



CSE312/ISE312



Chapter 7: pages 329-350
Digital Divide

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What We Will Cover

- The “Digital Divide”
- Neo-Luddite Views of Computers and Technology
- Predicting Technology Advances

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The "Digital Divide"

- Some groups of people access and regularly use various forms of information technology, while others do not
 - Text relates this to “haves” and “have-nots”
 - 1990s focus – access to computers and to the Internet
 - Current focus – access to broadband
- In your experience is the digital divide related more to wealth or to geographic location?

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The Next Billion Users

- Approximately two billion people worldwide have access to the Web, a fivefold increase over roughly a decade
- Approximately five billion do not use the Internet
- Non-profit organizations and huge computer companies are spreading computer access to people in developing countries
- Bringing new technology to poor countries is not just a matter of money to buy equipment

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Criticisms of Computing Technology

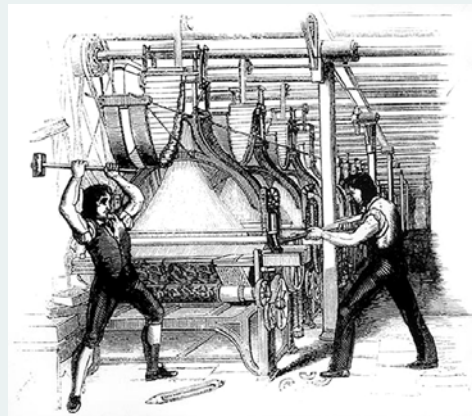
- The textbook cites some criticisms of computers, namely, that computers:
 - Cause massive unemployment and de-skilling of jobs.
 - Do not satisfy real needs.
 - Cause social inequity
 - Cause social disintegration
 - Are dehumanizing
 - Weaken communities
 - Lead to isolation of people from each other.

Do you agree with these criticisms of computers?

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Luddites

- Luddite refers to the backlash against the Industrial Revolution in early 1800s England
- Fought to preserve home-weaving
- Term has evolved to describe those who oppose technological progress



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Similarities to 2016 US

- Situation
 - Anger among displaced factory workers
 - Loss of real income
- Stated causes
 - Undocumented workers
 - Global trade
- Unstated causes
 - Robots
 - Computer-related de-skilling



Will a reduction in global trade and a decrease in undocumented workers help with the situation?

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Neo-Luddite Views of Computers

- Textbook lists the following criticisms of computers:
 - Computers separate humans from nature and destroy the environment
 - Computers benefit big business and big government the most
 - Use of computers in schools thwarts development of social skills, human values, and intellectual skills in children
 - Computers do little or nothing to solve real problems
- Textbook states that the case that computers cause unemployment is not convincing
- Alternate view
 - Income inequality is a better measure of social impact

Do you think that computerization has had an effect on income inequality?


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Accomplishments of Technology

- Increased life expectancy
- Elimination or reduction of many diseases
- Increased standard of living
- Assistive technologies for those with disabilities

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The Difficulty of Prediction

- Each new technology finds new and unexpected uses
- The history of technology is full of wildly wrong predictions
- Classic quotes:

I think there is a world market for maybe five computers

- Thomas J. Watson, IBM Chairman, 1943


Computers in the future may ... only weigh 1.5 tons.

- Popular Mechanics, 1949

There is no reason for any individual to have a computer in their home

Ken Olson, president of DEC, 1977

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Intelligent Machines

- Technological Singularity - point at which artificial intelligence or some combined human-machine intelligence advances so far that we cannot comprehend what lies on the other side
- We cannot prepare for aftermath, but prepare for more gradual developments
- Select a decision making process most likely to produce what people want

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