

Workplace - What We Will Cover

- Fears and Questions
- The Impact on Employment
- The Work Environment
- Employee Crime
- Employee Monitoring

Fears and Questions

- The introduction of computers in the workplace generated many fears
 - Mass unemployment due to increased efficiency
 - The need for increased skill and training widens the earning gap
- New trends still generating fears
 - Offshoring of jobs will lead to mass unemployment
 - Employers use of technology to monitor their employees

The Impact on Employment

Job Creation and destruction:

- A successful technology eliminates or reduces some jobs but creates others
 - Reduced the need for telephone operators, meter readers, mid-level managers
- New industries arise
 - Internet
 - Cellular communications
- Lower prices increase demand and create jobs
 - Music industry changed from serving the wealthy to serving the masses, employing more than just musicians

The Impact on Employment (cont.)

Job Creation and destruction:

- Unemployment rates fluctuate
 - Growth of computers has been steady, while unemployment has fluctuated widely
- Are we earning less?
 - Since the 1970s, wages decreased but fringe benefits increased
 - People work fewer hours since the Industrial Revolution
 - Decrease in take-home pay may be due to other factors (e.g. increased taxes)
 - Purchasing power increases as prices fall

The Impact on Employment (cont.)

Changing Skill Levels:

- The new jobs created from computers are different from the jobs eliminated
- New jobs such as computer engineer and system analyst jobs require a college degree, where jobs such as bank tellers, customer service representatives and clerks do not
- Companies are more willing to hire people without specific skills when they can train new people quickly and use automated support systems

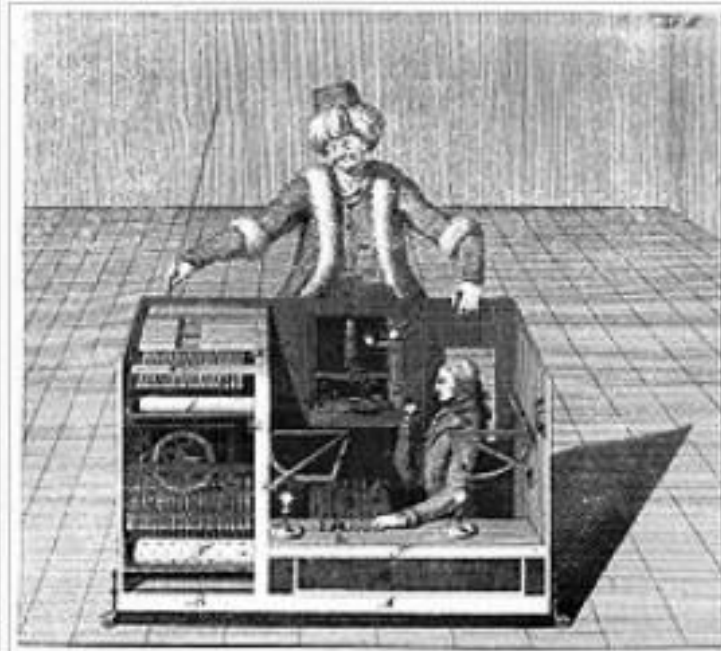
The Impact on Employment (cont.)

A Global Workforce:

- Outsourcing - phenomenon where a company pays another company to build parts for its products or services instead of performing those tasks itself
- Offshoring - the practice of moving business processes or services to another country, especially overseas, to reduce costs
- Inshoring - when another company employs thousands of people in Canada (e.g. offshoring for a Japanese company means inshoring for Canada)
- Starts happening in both directions
- Almost 5% of U.S. workers are employed by foreign companies; probably many more in Canada

Crowdsourcing

- Mechanical Turk
- Amazon.com has public software to outsource Human Intelligence Tasks (HITs) to large groups of people, for money
 - Search and rescue
 - Identifying pictures, music



A cross-section of the Turk from Racknitz, showing how he thought the director sat inside as he played his opponent. Racknitz was wrong both about the position of the director and the dimensions of the automaton.^[10]

Crowdsourcing

- reCAPTCHA [von Ahn] as an example (Completely Automated Public Turing test to tell Computers and Humans Apart)
- CAPTCHA
- Using CAPTCHA to decipher OCR'ed books
 - OCR
 - Unreadable if 2 OCR programs disagree
- The control word idea
 - Enriching the control word set
- 40,000 websites, after 1 year equiv. of 17K books translated, equiv. of 160 books per day

The Impact on Employment (cont.)

A Global Workforce (cont.):

- Problems and side effects of offshoring:
 - Consumers complain about customer service representatives, because accents are difficult to understand
 - Employees in Canadian companies need new job skills (e.g., managing, working with foreign colleagues)
 - Increased demand for high-skill workers in other countries forces salaries up

The Impact on Employment

Discussion Questions

- What jobs have been eliminated due to technology?
- What jobs that were once considered high-skill jobs are now low-skill due to technology?
- What new jobs have been created because of technology?
- What jobs can get offshored?

The Work Environment

Job Dispersal and Telecommuting:

- Telecommuting
 - Working at home using a computer electronically linked to one's place of employment
 - Mobile office using a laptop, working out of your car or at customer locations
 - Fulltime and part-time telecommuting

The Work Environment (cont.)

Job Dispersal and Telecommuting (cont.):

- Benefits
 - Reduces overhead for employers
 - Reduces need for large offices
 - Employees are more productive, satisfied, and loyal
 - Reduces traffic congestion, pollution, gasoline use, and stress
 - Reduces expenses for commuting and money spent on work clothes
 - Allows work to continue after blizzards, hurricanes, etc.

The Work Environment (cont.)

Job Dispersal and Telecommuting (cont.):

- Problems
 - Employers see resentment from those who have to work at the office
 - For some telecommuting employees, corporation loyalty weakens
 - Odd work hours
 - Cost for office space has shifted to the employee
 - Security risks when work and personal activities reside on the same computer

The Work Environment (cont.)

Changing Structure of Business:

- Increase in smaller businesses and independent consultants ('information entrepreneurs')
- 'Mom and pop multi-nationals', small businesses on the Web
- Growth of large, multi-national corporations
- Not all changes due to technology

The Work Environment Discussion Questions

- Would you want to telecommute? Why or why not?
- How has technology made entrepreneurship easier? Harder?

Employee Crime

- Embezzlement - fraudulent appropriation of property by a person to whom it has been entrusted
- Trusted employees have stolen millions of dollars: the SocGen 2008 rogue trader case
 - EU50B exposure
 - EU 3B loss
- Angry fired employees sabotage company systems
- Logic bomb - software that destroys critical files (payroll and inventory records) after employee leaves

Employee Monitoring

Background:

- Monitoring is not new
 - Early monitoring was mostly ‘blue-collar’ (factory) and ‘pink-collar’ (telephone and clerical) jobs
 - Time-clocks and logs
 - Output counts at the end of the day
 - Bosses patrolled the aisles watching workers

Employee Monitoring (cont.)

Data Entry, Phone Work, and Retail:

- Data entry
 - Key stroke quotas
 - Encourage competition
 - Beep when workers pause
- Phone work
 - Number and duration of calls
 - Idle time between calls
 - Randomly listen in on calls
- Retail
 - Surveillance to reduce theft by employees

Employee Monitoring (cont.)

Location Monitoring:

- Cards and badges used as electronic keys increase security but track employee movements
- GPS tracks an employee's location
 - Used in some hospitals to track nurse locations for emergency purposes, also shows where they are at lunch or when they use the bathroom
 - Used to track long-haul trucks to reduce theft and optimize delivery schedules, also detects driving speeds and duration of rest breaks
- Employees often complain of loss of privacy

Employee Monitoring (cont.)

E-Mail, Blogging, and Web Use:

- E-mail and voice mail at work
 - Employees often assume passwords mean they are private
 - Roughly half of major companies in the U.S. monitor or search employee e-mail, voice mail, or computer files
 - Most companies monitor infrequently, some routinely intercept all e-mail
 - Whose property is employer's email?

Employee Monitoring (cont.)

E-Mail, Blogging, and Web Use (cont.):

- Law and cases (cont.)
 - Courts have ruled against monitoring done to snoop on personal and union activities or to track down whistle blowers
 - Many employers have privacy policies regarding e-mail and voice mail

Employee Monitoring (cont.)

E-Mail, Blogging, and Web Use (cont.):

- Some companies block specific sites (e.g. adult content, sports sites, job search sites, social-network sites)
- Employees spend time on non-work activities on the Web
- Concerns over security threats such as viruses and other malicious software
- Concerns about inappropriate activities by employees (e.g., harassment, unprofessional comment)

Employee Monitoring Discussion Questions

- How much privacy is reasonable for an employee to expect in the workplace?
- Under what circumstances is it appropriate for an employer to read an employee's e-mail?