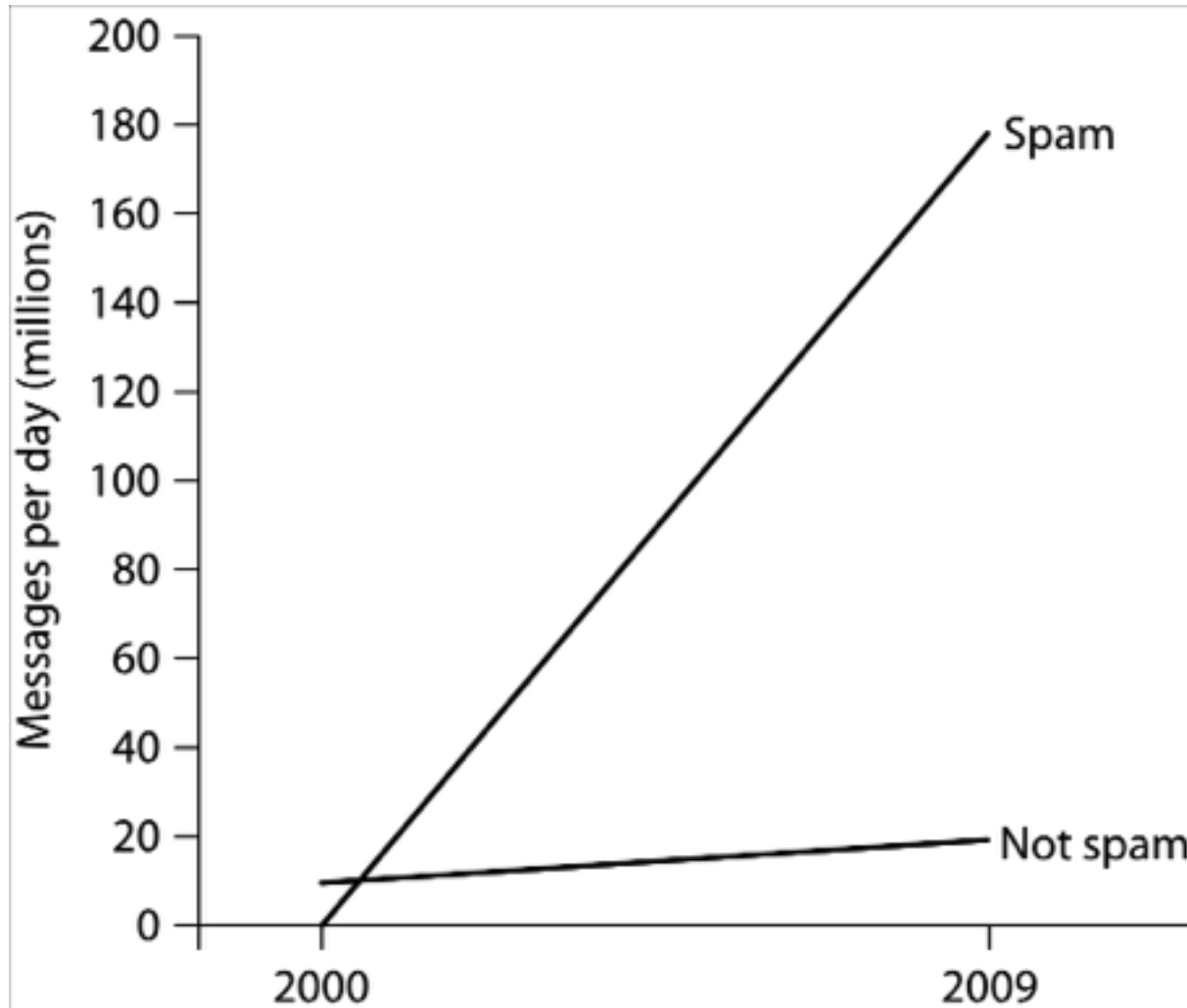
Charles Sturge/Alamy

## 3.2 Spam

# The Spam Epidemic (1/3)

- Spam: Unsolicited, bulk email
- Spam is profitable
  - More than 100 times cheaper than “junk mail”
  - Profitable even if only 1 in 100,000 buys product
- Amount of email that is spam has ballooned
  - 8% in 2001
  - 90% in 2009

# The Spam Epidemic (2/3)



# The Spam Epidemic (3/3)

- How firms get email addresses
  - Web sites, chat-room conversations, newsgroups
  - Computer viruses harvest addresses from PC address books
  - Dictionary attacks
  - Contests
- Most spam sent out by bot herders who control huge networks of computers
- Spam filters block most spam before it reaches users' inboxes

# Need for Socio-Technical Solutions

- New technologies sometimes cause new social situations to emerge
  - Calculators → feminization of bookkeeping
  - Telephones → blurred work/home boundaries
- Spam an example of this phenomenon
  - Email messages practically free
  - Profits increase with number of messages sent
  - Strong motivation to send more messages
- Internet design allows unfair, one-way communications



# Case Study: Ann the Acme Accountant

- Ann: Accountant at Acme Corporation
- She distributes paychecks to all 50 employees
- Ann sends email advertising Girl Scout cookie sale
- 9 recipients order cookies; average 4 boxes each
- Other 40 recipients unhappy to get email; half complain to a co-worker
- Did Ann do anything wrong?

# Kantian Analysis

- We should always respect autonomy of others, treating them as ends in themselves and never only as the means to an end (2<sup>nd</sup> formulation of Categorical Imperative)
- Ann didn't misrepresent what she was doing
- She didn't force anyone to read the entire email
- Some who read her email chose to order cookies
- Therefore, she didn't "use" others, and her action was not strictly wrong
- However, an "opt in" approach would have been better

# Act Utilitarian Analysis

- Benefit to Girls Scouts = \$108
  - \$3 profit per box of cookies
  - 36 boxes sold
- Harm to company: time wasted
  - Orders taken during breaks
  - Lost productivity from complaining: \$70
    - 20 employees  $\times$  2  $\times$  5 minutes/employee = 200 minutes
    - 3.5 hours  $\times$  \$20/hour = \$70
- Benefits exceed harms, so action good
- Company may create policy against future fundraisers

# Rule Utilitarian Analysis

- Q: What would be consequences of everyone in company used email to solicit donations?
- A: Plenty of employee grumbling and lower morale
- If all doing it, unlikely any one cause would do well
- Harms greater than benefits, so Ann's action was wrong

# Social Contract Theory Analysis

- Acme Corporation has no prohibition against using its email system this way
- Ann was exercising her right to express herself
- Some people didn't appreciate message, but she didn't act like a spammer
  - She didn't conceal her identity
  - She wasn't selling a fraudulent product
- Ann did nothing wrong

# Virtue Ethics Analysis

- As employee, relevant virtues: honesty, fairness, respect
- Ann was honest: her email didn't mislead anyone
- She wasn't fair or respectful, and she exercised poor judgment (as evidenced by larger amount of complaining by co-workers)
- In her role as parent, she did all work herself and didn't find a role for her daughter to play
- Ann should have found a way for her daughter to help, and she should have found another way to advertise that respected co-workers

# Summary

- Analyses reached different conclusions, but Ann could have taken a less controversial course
- She could have posted a sign-up sheet to identify those interested in cookie sale
- That way, she would have sent email only to those interested, avoiding the problems of grumbling and lost productivity
- She could have found a way to get her daughter more engaged

# 3.3 Internet Interactions



# The World Wide Web

- WWW : networked hypertext system
- Stimulated tremendous growth in popularity of Internet
- Two important attributes
  - It is decentralized
  - Every Web object has a unique address

# Rise of the App

- People spending more time on smartphones and tablets
- Using Web browsers awkward on mobile devices
- Mobile apps replace Web browsers as way to access Internet on mobile devices

# How We Use the Internet

- Shopping
- Socializing (e.g., Facebook)
- Contributing content (e.g., wikis)
- Blogging
- Crowdsourcing
- Learning
- Exploring our roots
- Entering virtual worlds
- Controlling the Internet of Things
- Paying taxes
- Gambling
- Taking humanitarian action
- Lots more!

# Online Source of Genealogical Information

Archives.gov Home Subject Index Contact Us FAQs Español

THE NATIONAL ARCHIVES ARCHIVES.GOV

ARC


Research ARC ARC Galleries Genealogy

ARC SEARCH

Print E-mail Bookmark/Share

## ARC Guide for Genealogists and Family Historians

- **What Is in the Archival Research Catalog?**
  - [ARC vs. Online Genealogy Databases](#)
  - [ARC Data Model Example: District Court Records](#)
- **How Do I Search in ARC?**
  - [Tips for Searching for an Individual's Name](#)
    - [More Tips for Searching for People by Name in ARC](#)
  - [Tips for Searching by Topics Related to Genealogy and Family History](#)
    - [Suggested Keywords](#)
    - [Follow the Clues](#)



Immigrants on a Ferry Boat Near Ellis Island, ARC ID 594479.

ARC PROGRESS

ARC is 63% complete at the series level.

[More about ARC](#)

# 3.4 Text Messaging

# Transforming Lives in Developing Countries

- M-PESA in Kenya
  - Save money
  - Pay bills
  - Transfer funds
- Communicate information about crop prices
- Protect against counterfeit medicine

# Twitter

- Web-based social networking service
- More than 200 million users
- Blogging tool
- Business promotion
- Role in Arab Spring uprisings debated
  - (+) Social networks lead to politicization
  - (-) Ties in social networks too weak for high-risk activism

# 3.5 Censorship



# Forms of Direct Censorship

- Government monopolization
- Prepublication review
- Licensing and registration

# Self-censorship

- Most common form of censorship
- Group decides for itself not to publish
- Reasons
  - Avoid subsequent persecution
  - Maintain good relations with government officials (sources of information)
- Ratings systems created to advise potential audience
  - Movies, TVs, CDs, video games
  - **Not** the Web

# Challenges Posed by the Internet

- Many-to-many communications
- Dynamic connections
- Huge numbers of Web sites
- Extends beyond national borders, laws
- Hard to distinguish between minors and adults

# Governmental Filtering and Surveillance

- Cuba, North Korea: Internet virtually inaccessible
- Saudi Arabia: centralized control center
- People's Republic of China:
  - Blocks Internet access at times of social unrest
  - Has “one of most sophisticated filtering systems in the world”
- Germany: Forbids access to neo-Nazi sites
- United States: Have been repeated efforts to limit access of minors to pornography

# Ethical Perspectives on Censorship

- Kant opposed censorship
  - Enlightenment thinker
  - “Have courage to use your own reason”
- Mill opposed censorship
  - No one is infallible
  - Any opinion may contain a kernel of truth
  - Truth revealed in class of ideas
  - Ideas resulting from discourse are more influential

# Mill's Principle of Harm

“The only ground on which intervention is justified is to prevent harm to others; the individual's own good is not a sufficient condition.”

# 3.6 Freedom of Expression

# Freedom of Expression: History

- *De Scandalis Magnatum* (England, 1275)
- Court of Star Chamber
- 18<sup>th</sup> century
  - No prior restraints on publication
  - People could be punished for sedition or libel
- American states adopted bills of rights including freedom of expression
- Freedom of expression in 1<sup>st</sup> amendment to U.S. Constitution



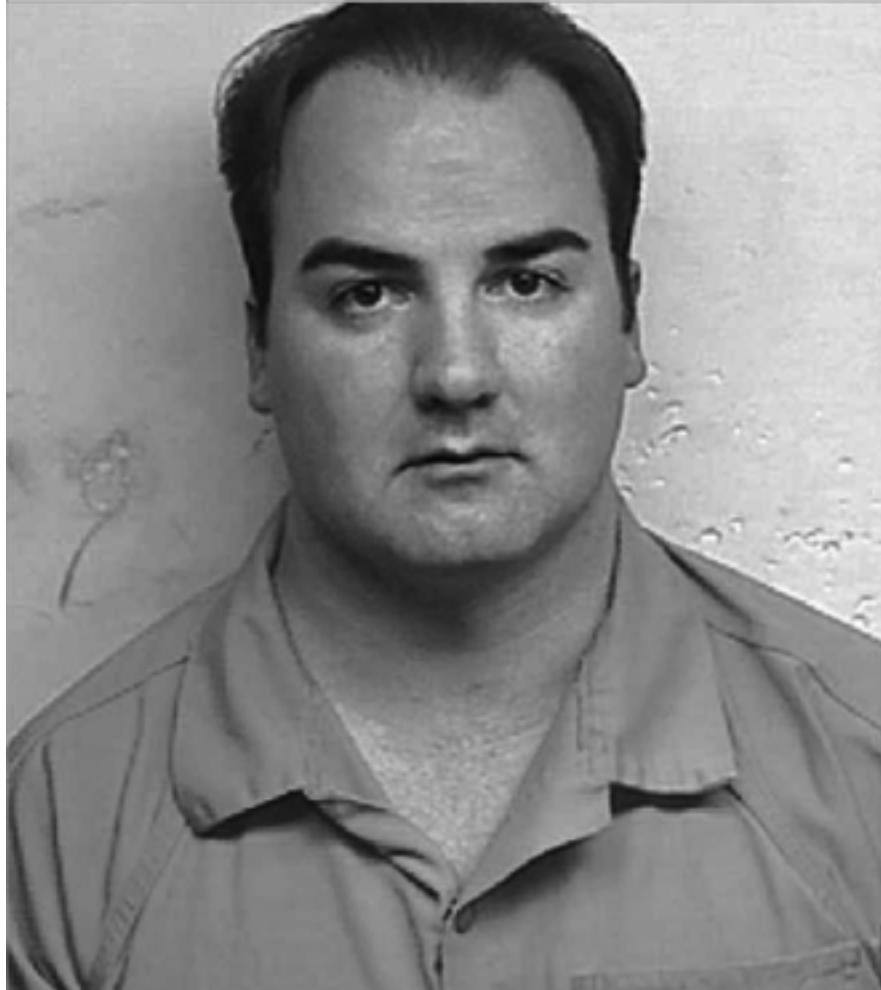
# 1<sup>st</sup> Amendment to U.S. Constitution

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.

# Freedom of Expression Not an Absolute Right

- 1<sup>st</sup> Amendment covers political and nonpolitical speech
- Right to freedom of expression must be balanced against the public good
- Various restrictions on freedom of expression exist

# Jeremy Jaynes



AP Photo/Loudoun County Sheriff's office

# ***FCC v. Pacifica Foundation et al.***

- George Carlin records “Filthy Words”
- WBAI in New York airs “Filthy Words” (1973)
- FCC issues declaratory order to Pacifica
- Pacifica sues
- U.S. Supreme Court ruled FCC did not violate 1<sup>st</sup> Amendment (5-4 decision)
  - Broadcast media “uniquely pervasive”
  - Broadcasting uniquely accessible to children

# Case Study: Kate's Blog

- Kate: Maintains a popular “life on campus” blog
- Jerry: Another student; active in Whig Party
- At private birthday party, someone gives Jerry a Tory Party T-shirt as a gag, and Jerry puts it on
- Kate uses cell phone to take picture of Jerry when he isn't looking, posts it on her blog
- Story read by many people on and off campus
- Jerry confronts Kate and demands she remove photo; she complies, and they remain friends
- Kate's blog and Jerry both become more popular

# Kantian Analysis

- Kate uploaded Jerry's photo to her blog without asking his permission
- She treated him as a means to her end of increasing the readership of her Web site
- Her action was wrong

# Social Contract Theory Analysis

- Birthday party held in apartment of one of Jerry's friends
- Jerry had a reasonable expectation of privacy
- Kate violated Jerry's right to privacy
- Kate's action was wrong

# Act Utilitarian Analysis

- Benefits
  - Popularity of Kate's blog increased (definitely)
  - Jerry become more popular on campus (definitely)
- Harms
  - Jerry's anger at Kate (only temporary)
  - Photo could discredit Jerry at some point in future (unlikely)
- Benefits greater than harms, so Kate did a good thing



# Rule Utilitarian Analysis

- What if everyone were constantly taking photos of people they encountered and posting them?
- Positive consequences
  - People would have more opportunities to keep up with what their friends are doing
  - People might be more reluctant to engage in illegal activities
- Negative consequences
  - People would become more self-conscious
  - Some relationships would be harmed
- Negative consequences more weighty than positive consequences, so Kate's action was bad

# Virtue Ethics Analysis

- True friends trust each other and seek each other's good
- Reciprocity and equality are fundamental elements of friendship
- Lack of reciprocity: Kate took something from Jerry without giving him anything in return
- Lack of equality: She put her own interest above that of Jerry
- Kate's actions did not seem to be characteristic of a good friend

# Summary

- Four out of five analyses: Wrong for Kate to post the photo without asking Jerry's permission
- Kate figured it would be better to beg for forgiveness than ask for permission, but she cut Jerry out of a decision that affected both of them, and that's no way to treat a friend
- Kate should have tried to get Jerry's consent

# 3.7 Children and Inappropriate Content

# Web Filters

- Web filter: Software that prevents display of certain Web pages
  - May be installed on an individual PC
  - ISP may provide service for customers
- Methodologies
  - Maintain “black list” of objectionable sites
  - Examine content for objectionable words/phrases



Calvin and Hobbes, 1990 / © Universal Press Syndicate

# Child Internet Protection Act

- Libraries receiving federal networking funds must filter pages containing obscenity or child pornography
- U.S. Supreme Court ruled CIPA did not violate 1<sup>st</sup> Amendment guarantees (6-3 decision in June 2003)

# Ethical Evaluations of CIPA

- Kantian evaluation: CIPA is wrong
- Act utilitarian evaluation: depends on how benefits and harms are weighed
- Social contract theory: freedom of conscience should be given precedence



# Sexting

- Definition: sexually suggestive text messages or emails with nude or nearly nude photographs
- In a 2009 survey, 9% of U.S. teenagers admitted to sending a sext, 17% admitted to receiving a sext
- Case of Jesse Logan
- Case of Phillip Alpert
- Case of Ting-Yi Oei

# 3.8 Breaking Trust

# Identity Theft (1/2)

- Identity theft: When a person uses another person's electronic identity
- Leading form of identity theft is credit card fraud
- Financial institutions contribute to problem by making it easy to open new accounts
- About 8 million cases of identity theft in U.S. in 2010
- Consumer's liability for credit card losses limited to \$50

# Identity Theft (2/2)

- Nearly half of cases from lost credit card, checkbook, etc.
- In 20% of cases, credit card number stolen at time of making purchase (skimmers)
- About 1 million cases of identity theft annually in United States from online activities
- Phishing: Use of email to attempt to deceive people into revealing personal information
- Identity theft a federal crime, but only 1 in 700 cases results in an arrest

# Chat-Room Predators

- Chat room: Supports real-time discussions among many people connected to network
- Instant messaging and chat rooms replacing telephone for many people
- Some pedophiles meeting children through chat rooms
- Police countering with “sting” operations

# Ethical Evaluations of “Stings”

- Utilitarian evaluation
- Kantian evaluation
- Social contract theory evaluation

# False Information

- Quality of Web-based information varies widely
- Other media also have information of varying quality
  - *The New York Times v. The National Enquirer*
  - *60 Minutes v. Conspiracy Theory*
- Google attempts to reward quality
  - Ranking uses “voting” algorithm
  - If many links point to a page, Google search engine ranks that page higher

# Cyberbullying

- Cyberbullying: Use of the Internet or phone system to inflict psychological harm
- In a 2009 survey, 10% admitted to cyberbullying, and 19% said they had been cyberbullied
- Case of Ghyslain Raza
- Case of Megan Meier
- Megan Meier Cyberbullying Prevention Act



# 3.9 Internet Addiction

# Is Internet Addiction Real?

- Some liken compulsive computer use to pathological gambling
- Traditional definition of addiction:
  - Compulsive use of harmful substance or drug
  - Knowledge of its long-term harm
- Some people spend 40-80 hours/week on the Internet, with individual sessions lasting up to 20 hours

# Is Internet Addiction Real?

- Kimberly Young created test for Internet addiction
  - Sample question: “Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?”
  - Patients who answer “yes” to at least 5 of 8 questions may be addicted
- Others disagree, noting
  - Computer use is generally considered a positive activity
  - Excessive use does not lead to criminal activity
  - More accurate to call excessive use a compulsion

# South Koreans in a PC Bang



Kim-Jae Hwan

# Contributing Factors

- Social factors
  - Peer groups
- Situational factors
  - Stress
  - Lack of social support and intimacy
  - Limited opportunities for productive activity
- Individual factors
  - Tendency to pursue activities to excess
  - Lack of achievement
  - Fear of failure

# Ethical Evaluation

- Enlightenment view
  - Individuals can and should govern their lives
  - People are responsible for their choices
- Jeffrey Reiman's view
  - Addict's behavior makes sense if addict has no hope for a better future
  - Society bears responsibility for putting people in hopeless situations