Making Ethical Decisions in High Technology
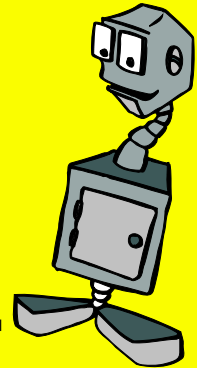
CSH6 Chapter 43
"Ethical Decision Making and High Technology"
James Landon Linderman

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Topics*

- **Fundamentals**
- **Case Studies for Class Discussion**

* **Based in part on CSH6 Ch 43 with added materials for classroom discussion**

2

Fundamentals

- What is Ethics?
- Common Fallacies about Ethical Decisions
- Making Ethical Decisions
- Identify the Ethical Question Clearly
- Explicit or Implicit Guidelines for the Issue?
- Underlying Principles
- Intuitive Responses

3

What is *Ethics?*

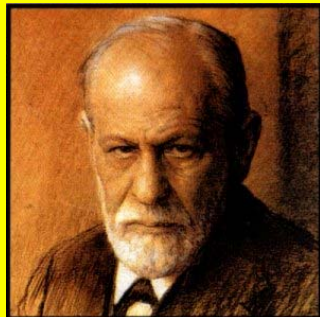- "Ethics in philosophy, the
  - study and evaluation
  - of human conduct
  - in the light of moral principles.
- Moral principles may be viewed either as
  - the standard of conduct that individuals have constructed for themselves or
  - as the body of obligations and duties that a particular society requires of its members."

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How does Ethical Reasoning Develop?

- Moral growth: the Freudian model
  - Id
  - Ego
  - Superego
- Peer pressure
- Law
- Consequences
  - For others
  - For us
  - For employer
  - For society

5

Common Fallacies about Ethical Decisions

- It's just a matter of how you feel.
- We just have to agree to disagree.
- You're entitled to your opinion and I'm entitled to mine.
- Who's to say if it's right or wrong?
- There is *no way* to decide what is wrong and what is right.
- If it's not condemned in the Bible / Torah / Talmud / Quran / Book of Mormon / … then it's not a sin
- If it's not illegal it must be OK.

6

What's Special about Computers?

- Same principles of ethics
- Speed of processing
- Extent of research or correlation
- Impersonality of the medium
- Subtlety of the dilemmas — people may not recognize there is an ethical dimension
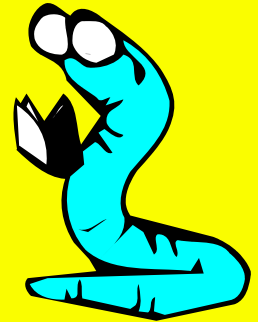
Making Ethical Decisions

- Identify the ethical question clearly
- Are there explicit or implicit guidelines? (e.g., laws!)
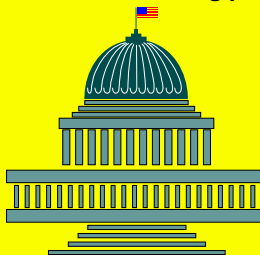- Underlying principles
- Intuitive responses

Identify the Ethical Question Clearly

- What are the actions in question?
- Who gains from the proposed actions?
- Who suffers?
- Are those who lose out willing participants?

Explicit or Implicit Guidelines for the Issue?

- Laws?
- Rules?
- Expectations?
- Customs?
- Habits?
- Religious obligations?
- Contracts
- Policy?
- Agreements?
- Professional standards?
- Codes of ethics?

Underlying Principles

- Does it break a promise?
- Damage the trust others have in you?
- Damage friendships?
- Hurt feelings?
- Tarnish your or someone else's reputation?
- Be unjust or unfair?
- Help you and world be better, kinder?
- Maintain your integrity and pride?
- Treat others as individuals, not as tools?
- Be a Good Thing if everyone acted so?
- Would you be happy to be the recipient of your proposed actions?

Intuitive Responses

- Does it feel wrong?
- Would you be proud to tell your parents, your spouse?
- Would you be happy having a full report on the proposed action detailed on prime-time TV news?
- Would you be proud to tell strangers what you're proposing to do?
- Would you be happy to have your children acting as you are thinking of doing?

Case Studies

- Instructions
- Distributing Viruses
- Denial-of-Service Attacks for Extortion
- Sending Spam
- Creating and Distributing Popups and Popup Defenses
- Hacking for Fun
- Hacking for Politics
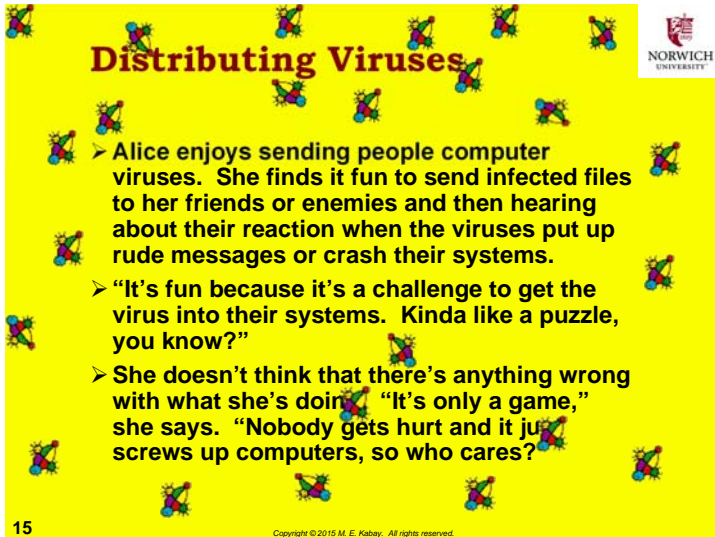- Sharing Software and Music

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Case Studies: Instructions

- In each of the following case studies, apply the full process of making ethical decisions to the issue at hand.
- This is a class discussion and you will contribute comments one after another to ensure that everyone gets a chance to think about the process.
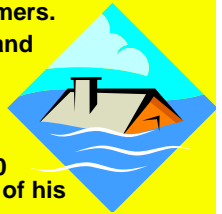

Distributing Viruses

- Alice enjoys sending people computer viruses. She finds it fun to send infected files to her friends or enemies and then hearing about their reaction when the viruses put up rude messages or crash their systems.
- "It's fun because it's a challenge to get the virus into their systems. Kinda like a puzzle, you know?"
- She doesn't think that there's anything wrong with what she's doing. "It's only a game," she says. "Nobody gets hurt and it just screws up computers, so who cares?"

Denial-of-Service Attacks for Extortion

- Bobby is 23 years old. He uses DoS attacks to overwhelm commercial Web sites with floods of packets that make it impossible for them to transact business with their customers.
- Then he calls up the Webmasters and says, "I understand you've been having trouble with DoS attacks. I can arrange to protect you against those – for the right price."
- So far he has extorted over $40,000 from victims in the first 12 months of his operation. He is very pleased.
- "It's their own fault for not having proper defenses," he says. "It's not my fault. If I didn't do it, someone else would."

Sending Spam

- Sanford "Spamford" Wallace made millions in the 1990s by sending out hundreds of millions of e-mail messages advertising products to unwilling recipients.
- He hid the origin of the spam by forging e-mail headers so that the junk e-mail looked as if it came from someone else.
- He was sued by many ISPs and lost millions in penalties. He was hacked, mail-bombed, postal-mail-bombed and vilified world-wide.
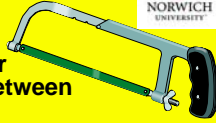- He finally announced that he was out of the spam business in 1998.

Creating and Distributing Popups and Popup Defenses

- Sanford Wallace was accused by the US FTC in January 2004 of infesting millions of computers with unwanted popup ads.
- He then allegedly advertised and sold anti-popup software to combat the very popups he was pushing onto victims' computers.
- The anti-popup software didn't work.
- A court issued an injunction forbidding Wallace from continuing these practices.

Hacking for Fun

➤ The 4NG3L5 0F C0RRUPT10N h4x0r gang consists of 7 children aged between 9 and 17 years of age.

➤ The 4NG3L5 enjoy vandalizing Web sites with funny pictures, most of them involving naked women. They also leave messages insulting the "L4M3R5" who run these sites and pointing out the security holes they used (well, some of them, anyway).

➤ They "tagged" over 174 Web sites in 8 months and ran contests to see who could tag the most sites in a month.

➤ "It's just for fun," they insisted. "We never do any real damage, and anyway, these L4M3R5 deserve what they get because they are so stupid."

Hacking for Politics

➤ Klaus and Wilhelm are furious about the Burmese regime that has destroyed civil liberties in that country. They decry the detentions without trial, torture, and other abuses of civil rights in that miserable land.

➤ They have therefore created an army of volunteer hackers from all over the world to harass the dictators of the SLORC (State Law and Order Restoration Committee). They deface Burmese government Web sites, steal confidential government files, and destroy government computers.

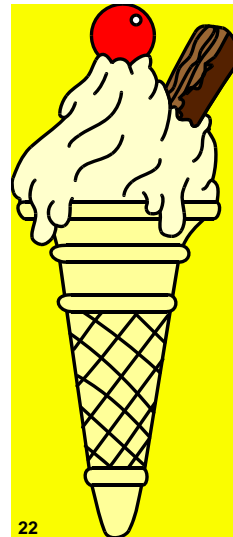➤ "It's for a good cause," they say.

Sharing Software and Music

➤ Shareem loves music but doesn't have much money, so she uses Napster, Grokster, BitTorrent and the Web in general to download songs that have been ripped to MP3 format.

➤ "It doesn't hurt anyone," she explains. "The companies make too much profit, the artists don't get enough, it helps increase sales, and everyone is doing it anyway."

➤ She also needs software, so she borrows installation disks from her parents, uncles and aunts, and friends rather than buying her own licensed copy. "Who's to know?" she asks winningly. "And who cares?" she adds.

Conclusion

Making ethical decisions involves more than the equivalent of selecting your favorite flavor of ice-cream.

Review Questions (1)

1. Analyze how good ethics can support good business and bad ethics can harm business. Give an example from the current news.

2. Explain in simple language how to make an ethical decision using the full range of techniques discussed in this lecture and in the assigned chapter from CSH6.

3. Analyze in depth the arguments used to defend software and music theft.

4. Should companies strike back at the computer sites they detect as the source of attacks (e.g., DoS, hacking)? Why or why not?

Review Questions (2)

5. Analyze the ethical issues when a manager asks a system administrator to look at the medical records of a fellow employee without authorization.

6. Analyze how to respond to your boss if (s)he tells you to make illegal copies of licensed software so the company can save money.

7. Analyze what to do if you discover that one of your friends at work has been stealing computer-time on the mainframe to run a major real-estate operation without permission.