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**Information Technology
and Society
Summary**

1. Inquiry
2. Objectives

David Keil Information Technology and Society 1/12 1

Invitation

- Do you trust all the ways information technology can be used?
- Can we do better than the computers we have?
- Do computers improve our lives?
- Can we keep our privacy?
- Who owns songs and videos?
- How much can we depend on technology?
- How do social networks like Facebook connect us, and how do they place us at risk?

David Keil Information Technology and Society 1/12 2

Inquiry

- What are the major *technical changes* in computing that affect us as members of society?
- What are the effects of universal connectedness, ubiquity of computing, and the speed and low cost of processing, storage, copying, and communication of information?
- Does today's IT embody values from the social environment? Or is it *value free* (value neutral)?
- How are *social values* shaped by how IT operates and is used?

Inquiry

- Does information technology, acting on itself, *accelerate the rate of change* by enabling application of knowledge to knowledge?
- Does IT enable a *global economy*?
- Does *connectedness of all people* via information technology raise social issues and enable changes in society?
- Is privacy about power? (Do IT-enabled security and privacy intrusions assert *power* over individuals? Do privacy protections protect the power of individuals?)

Inquiry

- Do computer systems widen freedom of expression?
- Do computer systems limit and constrain freedom of expression?
- Does the direct sharing of information and culture enabled by information technology outpace efforts to enforce intellectual-property rights?

Inquiry

Does the information revolution result in:

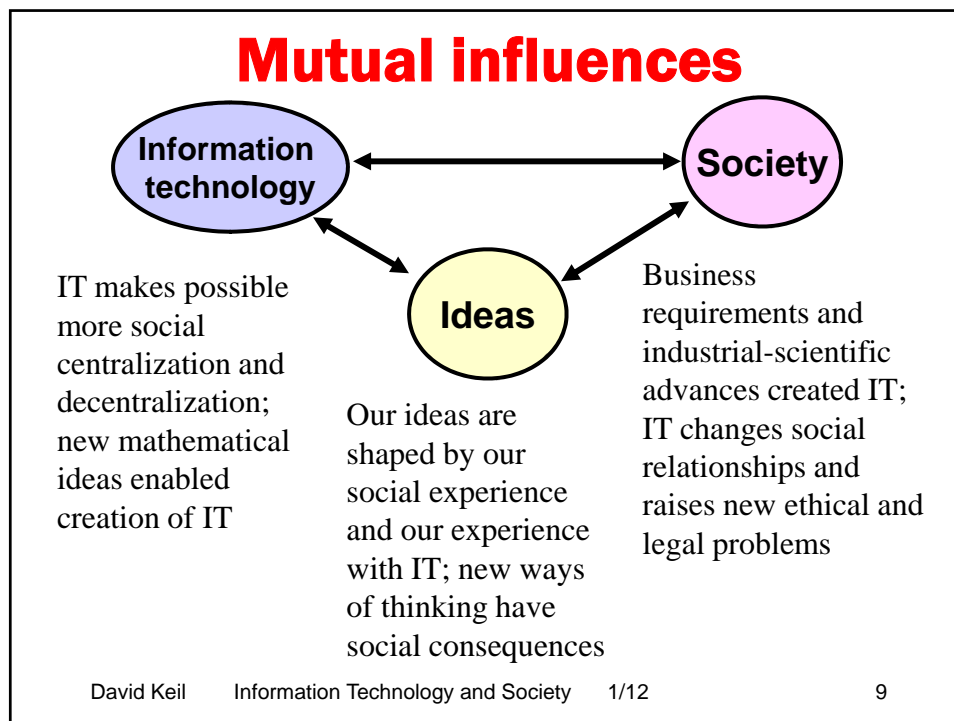
- individualization of work?
- increased fragmentation of society?
- Increased social connectedness and cohesion?
- radical changes in education?
- radical changes in our culture as a result of integration of text, video, and images?
- radical changes in our culture due to open access to culture?

Inquiry

- Is the reliability of software today at an advanced or primitive stage?
- In shaping our world, are we *enabled* by the ubiquity of computing and the connectivity of people?
- Does the IT revolution make possible *centralization* or *decentralization* of power and production, or both?

Inquiry

- Have informationalism and globalization decreased or increased social polarization?
- Is informationalism associated with a new non-hierarchical organizational logic?
- Does research in *indirect interaction*, *decentralized emergent behavior*, and *self organization* shed light on social changes being effected by IT?



2. Topics and objectives

1. Technical background
2. Social, ethical, and legal background
3. Security and privacy
4. Freedom of expression
5. Intellectual property and IT
6. Work, education, and culture
7. Risks, professional ethics, and evaluation of IT
8. Network structures and the global economy

Multi-topic objectives

- 0a. Participate in class activities throughout the semester
- 0b. Solve a problem as part of a team
- 0c. Present a short talk in the classroom
- 0d. Write a documented research paper
- 0e. Support opinions by evidence
- 0f. Acknowledge alternative points of view
- 0g. Document sources used

Objectives

- 1a. Explain basic principles of hardware and operating systems
- 1b. Explain concepts of major office applications
- 1c. Use software that supports collaboration
- 1d. Explain concepts of networked and Internet computing
- 2a. Explain what social and economic factors have driven the information revolution
- 2b. Explain the effects of computing and information technology on society
- 2c. Discuss IT issues and theories of ethics

Objectives

- 3a. Explain issues raised by IT related to security and crime
- 3b. Explain and apply theories of privacy in the IT era
- 4a. Discuss trade-offs between conflicting legitimate concerns about freedom of expression
- 4b. Explain how IT offers opportunities for and risks to free expression
- 5a. Explain copyright law and its exceptions
- 5b. Give reasons and ways to support intellectual property rights in the information society
- 5c. Give reasons and ways to broaden access to information and entertainment

Objectives

- 6a. Explain how IT affects work life
- 6b. Explain how IT has changed education
- 6c. Explain how IT influences cultural life
- 7a. Explain risks related to IT and ways to manage them
- 7b. Explain ethical responsibilities of IT professionals
- 8a. Explain the role of IT in the globalized economy
- 8b. Explain how IT makes possible decentralized structures in the economy and in society