

Ethical and Social Issues in IS

Part I

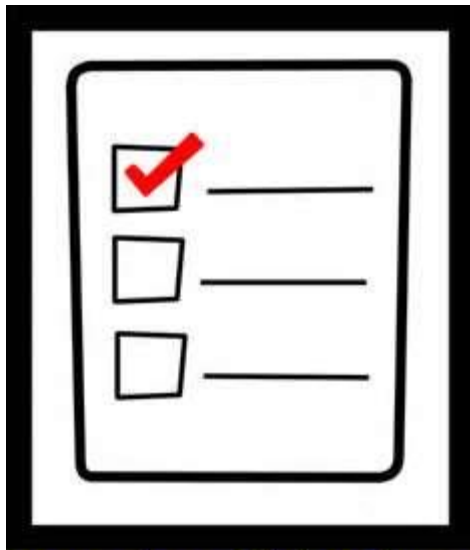
Organizations, Management, and Networked Enterprise

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Information Systems

Topic 4

Part I

Organizations, Management, and Networked Enterprise



Learning Objectives

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1. What ethical, social, and political issues are raised by information systems?
2. What specific principles for conduct can be used to guide ethical decisions?
3. Why do contemporary information systems technology and the Internet pose challenges to the protection of individual privacy and intellectual property?
4. How have information systems affected laws for establishing accountability, liability, and the quality of everyday life?
5. How will M I S help my career?

- Case 1: The Boeing 737 MAX Crashes - What Happened and Why?
- Case 2: Do Smartphones Harm Children? Maybe, Maybe Not

Case Study: Facebook Privacy: Your Life for Sale

What Ethical, Social, and Political Issues Are Raised by Information Systems? (1 of 2)

- **Recent cases of failed ethical judgment in business**

- VW vs Vehicle Behaviour 14,7 b\$ fine – 500k cars, GE faulty ignition switches – 114 deaths+100m cars, Takata vs Airbags malfunction – 100m cars, Madoff's Ponzi scheme 50b\$, City Group+JP Morgan+Barclays+UBS admit manipulating LIBOR interest rates used as loan rate globally, Novartis influences prescribed drugs in Greece during Greek fault period 1-3b€, influencing local countries
- Chicago Police vs BigData and foreseen behavior, Iot+Insurance Companies analyze your driving behavior, Hiring companies use CV analyzers, Facebook+non-information and the ability to influence the masses
- In many, IS are used to bury decisions from public scrutiny
- In others, IS are used to target specific individuals, leaving others out of the scene

- **Ethics**

- Principles of right and wrong that individuals, acting as free moral agents, use to make choices to guide their behaviors

What Ethical, Social, and Political Issues Are Raised by Information Systems? (2 of 2)

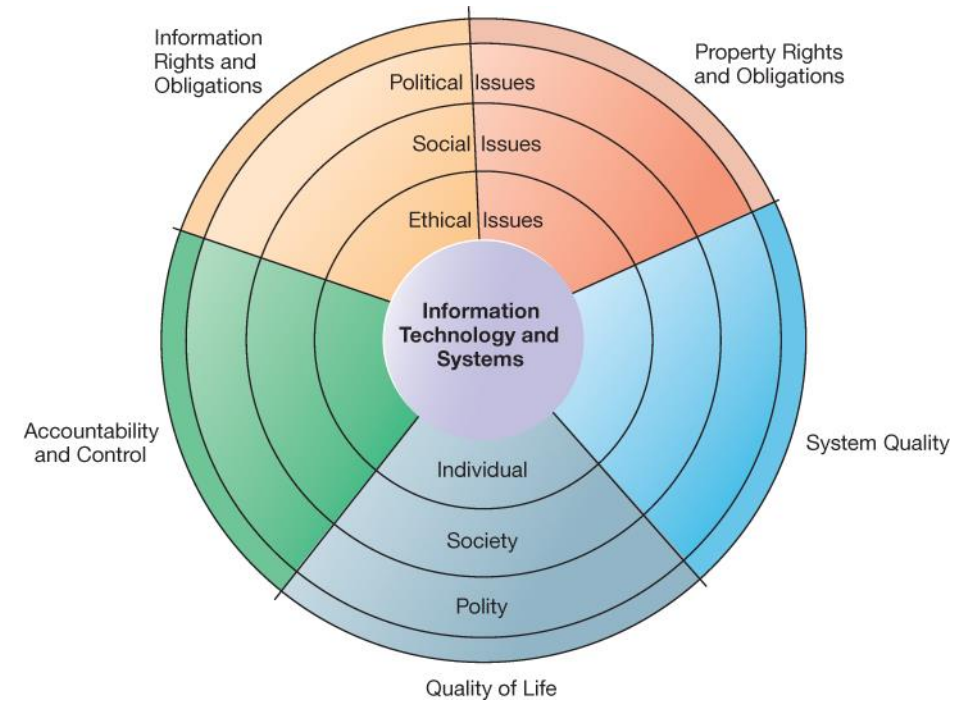
- **Information systems raise new ethical questions because they create opportunities for:**
 - Intense social change, threatening existing distributions of power, money, rights, and obligations
 - New kinds of crime

A Model for Thinking about Ethical, Social, and Political Issues.

- **Society as a calm pond**
- **IT as rock dropped in pond, creating ripples of new situations not covered by old rules**
- **Social and political institutions cannot respond overnight to these ripples—it may take years to develop etiquette, expectations, laws**
 - **Requires understanding of ethics to make choices in legally gray areas**

The Relationship Between Ethical, Social, and Political Issues in an Information Society - Five Moral Dimensions of the Information Age

- **Information rights and obligations**
- **Property rights and obligations**
- **Accountability and control**
- **System quality**
- **Quality of life**



The Relationship Between Ethical, Social, and Political Issues in an Information Society

Key Technology Trends that Raise Ethical Issues

- **Computing power doubles every 18 months**
- **Data storage costs rapidly decline**
- **Data analysis advances**
- **Networking advances**
- **Mobile device growth impact**

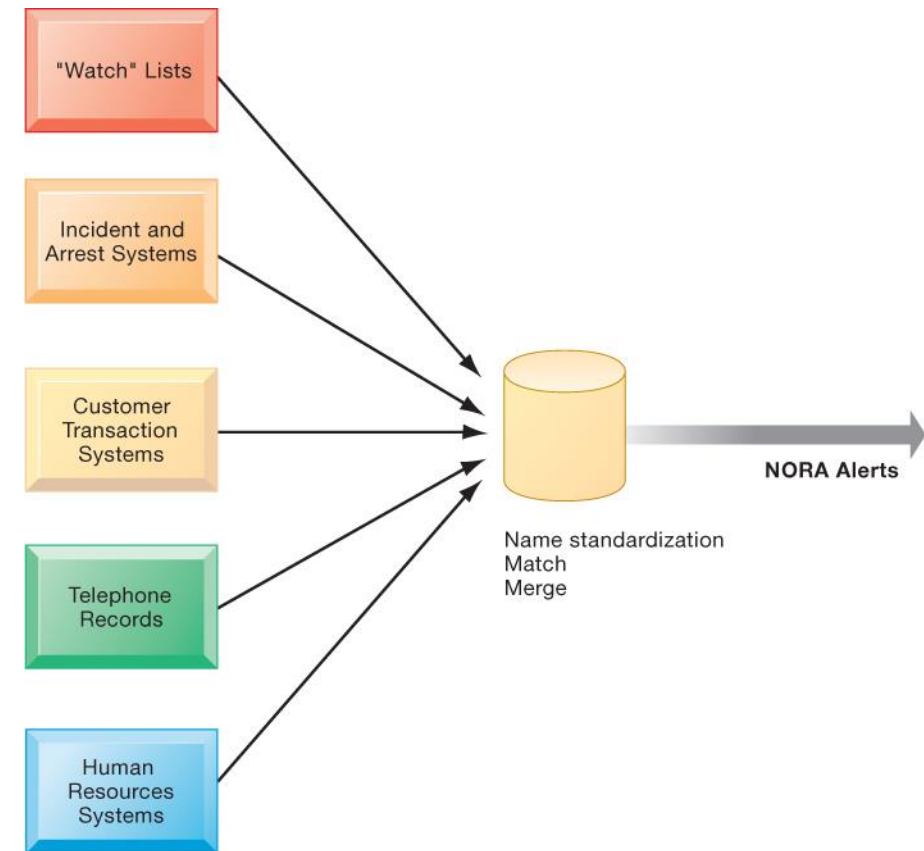
Advances in Data Analysis Techniques

- **Profiling**

- Combining data from multiple sources to create dossiers of detailed information on individuals

- **Nonobvious relationship awareness (NORA)**

- Combining data from multiple sources to find obscure hidden connections that might help identify criminals or terrorists



Basic Concepts: Responsibility, Accountability, and Liability

- **Responsibility**
 - Accepting the potential costs, duties, and obligations for decisions
- **Accountability**
 - Mechanisms for identifying responsible parties
- **Liability**
 - Permits individuals (and firms) to recover damages done to them
- **Due process**
 - Laws are well-known and understood, with an ability to appeal to higher authorities

Ethical Analysis

- **Five-step process for ethical analysis**
 - Identify and clearly describe the facts.
 - Define the conflict or dilemma and identify the higher-order values involved.
 - Identify the stakeholders.
 - Identify the options that you can reasonably take.
 - Identify the potential consequences of your options.

Candidate Ethical Principles (1 of 2)

- **Golden Rule**
 - Do unto others as you would have them do unto you
- **Immanuel Kant's Categorical Imperative**
 - If an action is not right for everyone to take, it is not right for anyone
- **Descartes' Rule of Change a.k.a. Slippery Slope Rule**
 - If an action cannot be taken repeatedly, it is not right to take at all

Candidate Ethical Principles (2 of 2)

- **Utilitarian Principle**
 - Take the action that achieves the higher or greater value
- **Risk Aversion Principle**
 - Take the action that produces the least harm or potential cost
- **Ethical “No Free Lunch” Rule**
 - Assume that virtually all tangible and intangible objects are owned by someone unless there is a specific declaration otherwise

Professional Codes of Conduct

- **Promulgated by associations of professionals**
 - American Medical Association (AMA)
 - American Bar Association (ABA)
 - Association for Computing Machinery (ACM)
- **Promises by professions to regulate themselves in the general interest of society**

Real-world Ethical Dilemmas

- **One set of interests pitted against another**
- **Examples**
 - **Monitoring employees: Right of company to maximize productivity of workers versus workers right to use Internet for short personal tasks**
 - **Facebook monitors users and sells information to advertisers and app developers**

Information Rights: Privacy and Freedom in the Internet Age (1 of 3)

- **Privacy**

- **Claim of individuals to be left alone, free from surveillance or interference from other individuals, organizations, or state; claim to be able to control information about yourself**

- **In the United States, privacy protected by:**

- **First Amendment (freedom of speech and association)**
 - **Fourth Amendment (unreasonable search and seizure)**
 - **Additional federal statutes (e.g., Privacy Act of 1974)**

Information Rights: Privacy and Freedom in the Internet Age (2 of 3)

- **Fair information practices**
 - **Set of principles governing the collection and use of information**
 - Basis of most U.S. and European privacy laws
 - **Used to drive changes in privacy legislation**
 - COPPA
 - Gramm-Leach-Bliley Act
 - HIPAA
 - Do-Not-Track Online Act of 2011

Information Rights: Privacy and Freedom in the Internet Age (3 of 3)

- **FTC FIP principles**
 - **Notice/awareness (core principle)**
 - **Choice/consent (core principle)**
 - **Access/participation**
 - **Security**
 - **Enforcement**

European Directive on Data Protection (GDPR):

- **Requires unambiguous explicit informed consent of customer**
- **EU member nations cannot transfer personal data to countries without similar privacy protection**
 - Applies across all EU countries to any firms operating in EU or processing data on EU citizens or residents
 - Strengthens right to be forgotten
- **Privacy Shield: All countries processing EU data must conform to GDPR requirements**
- **Heavy fines: 4% of global daily revenue**

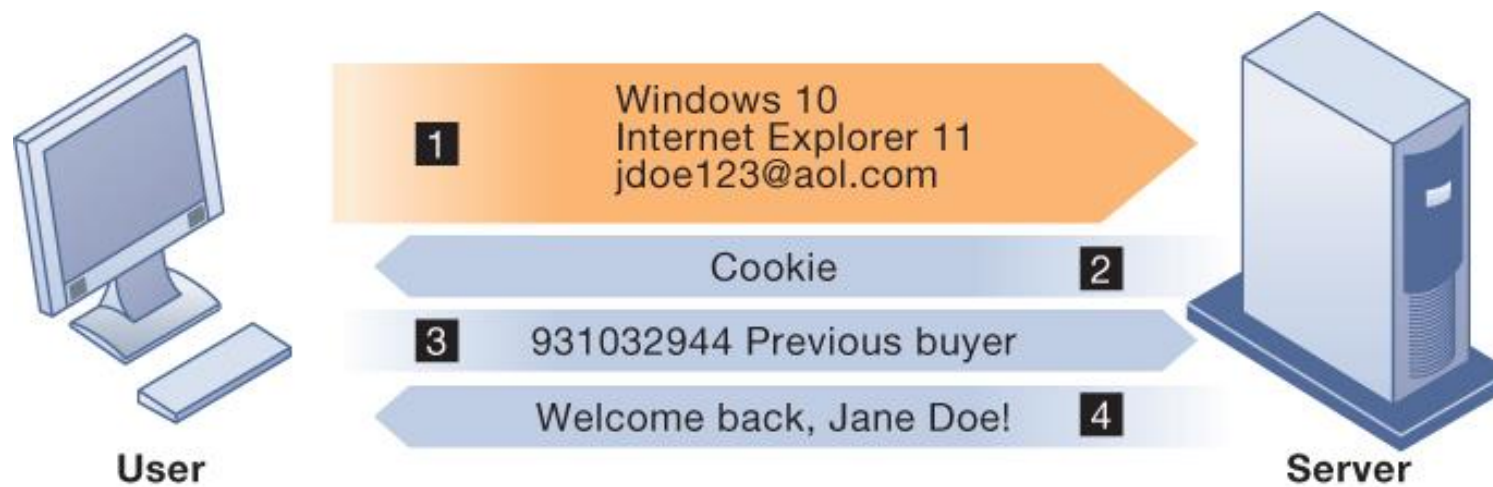
Internet Challenges to Privacy (1 of 2)

- **Cookies**
 - Identify browser and track visits to site
 - Super cookies (Flash cookies)
- **Web beacons (web bugs)**
 - Tiny graphics embedded in e-mails and web pages
 - Monitor who is reading e-mail message or visiting site
- **Spyware**
 - Surreptitiously installed on user's computer
 - May transmit user's keystrokes or display unwanted ads
- **Google services and behavioral targeting**

Internet Challenges to Privacy (2 of 2)

- **The United States allows businesses to gather transaction information and use this for other marketing purposes.**
- **Opt-out vs. opt-in model**
- **Online industry promotes self-regulation over privacy legislation.**
 - **Complex/ambiguous privacy statements**
 - **Opt-out models selected over opt-in**
 - **Online “seals” of privacy principles**

How Cookies Identify Web Visitors



1. The Web server reads the user's web browser and determines the operating system, browser name, version number, Internet address, and other information.
2. The server transmits a tiny text file with user identification information called a cookie, which the user's browser receives and stores on the user's computer hard drive.
3. When the user returns to the website, the server requests the contents of any cookie it deposited previously in the user's computer.
4. The Web server reads the cookie, identifies the visitor, and calls up data on the user.

Technical Solutions

- **Solutions include:**
 - **E-mail encryption**
 - **Anonymity tools**
 - **Anti-spyware tools**
- **Overall, technical solutions have failed to protect users from being tracked from one site to another**
 - **Browser features**
 - “Private” browsing
 - “Do not track” options

Property Rights: Intellectual Property

- **Intellectual property**
 - Tangible and intangible products of the mind created by individuals or corporations
- **Four main ways that intellectual property is protected:**
 - **Trade secret:** intellectual work or product belonging to business, not in the public domain
 - **Copyright:** statutory grant protecting intellectual property from being copied for the life of the author, plus 70 years
 - **Patents:** grants creator of invention an exclusive monopoly on ideas behind invention for 20 years
 - **Trademarks:** grants brand owner to exclusively use the brand image

Challenges to Intellectual Property Rights

- **Digital media different from physical media**
 - Ease of replication
 - Ease of transmission (networks, Internet)
 - Ease of alteration
 - Compactness
 - Difficulties in establishing uniqueness
- **Digital Millennium Copyright Act (DMCA)**
 - Makes it illegal to circumvent technology-based protections of copyrighted materials

Computer-Related Liability Problems

- **If software fails, who is responsible?**
 - If seen as part of a machine that injures or harms, software producer and operator may be liable.
 - If seen as similar to book, difficult to hold author/publisher responsible.
 - If seen as a service? Would this be similar to telephone systems not being liable for transmitted messages?

System Quality: Data Quality and System Errors

- **What is an acceptable, technologically feasible level of system quality?**
 - Flawless software is economically unfeasible
- **Three principal sources of poor system performance**
 - Software bugs, errors
 - Hardware or facility failures
 - Poor input data quality (most common source of business system failure)

Quality of Life: Equity, Access, Boundaries (1 of 3)

- **Negative social consequences of systems**
- **Balancing power: center versus periphery**
- **Rapidity of change: reduced response time to competition**
- **Maintaining boundaries: family, work, and leisure**
- **Dependence and vulnerability**
- **Computer crime and abuse**

Quality of Life: Equity, Access, Boundaries (2 of 3)

- **Computer crime and abuse**
 - Computer crime
 - Computer abuse
 - Spam
 - CAN-SPAM Act of 2003
- **Employment**
 - Trickle-down technology
 - Reengineering job loss

Quality of Life: Equity, Access, Boundaries (3 of 3)

- **Equity and access**
 - The digital divide
- **Health risks**
 - Repetitive stress injury (RSI)
 - Carpal tunnel syndrome (CTS)
 - Computer vision syndrome (CVS)
 - Technostress

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Next Steps

- Answer the Moodle quiz
- Prepare for 5th chapter

