INFO 1400

Koffka Khan

Tutorial 4
1. **What ethical, social, and political issues are raised by information systems?**

1.1 **Explain how ethical, social, and political issues are connected and give some examples.**

Information technology has raised new possibilities for behavior for which laws and rules of acceptable conduct have not yet been developed. The introduction of new information technology has a ripple effect, raising new ethical, social, and political issues that must be dealt with on the individual, social, and political levels. Ethical, social, and political issues are closely related. Ethical issues confront individuals who must choose a course of action, often in a situation in which two or more ethical principles are in conflict (a dilemma). Social issues spring from ethical issues as societies develop expectations in individuals about the correct course of action. Political issues spring from social conflict and are mainly concerned with using laws that prescribe behavior to create situations in which individuals behave correctly.

Examples can identify issues surrounding the five moral dimensions of the information age. These include: information rights and obligations, property rights and obligations, accountability and control, system quality, and quality of life.
Review Questions

1.2 List and describe the key technological trends that heighten ethical concerns.

• Computing power doubles every 18 months
• Data storage costs rapidly declining
• Data analysis advances
• Networking advances and the Internet

Increasing computer power, storage, and networking capabilities including the Internet can expand the reach of individual and organizational actions and magnify their impacts. The ease and anonymity with which information can be communicated, copied, and manipulated in online environments are challenging traditional rules of right and wrong behavior.
Review Questions

1.3 Differentiate between responsibility, accountability, and liability.

• **Responsibility** is a key element of ethical actions. Responsibility means that you accept the potential costs, duties, and obligations for the decisions you make.

• **Accountability** is a feature of systems and social institutions. It means that mechanisms are in place to determine who took responsible action.

• **Liability** is a feature of political systems in which a body of laws is in place that permits individuals to recover the damages done to them by other actors, systems, or organizations.
Review Questions

2. What specific principles for conduct can be used to guide ethical decisions?

2.1 List and describe the five steps in an ethical analysis.

1. Identify and describe clearly the facts.
2. Define the conflict or dilemma and identify the higher-order values involved.
3. Identify the stakeholders.
4. Identify the options that you can reasonably take.
5. Identify the potential consequences of your options.
Review Questions

2.2 Identify and describe six ethical principles.

1. Golden Rule. Do unto others as you would have them do unto you
2. Immanuel Kant’s Categorical Imperative. If an action is not right for everyone to take, it is not right for anyone
3. Descartes’ Rule of Change. If an action cannot be taken repeatedly, it is not right to take at all
4. Utilitarian Principle. Take the action that achieves the higher or greater value
5. Risk Aversion Principle. Take the action that produces the least harm or the least potential cost
6. “No Free Lunch” Rule. Assume that virtually all tangible and intangible objects are owned by someone else unless there is a specific declaration otherwise.

These principles should be used in conjunction with an ethical analysis to guide decision making. The ethical analysis involves identifying the facts, values, stakeholders, options, and consequences of actions. Once completed, you can consider which ethical principle to apply to a situation to arrive at a judgment.
3. Why do contemporary information systems technology and the Internet pose challenges to the protection of individual privacy and intellectual property?

3.1 Define privacy and fair information practices.

*Privacy* is the claim of individuals to be left alone, free from surveillance or interference from other individuals or organizations, including the state. Claims of privacy are also involved at the workplace.

*Fair information practices* is a set of principles governing the collection and use of information about individuals. FIP principles are based on the notion of a mutuality of interest between the record holder and the individual.
3.2 Explain how the Internet challenges the protection of individual privacy and intellectual property.

Contemporary information systems technology, including Internet technologies, challenges traditional regimens for protecting individual privacy and intellectual property. Data storage and data analysis technology enables companies to easily gather personal data about individuals from many different sources and analyze these data to create detailed electronic profiles about individuals and their behaviors. Data flowing over the Internet can be monitored at many points. The activities of Web site visitors can be closely tracked using cookies, Web beacons, and other Web monitoring tools. Not all Web sites have strong privacy protection policies, and they do not always allow for informed consent regarding the use of personal information.
3.3 *Explain how informed consent, legislation, industry self-regulation, and technology tools help protect the individual privacy of Internet users.*

The online industry prefers self-regulation rather than having state and federal governments passing legislation that tightens privacy protection.

In February 2009, the Federal Trade Commission (FTC) began the process of extending its fair information practices doctrine to behavioral targeting. The FTC held hearings to discuss its program for voluntary industry principles for regulating behavioral targeting. The online advertising trade group Network Advertising Initiative, published its own self-regulatory principles that largely agreed with the FTC. Nevertheless, the government, privacy groups, and the online ad industry are still at loggerheads over two issues. Privacy advocates want both an opt-in policy at all sites and a national Do Not Track list. The industry opposes these moves and continues to insist on an opt-out capability being the only way to avoid tracking. Nevertheless, there is an emerging consensus among all parties that greater transparency and user control (especially making opt-out of tracking the default option) is required to deal with behavioral tracking.

Privacy protections have also been added to recent laws deregulating financial services and safeguarding the maintenance and transmission of health information about individuals. The Gramm-Leach-Bliley Act of 1999, which repeals earlier restrictions on affiliations among banks, securities firms, and insurance companies, includes some privacy protection for consumers of financial services. All financial institutions are required to disclose their policies and practices for protecting the privacy of nonpublic personal information and to allow customers to opt out of information-sharing arrangements with nonaffiliated third parties.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA), which took effect on April 14, 2003, includes privacy protection for medical records. The law gives patients access to their personal medical records maintained by healthcare providers, hospitals, and health insurers and the right to authorize how protected information about themselves can be used or disclosed. Doctors, hospitals, and other healthcare providers must limit the disclosure of personal information about patients to the minimum amount necessary to achieve a given purpose.
3.4 *List and define three different regimes that protect intellectual property rights?*

• Trade secrets
• Copyright
• Patent law

Traditional copyright laws are insufficient to protect against software piracy because digital material can be copied so easily. Internet technology also makes intellectual property even more difficult to protect because digital material can be copied easily and transmitted to many different locations simultaneously over the Net. Web pages can be constructed easily using pieces of content from other Web sites without permission.
Review Questions

4. How have information systems affected everyday life?

4.1 Explain why it is so difficult to hold software services liable for failure or injury.

In general, insofar as computer software is part of a machine, and the machine injures someone physically or economically, the producer of the software and the operator can be held liable for damages. Insofar as the software acts like a book, storing and displaying information, courts have been reluctant to hold authors, publishers, and booksellers liable for contents (the exception being instances of fraud or defamation), and hence courts have been wary of holding software authors liable for book-like software.

In general, it is very difficult (if not impossible) to hold software producers liable for their software products that are considered to be like books, regardless of the physical or economic harm that results. Historically, print publishers, books, and periodicals have not been held liable because of fears that liability claims would interfere with First Amendment rights guaranteeing freedom of expression.

Software is very different from books. Software users may develop expectations of infallibility about software; software is less easily inspected than a book, and it is more difficult to compare with other software products for quality; software claims actually to perform a task rather than describe a task, as a book does; and people come to depend on services essentially based on software. Given the centrality of software to everyday life, the chances are excellent that liability law will extend its reach to include software even when the software merely provides an information service.
4.2 *List and describe the principal causes of system quality problems?*

- Software bugs and errors
- Hardware or facility failures caused by natural or other causes
- Poor input data quality

Zero defects in software code of any complexity cannot be achieved and the seriousness of remaining bugs cannot be estimated. Hence, there is a technological barrier to perfect software, and users must be aware of the potential for catastrophic failure. The software industry has not yet arrived at testing standards for producing software of acceptable but not perfect performance. Although software bugs and facility catastrophes are likely to be widely reported in the press, by far the most common source of business system failure is data quality. Few companies routinely measure the quality of their data, but individual organizations report data error rates ranging from 0.5 to 30 percent.
Review Questions

4.3 *Name and describe four quality-of-life impacts of computers and information systems.*

1. Jobs can be lost when computers replace workers or tasks become unnecessary in reengineered business processes.
2. Ability to own and use a computer may be exacerbating socioeconomic disparities among different racial groups and social classes.
3. Widespread use of computers increases opportunities for computer crime and computer abuse.
4. Computers can create health problems, such as repetitive stress injury, computer vision syndrome, and technostress.
Review Questions

4.4 Define and describe technostress and RSI and explain their relationship to information technology.

Technostress is defined as stress induced by computer use; symptoms include aggravation, hostility toward humans, impatience, and fatigue.

Repetitive stress injury (RSI) is avoidable. Three management actions that could reduce RSI injuries include:
• Designing workstations for a neutral wrist position, using proper monitor stands, and footrests all contribute to proper posture and reduced RSI.
• Using ergonomically designed devices such as keyboards and mice are also options.
• Promoting and supporting frequent rest breaks and rotation of employees to different jobs.
Homework

Homework for next week published here:

http://www2.sta.uwi.edu/~anikov/info1400/lectures.htm

http://www2.sta.uwi.edu/~anikov/info1400/coursework/04-ITF-homework-running-case.pdf