

ECS 3361: Social Issues and Ethics in ECS

Lecture 5 Networked Communications Chapter 3

Credits:

Dr. Michael J. Quinn, Author of “Ethics for the information age

The Free Encyclopedia, <http://en.wikipedia.org>

YouTube

Today's Learning Objectives

- Email and spam
- World Wide Web
- Censorship
- Freedom of expression
- Breaking trust on the Internet (Reliability of sources, Identity theft....)
- Internet addiction

Email and Spam

- **Email**: A file containing a message transferred between computers
 - Messages broken into packets
 - Routers transfer packets from sender's mail server to receiver's mail server
 - **Email address**: Unique identifier of a cyberspace mailbox
- **Spam**: Unsolicited, bulk email (8% in 2001 to 90% of all emails in 2009)
 - A side effect of a useful application of the internet
 - Spam is profitable
 - Profitable even if only 1 in 100,000 responds positively.

Email and Spam

- **How do firms get email addresses?**
 - Web sites, chat-room conversations, contests
 - Computer viruses harvest addresses from PC address books
 - Dictionary attacks
- **Most spammers** use hijacked systems as launch pad to **hide their identity**.
- ISP's use spam filters to block most spam before it reaches users' inboxes
 - Looking for large amounts of emails coming from a single address
 - Using "challenge response" software to distinguish between humans and automated senders.

Case Study: Ann the Acme Accountant

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

Kantian Analysis

- We should treat ourselves and others 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 is giving her co-workers an opportunity to help
 - Some who read her email chose to order cookies
- Therefore, she didn't "use" others, and her action was not strictly wrong.
- How about the first formulation of Kantianism?
- An alternate approach is better.

Act Utilitarian Analysis

- **Benefit to Girls Scouts = \$108**
 - 36 boxes sold at \$3 profit per box of cookies
- Ann, the Girls Scouts and the ones helping are happy
- Harm to company: time wasted by those who complained
 - Orders taken during breaks
 - **Lost productivity from complaining: \$70**
 - 20 employees $\times 2 \times 5$ minutes/employee = 200 minutes
 - 3.5 hours $\times \$20/\text{hour}$ = \$70
- Benefits exceed harms, **so action is right.**
- How about rule utilitarianism?

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 the 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
- How about virtue ethics? Honesty, Respect, Fairness

Summary

- Ann's action is acceptable under social contract and act utilitarianism, wrong under rule utilitarianism and Kantianism (first formulation) and may be questionable under virtue ethics.
- Ann could have taken a less controversial “opt-in” approach
 - She could have posted a sign-up sheet to identify those interested in this cookie sale.
 - That way, she would have sent email or talked only to those interested, avoiding the problems of unhappy employees and lost productivity

The World Wide Web

- Most important information storage and Retrieval technology
 - A system of interlinked **hypertext** documents accessed via a network of networks (the Internet)
 - Decentralized.
 - Every Web object has a unique pointer (URL).

Running out of IP addresses? Latest version is IPV6 (8x16bits as opposed to 4x8bits for IPV4)

<http://money.cnn.com/2012/06/06/technology/ipv6/index.htm>

The World Wide Web

- What do we use the web for?
 - Shopping (Amazon, ebay...). Socializing (Facebook, Twitter)
 - Contributing content (youTube, wikis, blogs): Web 2.0
 - Learning, getting information (weather, news, directions...)
 - Entering virtual worlds (Playing)
 - Paying taxes, Gambling, Fundraising, Crowdfunding
 - Text messaging
 - Lots more!...
- Mobile Apps replacing Web browsers
 - People are spending more time on smartphones/tablets
 - Apps are replacing Web browser to access the internet

Censorship (Direct and Self)

- Web access is not available everywhere in the world
- Some countries control what is accessible (Saudi Arabia, China)
- Germany: Forbids access to neo-Nazi sites
- **Censorship:** Attempt to suppress or regulate public access to material considered offensive or harmful
 - **Direct Censorship**
 - Government monopolization – difficult nowadays
 - Prepublication review – Mostly for printed media
 - Licensing and registration – Allocation of frequency bandwidth, domains

Censorship (Direct and Self)

– Self-censorship

- Most common form of censorship
- Group decides for itself not to publish
 - Avoid persecution
 - Maintain good relations with sources of information

– Ratings systems advise potential audience

- Movies, TV shows, video games
- **Not** the Web – Some websites do post warnings.

• Challenges

- Huge numbers of Web sites, many to many communications
- The web is dynamic (new computers added to the network)
- Extends beyond national borders, laws
- Hard to tell who is on the other side

Children and Inappropriate Content

- **Web Filters:** Software that prevents display of certain Web pages
- **Child Internet Protection Act (CIPA)**
 - 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 Perspectives on Censorship

- Kant opposed censorship.
 - Lived in time when censorship was widespread and being challenged (No internet)
 - People as rational agents should be responsible for their well being
- Mill opposed censorship
 - No one is infallible. May silence “voice of truth”
 - Ideas resulting from discourse are more influential. **Truth will prevail!**
 - **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.”

Freedom of Expression: History

- De Scandalis Magnatum (England, 1275) law
 - Cannot say “bad” things about the King, even if true.
 - Court of Star Chamber can convict for making verbal or written insult.
- 18th century
 - Freedom to publish without a license.
 - People could be punished for sedition (inciting rebellion) or libel (defamation by written word)
 - American states adopted bills of rights including freedom of expression (10 amendments to the constitution in 1791)

Freedom of Expression

- 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.
- Is freedom of expression an absolute right?

Freedom of Expression

Not an Absolute Right

- Right to freedom of expression must be balanced against the public good (perjury, libel, false advertising)
 - Various restrictions on freedom of expression exist
 - Can you yell “there is a bomb” in a public place?
- FCC v. Pacifica Foundation et al.
 - George Carlin records “Filthy Words” in California
 - WBAI in New York airs “Filthy Words” (1973).
 - FCC issued declaratory order to Pacifica (warning)
 - Pacifica sued and case went to the Supreme court.
 - U.S. Supreme Court ruled FCC did not violate 1st Amendment (5-4 decision) in 1978.
 - Broadcast media “uniquely pervasive”
 - Broadcasting uniquely accessible to children

Identity Theft

- Identity Theft: When a person uses another person's 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
 - About 1 million cases of identity theft annually in United States from online activities
 - Nearly half of cases from lost credit card, checkbook, etc.
 - In 20% of cases, credit card number stolen at time of making purchase (skimmers). Also from dumpsters...

Identity Theft

- Consumer's liability for credit card losses limited to \$50, but lots of time is spent to fix damages.
 - Call your credit card company
 - Freeze your credit
- Id theft is a federal crime but very hard to prosecute
 - 1 in 700 results in an arrest
- **Phishing**: Use of email to attempt to deceive people into revealing personal information

<http://www.utdallas.edu/infosecurity/Phishing.html>

Chat-Room Predators

- **Chat room:** Supports real-time discussions among many people connected to the network and sharing an interest.
 - Instant messaging and chat rooms **replacing telephone for many people**
- Some crimes are committed after introductions through chat rooms.
- Police counter with **“sting” operations:**
 - Deceptive operation designed to catch a person about to commit a crime.
 - They are not allowed in some countries (Sweeden,..)
- Ethical Evaluation of “Stings”: **Is it entrapment?** (inducing a person to commit a crime that the person would not have committed otherwise).

Other trust issues on the internet

- **Reliability of Information:**
 - Quality of Web-based information varies widely- No editors
 - Other media also have information of varying quality
 - The Dallas Morning News vs. The National Enquirer
 - 60 Minutes vs. Conspiracy Theory (fake moon landing)
 - Google attempts to reward quality
 - Ranking uses “voting” algorithm: if many links point to a page, Google search engine ranks that page higher
- **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.
 - Megan Meier Case led to Megan Meier Cyberbullying prevention Act

Internet Addiction

- 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

- Kimberly Young created a **test for Internet addiction**
Sample question: “Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?”
People who answer “yes” to at least 5 of 8 questions may be addicted (questions are in the book)
- Others disagree
 - Computer use is generally considered a positive activity
 - **More accurate to call it excessive use than addiction**

Addiction

Contributing Factors and Responsibility

- Social factors: Peer groups
- Situational factors
 - Stress and lack of social support
 - Limited opportunities for productive activity
- Individual factors
 - Tendency to pursue activities to excess to escape reality and fear of failure
- Anyone responsible in addiction cases?
 - People are responsible for their choices
 - Need to find something better to do.

Homework 5

- On eLearning as an assignment.