PROFESSIONAL ISSUES

COMPUTER ETHICS

What Is Cyberethics?

- *Cyberethics* is the study of moral, legal, and social issues involving cybertechnology.
- As a field of *applied ethics*, it:
  - examines the impact that cybertechnology has for our social, legal, and moral systems.
  - evaluates the social policies and laws that we frame in response to issues generated by the development and use of cybertechnology.

What Is Cybertechnology?

- *Cybertechnology* refers to a wide range of computing and communications devices
  - from standalone computers, to "connected" or networked computing and communications technologies, to the Internet itself.
- Cybertechnologies include:
  - digital electronic devices;
  - networked computers (including servers, desktops, laptops, etc.);
  - stand-alone computers.

Cybertechnology (Continued)

- Networked devices can be connected directly to the Internet.
- They also can be connected to other devices through one or more privately owned computer networks.
- Privately owned networks include both:
  - *Local Area Networks (LANs)*,
  - *Wide Area Networks (WANs)*.

Why the term c*yberethics*?

- *Cyberethics* is a more accurate label than *computer ethics*, which can suggest the study of ethical issues limited either to:

a) computing machines,

b) computing professionals.

- *Cyberethics* is also more accurate than *Internet ethics*, which is limited only to ethical issues affecting (only) networked computers and devices.

The Evolution of Cybertechnology and Cyberethics: Four Phases

- Computer technology emerged in the late 1940s, when some analysts confidently predicted that no more than six computers would ever need to be built.
- The first phase of computing technology (1950s and 1960s) consisted mainly of huge mainframe computers that were unconnected (i.e., stand-alone machines).
- One ethical/social question that arose during *Phase 1* dealt with the impact of computing machines as "giant brains" and what that meant for being human.
- Another question raised during this phase concerned privacy threats and the fear of Big Brother.

The Evolution of Cybertechnology and Cyberethics (Continued)

- In *Phase 2* (1970s and 1980s), computing machines and communications devices began to converge.
- Mainframe computers and personal computers could be linked together via privately owned networks, which generated three kinds of ethical/social issues:

1) *privacy* concerns (introduced in Phase 1) were exacerbated because confidential information could easily be exchanged between networked databases.
2) *intellectual property* issues emerged because personal computers could easily be used to duplicate and exchange proprietary software programs.
3) *computer crime* emerged because "hackers" could break into the computers of large organizations.

The Evolution of Cybertechnology and Cyberethics (Continued)

- During *Phase 3* (1990-present), the availability of Internet access to the general public has increased significantly.
- This has been facilitated by the phenomenal growth of the World Wide Web.
- The proliferation of Internet- and Web-based technologies in this phase has raised ethical and social concerns affecting:
  - free speech,
  - anonymity,
  - jurisdiction.

The Evolution of Cybertechnology and Cyberethics (Continued)

- In *Phase 4* (present to near future), "Web 2.0" has made possible the proliferation of social networking sites (SNSs), such as Facebook and Twitter.
- As cybertechnology continues to evolve in Phase 4, computers will likely become more and more a part of who or what we are as human beings.
  - For example, Moor (2005) notes that computing devices will soon be a part of our clothing, and even our bodies.
- Computers are already becoming *ubiquitous*, and are beginning to "pervade" both our work and recreational environments.
- Objects in these environments already exhibit what Brey (2005) calls "ambient intelligence," which enables "smart objects" to be connected via wireless technology.

The Evolution of Cybertechnology and Cyberethics (Continued)

- In Phase 4, computers are becoming *less visible* as distinct entities, as they:

a) continue to be miniaturized and integrated into ordinary objects,

b) blend unobtrusively into our surroundings.

- Cybertechnology is also becoming *less distinguishable* from other technologies as boundaries that have previously separated them begin to blur because of convergence.

Debate about the Uniqueness of Cyberethics Issues

- There are two points of view on whether cybertechnology has generated any new or unique ethical issues:

1. *Traditionalists* argue that nothing is new – crime is crime, and murder is murder.
2. *Uniqueness Proponents* argue that cybertechnology has introduced (at least some) new and unique ethical issues that could not have existed before computers.

The Uniqueness Debate (Continued)

- Both sides seem correct on some claims, and both seem to be wrong on others.
- Traditionalists underestimate the role that issues of *scale* and *scope* that apply because of the impact of computer technology.
  - For example, cyberbullies can bully multiple victims simultaneously (scale) and globally (because of the scope or reach of the Internet).
  - Cyberbullies can also operate without ever having to leave the comfort of their homes.

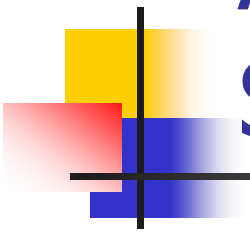
Alternative Strategy for Analyzing the Uniqueness Issue

- Moor (2000) argues that computer technology generates "new possibilities for human action" because computers are *logically malleable*.
- Logical malleability in computers means that they can be molded in ways that allow for many different kinds of uses.
- Some of the unanticipated uses of computers have introduced *policy vacuums*.

Policy Vacuums and Conceptual Muddles

- Policy vacuums are "voids" or gaps in our laws and policies.
- One solution might seem simply to fill the voids with new or revised policies.
- Some policy vacuums cannot easily be filled because of *conceptual muddles*.
- In these cases, conceptual muddles first need to be elucidated before clear policies can be formulated and justified.

A Policy Vacuum in Duplicating Software



- Consider again Scenario 1-5 (in the textbook) involving the duplication of software.
- In the early 1980s, there were still no clear laws regarding the duplication of software programs, which had been made easy because of the avaioability of personal computers.
- Because there were no clear rules for copying programs, a policy vacuum arose.
- Before the policy vacuum could be filled, a conceptual muddle had to be elucidated: What, exactly, is software?

Cyberethics as a Branch of Applied Ethics

- *Applied ethics*, unlike theoretical ethics, examines "practical" ethical issues.
- It analyzes moral issues from the vantage-point of one or more ethical theories.
- Ethicists working in fields of applied ethics are more interested in applying ethical theories to the analysis of specific moral problems than in debating the ethical theories themselves.

Cyberethics as a Branch of Applied Ethics (continued)

- Three distinct perspectives of applied ethics (as applied to cyberethics):
  - Professional Ethics;
  - Philosophical Ethics;
  - Sociological/Descriptive Ethics.

Professional Ethics

- Gotterbarn (1995) has suggested that computer ethics issues are *professional ethics* issues.
- Computer ethics, for Gotterbarn, is similar to medical ethics and legal ethics, which are tied to issues involving specific professions.
- He notes that computer ethics issues aren't, strictly speaking, about technology per se.
  - For example, he point out that we don't have automobile ethics, airplane ethics, etc.

Some Criticisms of the Professional Ethics Perspective

- Is Gotterbarn's model for computer ethics too narrow for cyberethics?
- Consider that cyberethics issues affect not only computer professionals; they effect evirtually veryone.
- Before the widespread use of the Internet, Gotterbarn's professional-ethics model may have been adequate.

Perspective # 2: Philosophical Ethics

- From this perspective, cyberethics is a field of philosophical analysis and inquiry that goes beyond professional ethics.
- Moor (2000) defines computer ethics as:

  ...the analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology. [Italics Added.]

Some Benefits of Using the Sociological/Descriptive Approach

- Huff and Finholt (1994) claim that when we understand the descriptive aspect of social effects of technology, the normative ethical issues become clearer.
- The descriptive/sociological perspective can prepare us for our subsequent (normative) analysis of the ethical issues that affect our system of policies and laws.

Summary of Cyberethics Perspectives

Type of Perspective	Associated Disciplines	Issues Examined
Professional	Computer Science Engineering Library/Information Science	Professional Responsibility System Reliability/Safety Codes of Conduct
Philosophical	Philosophy Law	Privacy & Anonymity Intellectual Property Free Speech
Sociological/Descriptive	Sociology Behavioral Sciences	Impact of cybertechnology on governmental/financial/ educational institutions and socio-demographic groups

A Multi-Disciplinary and Multi-Level Method for Cyberethics

- Brey's disclosive method is *multidisciplinary* because it requires the collaboration of:
  - computer scientists,
  - philosophers,
  - social scientists.

A Multi-Disciplinary & Multi-Level Method for Cyberethics (Continued)

- Brey's scheme is also *multi-level* because the method for conducting computer ethics research requires three levels of analysis, i.e., a:
  - *disclosure level*,
  - *theoretical level*,
  - *application level*.

Three Levels in Brey's Model of Computer Ethics

Level	Disciplines Involved	Task/Function
Disclosive	Computer Science Social Science (optional)	Disclose embedded features in computer technology that have moral import
Theoretical	Philosophy	Test newly disclosed features against standard ethical theories
Application	Computer Science Philosophy Social Science	Apply standard or newly revised/ formulated ethical theories to the issues

Morality and the Law

The Relationship Between Ethics and Law

If everyone made the same ethical decisions with the same results, there would be no need for law. In the real world, however, some people engage in conduct that most people agree is wrong.

Why Law is Necessary

- **Law** is the system of rules of conduct established by the government of a society to maintain stability and justice.
- Law defines the legal rights and duties of the people and provides the means of enforcing these rights and duties.

Morality and the Law
Ethics and Morality

- The term *Ethics* is derived from *Ethos* (Greek), and *Morality* from *Mores* (Latin).
- Both terms translate roughly into notions affecting "custom," "habit," and "behavior."
- Ethics is defined as *the study of morality, which* raises two questions:

1) What is *morality*?
2) What is *the study of morality*?

What is Morality?

- Morality can be defined as *a system of rules for guiding human conduct, and principles for evaluating those rules*.

Two points are worth noting in this definition:

i. morality is a *system;*
ii. it is a system comprised of moral *rules* and *principles*.

- Moral rules can be understood as "rules of conduct," which are very similar to "policies."

Morality

- Knowledge based on human experience, reason, and God's revelation that discovers what we ought to do.

Morality

- Three main sources of knowledge to reach conclusions about how we should act:
  - Human reason – our God-given intellects
  - Human experience – the collective wisdom of others, living and dead
  - Divine revelation – the teachings of God as found in the scriptures and the teachings of the Church (Tradition)

Law and Morality

- Law

"An ordinance of reason for the common good, promulgated by the one who is in charge of the community"

Law and Morality

- Elements of Law:
- Law is reasonable.
- Law is for the common good.
- Competent authority makes law.
- Law must be promulgated.

Law and Morality

- Natural Law
- Natural law is our participation in the divine law.
- Natural law teaches us what to do and what to avoid.
- Natural law corresponds to three basic human drives and needs:
  - Preserving life
  - Developing as individuals and communities
  - Sharing life with others
- Natural law is universal, permanent, and unchanging throughout history.

Vocabulary

- Freedom
- Determinism
- Imputable
- Law
- Natural law
- Evangelical counsels
- Precepts of the Church
- Canon law

Rules of Conduct as "Policies"

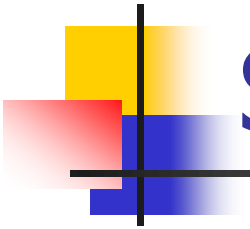
- James Moor (2004) notes that *policies* can range from formal laws to informal, implicit guidelines for actions.
- Moor suggests that every act can be viewed as an instance of a policy.
- There are two kinds of rules of conduct:

1) *Directives* for guiding our conduct as individuals (at the micro-level)
2) *Social Policies* framed at the macro-level.

Directives

- *Directives* are rules (of conduct) that guide our actions, and thus *direct* us to behave in certain ways.
- Rules such as
  - "Do not steal"
  - "Do not harm others"

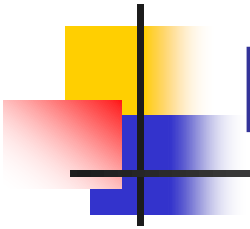
  are examples of rules of conduct that direct us in our individual moral choices at the "micro-ethical" level (i.e., the level of individual behavior).



Social Policies

- Some rules of conduct guide our actions at the "macro-ethical" level by helping us frame *social policies*.
- Rules such as
  - "Proprietary software should not be copied"
  - "Software that can be used to invade the privacy of users should not be developed"

  are both examples of rules of conduct that arise out of our social policies.
- Notice the correlation between directives and social policies (e.g., rules involving stealing).



Principles

- The rules of conduct in a moral system are evaluated by way of standards called *principles*.
- For example, the principle of "social utility“ (i.e., promoting the greatest good for the greatest number) can be used to evaluate a social policy such as
  - “Proprietary software should not be copied without permission."

Principles (Continued)

- In the previous example, the principle of *social-utility* functioned as a kind of "litmus test" for determining whether the policy pertaining to proprietary software could be justified on moral grounds.
- A policy, X, could be justified (on utilitarian grounds) by showing that following Policy X (i.e., not allowing the unauthorized copying of software) would produce more overall social utility (greater good for society).

Three Schemes for Grounding the Evaluative Rules in a Moral System

- The principles are grounded in one of three different kinds of schemes:
  - religion;
  - law;
  - philosophical ethics.
- We will see how a particular moral principle or rule – e.g., "Do not steal" – can be justified from the vantage point of each scheme.

Approach #1: Grounding Moral Principles in a Religious System

- Consider the following rationale for why stealing is morally wrong:

  Stealing is wrong because it offends God or because it violates one of God's (Ten) Commandments.

- From the point of view of institutionalized religion, stealing is wrong because of it offends God or because it violates the commands of a supreme authority.

Approach #2: Grounding Moral Principles in a Legal System

An alternative rationale would be:

Stealing is wrong because it violates the law.

- Here the grounds for determining why stealing is wrong are not tied to religion.
- If stealing violates a law in a particular nation or jurisdiction, then the act of stealing can be declared to be wrong independent of any religious beliefs that one may or may not happen to have.

Approach #3: Grounding Moral Principles in a Philosophical System of Ethics

- A third way of approaching the question is:

  Stealing is wrong because it is wrong
  (independent of any form of external authority or any external sanctions).

- On this view, the moral "rightness" or "wrongness" of stealing is not grounded in some external authoritative source.
- It does not appeal to an external authority, either theological or legal, for justification.

Approach # 3 Continued

- Many philosophers and ethicists have argued that, independent of either supernatural or legal authorities, reason alone is sufficient to show that stealing is wrong.
- They argue that reason can inform us that there is something either in the act of stealing itself, or in the consequences that result from this kind of act, that makes stealing morally wrong.

Approach # 3 Continued

- In the case of both law and religion, specific sanctions against stealing exist in the form of punishment.
- In the case of (philosophical) ethics, the only sanction would be in the form of social disapproval, and possibly social ostracism.
  - For example, there is no punishment in a formal sense.
  - External conditions or factors, in the form of sanctions, are irrelevant.

The Method of Philosophical Ethics

- The method philosophers use to analyze moral issues is normative, in contrast to the descriptive method that is used by social scientists.
- Sociological and anthropological studies are descriptive because they describe or report how people in various cultures and groups behave with respect to the rules of a moral system.
- For example, a sociologist might report that people who live in nations along the Pacific Rim believe that it is morally permissible to make copies of proprietary software for personal use.

Philosophical Studies vs. Scientific Studies

- Philosophical studies and scientific studies are similar in that both require that a consistent methodological scheme be used to verify hypotheses and theories.
- These verification schemes must satisfy criteria of *rationality* and *objectivity* (or *impartiality*).
- Philosophical studies also differ from scientific studies because scientists typically conduct experiments in a laboratory to confirm or refute a hypothesis.
- Philosophers have no physical laboratory to test ethical theories and claims; they evaluate a claim or thesis by testing it against the rules of logical argumentation.

Ethicists vs. *Moralists*

- Ethicists study morality from the perspective of philosophical methodology and they appeal to logical arguments to justify their positions.
- Moralists often claim to have all of the answers regarding morality, and often they exhibit characteristics that have been described as "preachy" and "judgmental."
- Some moralists may have a particular moral agenda to advance.

Ethicists vs. Moralists (Continued)

- Ethicists, in using the philosophical method to analyze and investigate moral issues, must remain open to different sides of a dispute.
- An ethicist's primary focus is on the *study* of morality and the application of theories.
- Ethicists approach the study of moral issues and controversies by way of standards that are both rational (based on logic) and impartial (open to others to verify).

Moral Relativism

- Moral relativists make a questionable move:

  Premise: Different cultures have different beliefs about what is right and wrong

  Conclusion: No universal standard of morality is possible.

- Many moral relativists also seem to suggest that, in matters of morality, "anything goes."
- But the moral relativist's view is essentially incoherent and inconsistent.

Ethics, Technology, and Value

Innovation

- Over the past several decades, technology has advanced at an amazing rate.
- As new technology develops, professionals are challenged to create new and innovative ethical boundaries to accommodate the advancement.

New Technology

- There are numerous examples of ethical considerations for technology
- Telephones
- Cell Phones
- Internet
  - Chat Rooms
  - Private vs. semiprivate email accounts
- Personal Computers

New technology new problems

- Industrial Revolution
  - Urbanization
  - Dissolution of family system
  - Materialistic mindset
- Features of IT
  - Time dilation
  - Space contraction

Difficulties posed by computer

- Change in nature & time of relationship
- Electronic information more fragile
  - Changed
  - Replicated
  - No degradation in quality
  - Plagiarism, piracy easy
- Conflict in information sharing & protection
- Authorization & authentication difficult yet

Difficulties posed by pace of technological change

- Order-of-magnitude effect
  - Tenfold increase in speed changes perception
- Increase in data availability
- Technology development

- The effort effect
  - The principle of unreasonable effort
  - Datamining

Unethical Computer use

- More by insider
- Social & Economic issues
  - Job displacement
  - Pressure-filled work, behind schedule, long hours
  - Have's & have's not
- Individual practices issues
  - Password and other resources protection
- Software Development issues
  - Incomplete or unreliable product
  - Professional Integrity
  - Software piracy
- Power struggle

Computer processing issues

- Unreliability
  - Hardware
  - Software
  - Communication

  - Failure to anticipate
  - Increase in application complexity
  - Increased dependence

- Late output
  - Development
  - Operation

Ethical Management

Telephones:

- Considerations
  - State that the phone has a confidential line and/or voicemail.
  - Always state on voicemail at the end of your greeting:
    - "If this is an emergency, please hang up and dial 911, or go to the nearest emergency room."

Electronic Media

- Personal Computers
  - Hardware: hard disk, disks, CD-ROM's, etc…
    - Hardware can be protected with a mechanical lock/key.
    - The hardware should be locked when unattended or not in use.
  - Software: Microsoft Word, Excel, Medisoft, etc…
    - The documents created with software can be protected with passwords for authorized personnel.
    - Authorized personnel should "log off" when the computer is unattended.

Email and Fax Machines:

- Email
  - Confidential information transferred by email should only be transmitted to secure locations
    - Password controlled systems
    - Mechanically locked systems
    - Psychologists' Use of E-mail with Clients: Some Ethical Considerations
- Fax Machines
  - Counselors must attempt to send facsimiles to secure locations
    - Do not send to centrally located machines
    - Provide a cover letter with a Confidentiality Statement

Computer-Assisted Counseling

- **Career Counseling**
  - Programs such as System for Guidance and Information-Plus (SIGI-PLUS) have been found to be useful with highly motivated clients.
    - Clients with lower levels of motivation were found to benefit less.
    - Clinicians need to assess the appropriateness of such programs according to each clients level of motivation.

Computer-Assisted Counseling

- **Rehabilitation**
  - Clients with traumatic brain injury began receiving cognitive retraining with computers in the 1970's.
  - Cognitive Retraining System (CACR)
    - The NeuroScience Center
  - Computers made it easy to record and track a patients improvement

Computer-Assisted Counseling: Is it Effective?

- Does computer-assisted counseling devaluate the client/counselor relationship?
  - Psychodynamic and humanistic counselors believe face-to-face interaction is imperative to the counseling relationship.
- Computer-assisted counseling allows clients to:
  - Learn new behaviors
  - Express emotions
  - Hone insightful capacities
  - Gain feedback
  - Practice interaction with individuals

Appropriateness for Clients

- It is important to identify which interventions are most appropriate for each client
  - Determine if a particular computer program is right for the client
  - Assess the client's level of function and cognitive capabilities

Validation of Programs

- APA and ACA require that assessment software be validated prior to use with clients
- Also required that clinicians are competent and trained to administer the assessment
- This guideline is not in place for computer-assisted programs
  - Not tested for reliability or validity
  - No training required for administration
  - At present, anyone can administer it!

Ethical Dilemmas

- ACA has some standards for computer-assisted counseling.
  - Ethics -Section A.12.g
- The counselor must ensure that each client:
  - Is capable of using the program
    - Emotionally, cognitively, and physically
  - The program must be appropriate for the client
  - Comprehends the purpose of the program
  - Receives a follow-up session(s) to preserve the intent of the program
    - Correct any misconceptions
    - Determine if misuse has taken place
    - Assess for alternate interventions

Online Counseling

- Forums
  - Very recent advancement in counseling
  - Ethical boundaries are still fuzzy
- Internet
  - Email
    - Counselors should be careful of transmitting confidential information
    - Often, this information can be intercepted
    - Clients typically use email to ask mental health professionals specific questions

Online Counseling

- Future applications
  - Advertising for services in the mental health field
  - Real-time video conferencing
- Ethical Implications
  - Need technological applications to protect clients
    - Video signal scrambling
    - Data encryption

Development of Ethical Policies

- Telehealth
  - Allows professionals to communicate with consumers from remote locations
    - Ex: Videoconference
    - Office for the Advancement of Telehealth - Welcome
- Perks for Providers
  - Many professionals are eligible for reimbursement from Medicare
  - Federal Communications Commission (FCC) offers grants

Telepsychology Regulation

- In 1997, a study looked at pertinent information regarding regulation according to each state's Attorney General
- The Survey Says!:
  - Only 7% of all 50 states had regulations regarding telehealth in 1999.
  - Only 7% of all licensing agencies had defined regulations for telehealth.

Telepsychology Regulation

- Future development of policies was only addressed 17% of the time in the agencies with regulations.
- Much of the regulations created are developed out of necessity
  - Litigation

Computer-Assisted Assessments

- Purpose
- Administer, score, and interpret information
- Examples of computerized assessments:
  - Wechsler Adult Intelligence Scale-III (WAIS-III (subtests))
  - Wonderlic Personnel Test
  - MMPI-2

Computer-Assisted Assessments

- Benefits
  - Quick
  - Reliable
  - Non-repetitive
  - Minimizes human error
- Concerns
  - Unqualified individuals may try to administer these assessments
  - Providers must be competent in the administration of these assessments
    - Adequate training

Computer-Assisted Assessments

- Limitations
  - Examinees should be observed during testing
    - Stimulus control, unfavorable conditions
  - SES
    - Lack of available technology for clients with little or no financial means
  - Cannot be used as a replacement for professionals

Computer-Assisted Assessments

- Reports
- Too much reliability on the technology to interpret the findings of the assessment
  - Ex: Qualitative data
- Data should be reviewed by the counselor
- Agencies may be pressured to use under-qualified individuals for testing
  - Lack of funding
  - Lack of time

Computer-Assisted Counselor Education

- Supervision and Practica
- Benefits
  - Email as a form of communication between professionals
    - Share ideas
- Concerns
  - Neglects the nonverbal communication between supervisor and supervisee
    - Ex: Crossed arms, smiling, furrowed eyebrows

Computer-Assisted Counselor Education

- Distance Learning
  - Convenient
  - Consistent quality to all users
  - Those in remote areas have access to education
  - Time limitations are minimized
  - Limited mobility individuals have equal opportunity

Computer-Assisted Counselor Education

- Modalities for online education
  - Asynchronous
    - Curricula are available continuously
    - Ex: Web CT, Blackboard
    - Blackboard 6 | Sam Houston State University
  - Synchronous
    - Curricula are available for a discrete period of time
    - Ex: Timed online exams, assignments

Distance Learning

- Ethical Concerns
  - Lack of personal contact
  - Prerecorded lectures lack an opportunity Q & A time
  - Discourages active participation in class
  - Limited collegial interaction
  - Cost may hinder some students
  - Clarification of information is limited

Development of Distance Learning Curricula

- Mission
  - Review the goals of the distance learning program
    - Populations, structure, procedures
- Delivery of distance learning
  - Video conferences
  - Prerecorded tapes
  - Discussion forums

Development of Distance Learning Curricula

- Instructors
  - Need competencies related to technology
  - Understand troubleshooting procedures
  - Property rights of curricula
- Resources
  - Texts should be complimentary to online applications
  - Interactive workbooks to encourage students to process the learned material

Development of Distance Learning Curricula

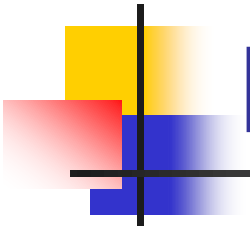
- Support for Students
  - Students should be screened for capacity to succeed
  - Career counseling
  - Registration
  - Financial aid
  - Selection of coursework and load
  - Need low student/teacher ratio
    - 10:1 (CACREP)

Development of Distance Learning Curricula

- Evaluation of Programs
  - Course evaluations from students
  - Quality
  - Assignment completion and punctuality rates
- Computer-Assisted Instruction (CAI)
  - Used to present specific concepts/information
  - Can help illustrate specific constructs

Public vs. Non-Public Personal Information

- *Non-Public Personal Information* (or *NPI*) refers to sensitive information such as in one's financial and medical records.
- NPI currently enjoys some legal protection.
- Many privacy analysts are now concerned about a different kind of personal information called *Public Personal Information* (or *PPI*).
- PPI is non-confidential and non-intimate in character, and is generally not legally protected.



Privacy Concerns Affecting PPI

- Why does the collection of PPI by organizations generate privacy concerns?
- Suppose some organization learns that you are a student at Technical University; you frequently attend university basketball games; and you are actively involved in your university's computer science club.
- In one sense, the information is personal because it is about *you* (as a person);but it is also about what you do in the public sphere.

Search Engines and Personal Information

- Search engines can be used to:

i. acquire personal information about individuals (as illustrated in the discussion of the Gawker/Stalker site in the text).

ii. reveal to search facilities data about which Web sites you have visited, as illustrated in Scenario 5-10 (in the text), which describes how Google users' search requests were subpoenaed by the U.S. Government.

Accessing Public Records via the Internet

- What are public records, and why do we have them?
- In the past, one had to go to municipal buildings to get public records.
- Review Scenarios 5-11 and 5-12 (in the text), describing online access to two different kinds of public records (at state and local levels).
- Should those records have been made available online to the public?

Can Technology Be Used to Protect Personal Privacy?

- Privacy advocates tend to argue for stronger privacy legislation.
- But groups in the commercial sector tend to oppose strong privacy laws, arguing instead for voluntary industry self-regulation.
- Can *Privacy Enhancing Tools*, or *PETs*, provide an acceptable compromise?

Privacy Enhancing Technologies (PETs)

- PETs are tools that users can employ to protect:
  - their personal identity, while navigating the Web;
  - the privacy of their communications (such as email) sent over the Internet.

PETs (Continued)

- Two challenges involving PETs with respect to ordinary users include:

1) educating ordinary users about the existence of these tools;
2) preserving the principle of informed consent for users who opt for these tools.

Privacy Legislation and Industry Self-Regulation

- Can industry adequately self-regulate privacy through voluntary controls, instead of strong privacy legislation?
- What kinds of assurances from vendors do online consumers need regarding the protection of their privacy?
- Consider again the incident involving (the now defunct) Toysmart.com (described in the textbook).

Google's 2012 Privacy Policy

- Review Scenario 5-13 in the text for information about Google's comprehensive privacy policy designed to cover its suite of applications.
- One advantage is that the privacy policy is comprehensive; so the same privacy rules apply to anyone using any Google application.
- Another advantage is that Google's privacy policy is explicit and transparent.
- However, this policy has also been very controversial and it has been criticized by some privacy advocates.

Critics of Google's Privacy Policy Worry Because in Their View

- It is not clear how Google will use all of the personal information that it can now access so easily.
- No one outside Google fully understands how the search engine company uses that information to manipulate (i.e., tailor or personalize) the search results a user receives for his or her search queries.
- Additionally, it is not clear whether one's personal information collected from the various Google services will be used only internally, or will also be available to advertisers and information merchants outside the company.

Google's Privacy Critics (Continued)

- Some critics worry whether users can trust Google – a company that officially embraces the motto: "do not be evil" – to abide by its new privacy policy.
  - For example, many people who used Apple's Safari Web browser on their computers and iPhones were under the impression that Google was not able to track their browsing activities.
- However, it was discovered Google had used software code that tricked the Safari browser, thus enabling Google to track the activities of those using that browser.

Google's Privacy Critics (Continued)

- Google responded to its critics by disabling the controversial software code shortly after the incident was reported in *The Wall Street Journal*.
- Safari users were informed by Google that they could rely on Safari's privacy settings to prevent tracking by Google in the future (Anguin and Valentino-DeVries, 2102).
- But some critics have remained skeptical.
- Because of concerns involving distrust of Google and other commercial Web sites to regulate themselves, privacy advocates believe that explicit privacy laws are needed to protect users.