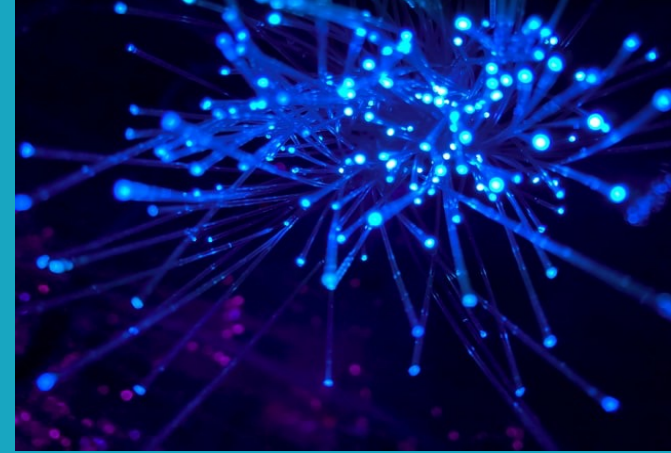


Chapter 3:

Networked Communications



COMP422 Ethics and Professional Issues in Computing
Dr. Patrick Pang

Based on
Ethics for the Information Age (5th Ed.)
by
Michael J. Quinn



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Chapter Overview

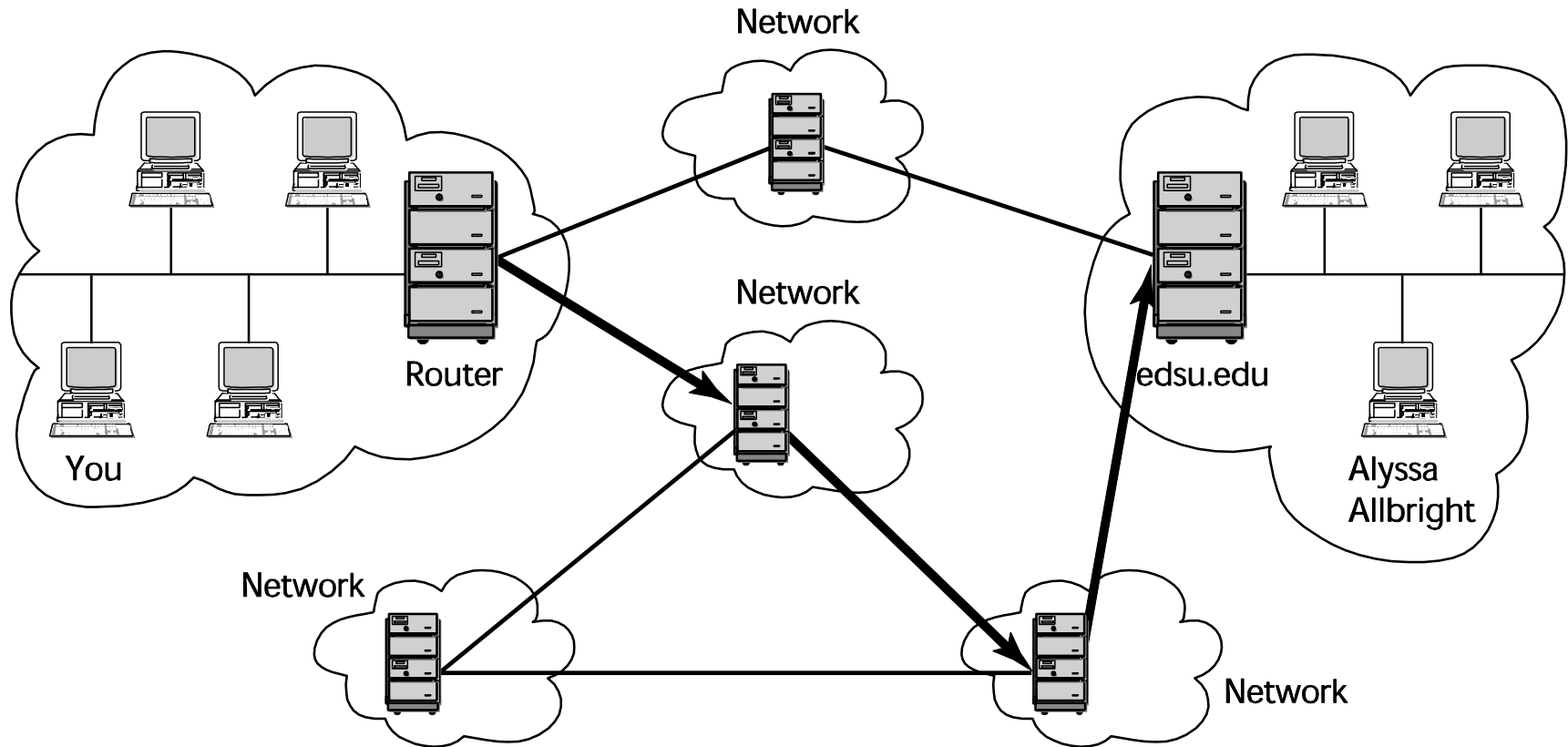
- Email and spam
- World Wide Web
- Censorship
- Freedom of expression
- Children and inappropriate content
- Breaking trust on the Internet
- Internet addiction

3.2 Email and Spam

How Email Works

- Email: Messages embedded in files transferred between computers
- Email address: Uniquely identifies cyberspace mailbox
- Messages broken into packets
- Routers transfer packets from sender's mail server to receiver's mail server

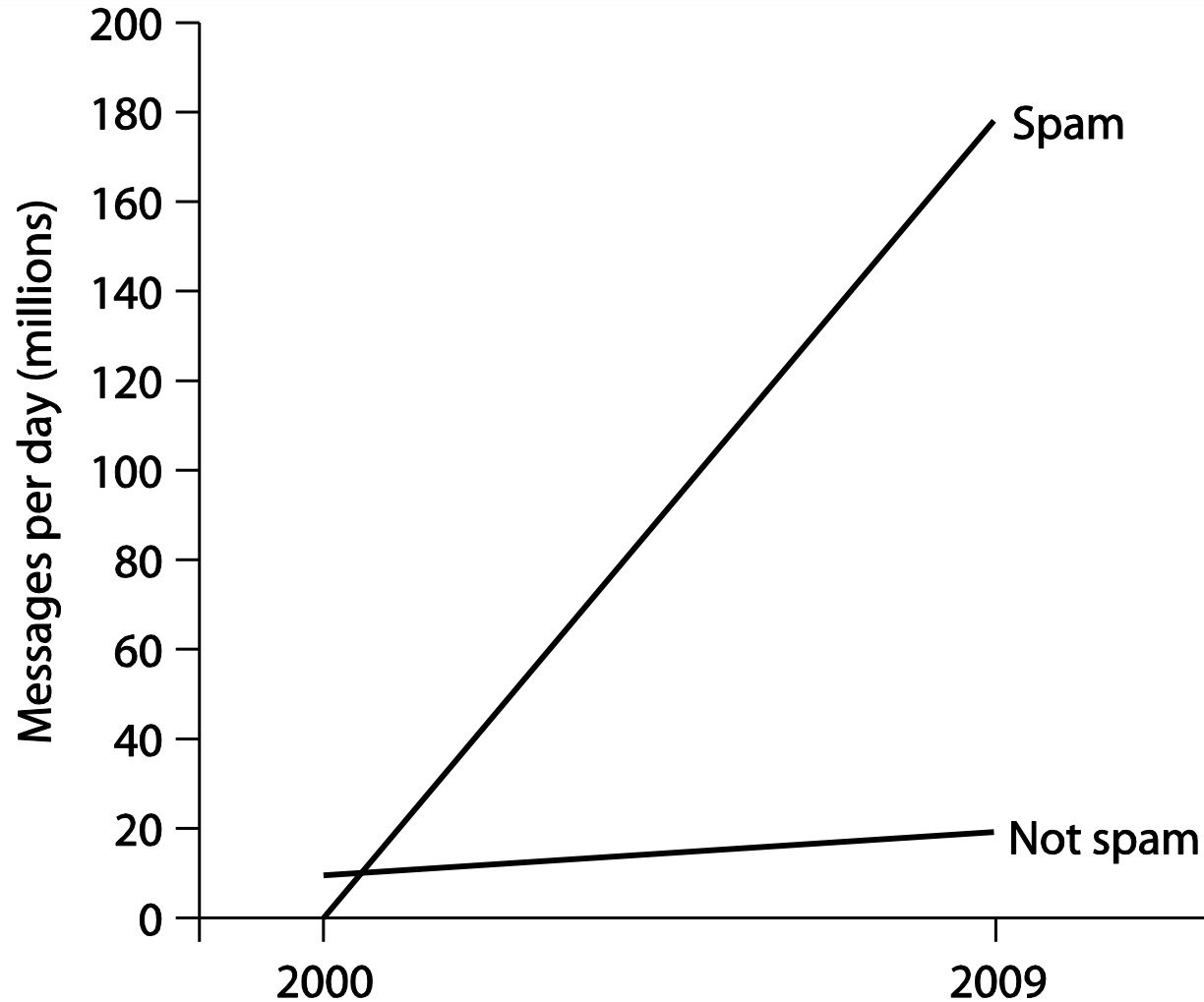
Routers Pass Email from LAN to LAN



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 (P.114)

- 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 (2nd 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
- An "opt in" approach would have been better

Act Utilitarian Analysis (P. 115)

- Benefit to Girls Scouts = \$108
 - \$3 profit per box of cookies
 - 36 boxes sold
- Harm to company: time wasted
 - Lost productivity from complaining: \$70
 - 40 employees \times 15 seconds/employee = 10 minutes
 - 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

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

3.3 The World Wide Web


Attributes of the Web

- It is decentralized
- Every Web object has a unique address
- It is based on the Internet

How We Use the Web

- Shopping (e.g., PARKnSHOP)
- Socializing (e.g., Facebook)
- Contributing content (e.g., wikis, blogs)
- Blogging (e.g., Blogger)
- Learning (e.g., MIT OpenCourseWare)
- Exploring our roots (an example will be shown on the next slide)
- Entering virtual worlds (e.g., PC bangs in S. Korea)
- Paying taxes (e.g., [HK Inland Revenue Department](#))
- Gambling
- Taking humanitarian action (e.g., [Kiva](#))
- Lots more!

Online Source of Genealogical Information



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Introducing NARations:
Our blog about online public access to the records of the U.S. National Archives


ARC Progress



ARC is 81% complete at the series level.
[More about ARC](#) ➔

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
- Case Studies: Access to Archival Databases (AAD) and the Archival Research Catalog (ARC)
- **Are There Any Digital Copies of Documents?**
 - Digital Copies: Tips for Browsing by Last Name



[Larger View](#)

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

Twitter

- Tweets limited to 280 characters
- 517 million users as of July 1, 2012
- Blogging tool
- Business promotion (example on P. 120)
- Role in Arab Spring uprisings debated
 - (+) Social networks lead to politicization
 - (-) Ties in social networks too weak for high-risk activism

Governmental Control: Too Much or Too Little?

- Burma (Myanmar), Cuba, North Korea: Internet virtually inaccessible
- Saudi Arabia: centralized control center
- People's Republic of China: “one of most sophisticated filtering systems in the world” (known as the “Great Firewall of China”)
- Germany: Forbids access to neo-Nazi sites
- United States: Repeated efforts to limit access of minors to pornography

3.4 Censorship

Forms of Direct Censorship

- Government monopolization
 - e.g., former Soviet Union owned all TV stations, radio stations, and newspapers
- Prepublication review
 - e.g., most governments have laws restricting the publication of information that would harm the national security
- Licensing and registration
 - e.g., a radio/TV station must obtain a license to broadcast, and the use 4-letters words is banned

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

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.”

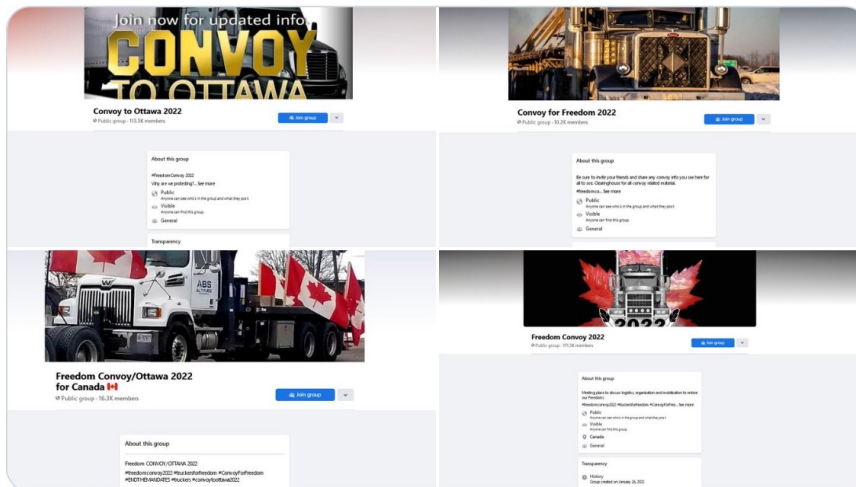
But what if things get out of hand...?



Steve Reilly ✓
@BySteveReilly

We researched some of the biggest Facebook groups promoting the Canadian trucker protest before they were shut down yesterday, and noticed something was a bit off.

The only individual admin running some of the most active groups was one woman in Missouri. Or so it seemed. 📊 ↻



<https://twitter.com/BySteveReilly/status/1491168971152044033>



Steve Reilly ✓ @BySteveReilly · Feb 9

Replying to @BySteveReilly

The woman's years-old Facebook account had no real history of political activity until January 2022, when it suddenly posted a fundraiser for Donald Trump.



Steve Reilly ✓ @BySteveReilly · Feb 9

I called the woman on her publicly listed number, and she said her account had been hacked.

The stolen account was administering a collection Facebook groups started between Jan. 26 and Jan. 28 that had amassed more than 300,000 followers that had 7,500 posts.

31 1.3K 6.6K



Steve Reilly ✓ @BySteveReilly · Feb 9

@Facebook has not yet responded to questions from @gridnews about this.

Its parent company, @Meta, mentioned "scammers" in media statements about the removal of Freedom Convoy groups — but did not address groups run by operators hiding behind a hacked personal Facebook account.

parent company of Facebook, said it removed several groups associated with the convoy for one of the groups had engaged in the types of practices commonly used by spammers, like s o followed the group to external sites to buy merchandise. Another group had violated Face content tied to the banned QAnon conspiracy movement.

any said it was still reviewing other groups being formed in connection to the truckers' prot

ue to see scammers latch on to any hot-button issue that draws people's attention, includi protests," said Margarita Franklin, a Meta spokeswoman. "Over the past week, we've remov run by spammers, including in Vietnam, who used abusive tactics to mislead people."

ue to monitor the situation and will enforce against violations when we find them," she ad

82 1.2K 6K

Google claims court ruling would force it to 'censor' the internet

The company appealed to Australia's High Court to overturn a defamation case.



I. Bonifacic

@igorbonifacic

January 23rd, 2022



In this article: news, gear, legal, internet, hyperlink, Google, Australia, Canada, web



Reuters Staff / Reuters

Google has asked the High Court of Australia to overturn a 2020 ruling it warns could have a “devastating” effect on the wider internet. In a [filing](#) the search giant made on Friday, Google claims it will be forced to “act as censor” if the country’s highest court doesn’t overturn a decision that awarded a lawyer \$40,000 in defamation damages for an article the company had linked to through its search engine, reports [The Guardian](#).

<https://www.engadget.com/google-australia-high-court-appeal-194529237.html>

3.5 Freedom of Expression

Freedom of Expression: History

- *De Scandalis Magnatum* (England, 1275)
- Court of Star Chamber
- 18th 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 1st amendment to U.S. Constitution

1st Amendment to U.S. Constitution

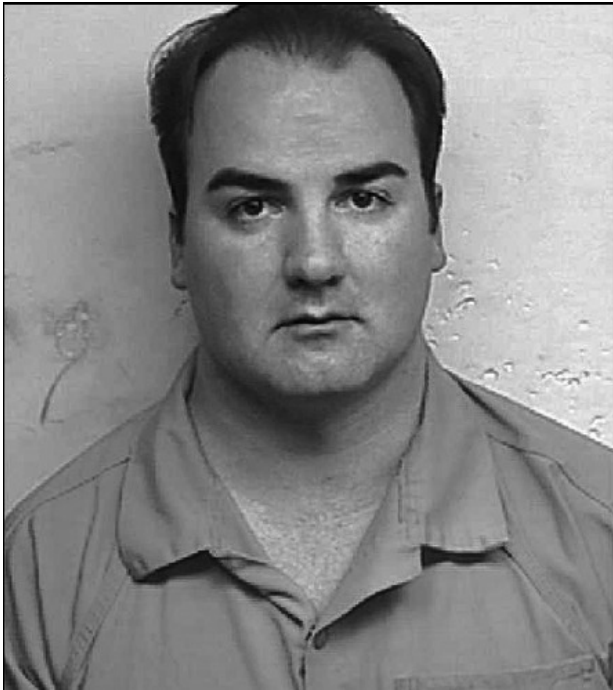
Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

Freedom of Expression

Not an Absolute Right

- 1st 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 (e.g., cigarette ads are prohibited on TV)

Jeremy Jaynes (P. 128)



Jeremy Jaynes was convicted under Virginia law for sending millions of spam messages. His conviction was overturned by the Supreme Court of Virginia because the anti-spam law was too broad and also prohibited the anonymous transmission of unsolicited bulk emails "containing political, religious or other speech protected by the First Amendment to the United States Constitution"

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 1st Amendment (5-4 decision)
 - Broadcast media “uniquely pervasive”
 - Broadcasting uniquely accessible to children

Case Study: Kate's Blog (PP. 129-130)

- 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)
- Kate did nothing wrong by posting Jerry's photo

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

Summary

- Three out of four 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

3.6 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

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 1st Amendment guarantees (6-3 decision in June 2003)

Ethical Evaluations of CIPA (PP. 133-134)


- 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 (P. 135)
- Case of Phillip Alpert (P. 135)
- Case of Ting-Yi Oei (PP. 135-136)

Sexual Behaviors, Mobile Technology Use, and Sexting Among College Students in the American South

Lucy A. Ingram, PhD, MPH¹, Mark Macaуда, PhD²,
Carolyn Lauckner, PhD³, and Alyssa Robillard, PhD¹

American Journal of Health Promotion
2019, Vol. 33(1) 87-96
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SO WHAT? Implications for Health Promotion Practitioners and Researchers

What is Already Known on this Topic?

Mobile technology use is ubiquitous among college students, and there has been a surge in meeting and communicating with sexual partners through mobile, digital platforms.⁵

What does this Article Add?

We confirmed the prolific use of mobile technology among college students; however, not particularly to meet sexual partners. We found that communication with sexual partners via text messaging—sexting—was a frequent behavior and was associated with several other sexual behaviors.

What are the Implications for Health Promotion Practice or Research?

These findings inform the development and implementation of future sexual health interventions whereby sexting behavior should be considered a normative part of college student sexual partnerships that could also be associated with sexual risk-taking behaviors. Additionally, this behavior should continue to be monitored to determine whether trends change over time to warrant increased or decreased attention in sexual and reproductive health programming for college students.

3.7 Breaking Trust on the Internet

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 10 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 (P. 138)
- Police countering with “sting” operations

Ethical Evaluations of “Stings”

- Utilitarian evaluation (PP. 138-139)
- Kantian evaluation (P. 139)
- Social contract theory evaluation (PP. 139-140)

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* (P. 140)
- 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 (P. 141)
- Case of Megan Meier (P. 142)
- Megan Meier Cyberbullying Prevention Act (P.142)

3.8 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 (P.144)
- 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

Contributing Factors (P.145)

- 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