Chapter 10
Organizational Aspects

Chapter 10 is aimed to inform on:

- What are the main organizational approaches
- how technology impacts organizations
- methods proposed to improve the quality of work in organizations
- know what the problems are to trying to incorporate this knowledge within HCI and system design
Interacting factors of organizations

- The people in them
  - each have different motivations, roles, etc.
- The technology used and created
  - each have different functions, reliabilities, etc.
- The work organization
  - the way work is allocated to number of groups
- The organizational culture
  - ‘way we do things around here’

Perspectives on nature of organizations

- The metaphorical perspective
  - conceptualize them in terms of metaphors

- Metaphorical notions proposed
  - The paperless office
    - all paper work and reading material is done electronically
  - The automated office
    - factories operated by robots
  - The electronic cottage
    - people work from terminals at home
  - The global village
    - convergence of telecommunications interconnects world
• The participants’ perspective
  – characterizing organizations by looking at how the members of the organizations interpret the structures and processes present in the organization in which they work
  – considered as creating a new organizational form
    • a previously disputed course of action becomes the establish correct way of doing something

Impact of information technology on organizations

• Specifically computerization on organizations
  – disputes whether computerization is revolutionizing society or that it’s taking over by changing methods of organizations
• List of advantages of computers
  – electronic records, safer systems, reduces costs, reduction of monotonous jobs
• List of problems of computerization
  – increase in unemployment, hi-tech weapons, infringement on privacy
Concerns about impact of technology upon jobs

- Technical system as control
  - IT is deskillling, takes work from people, reduce repetitive work
- Technical system as tool
  - IT is enriching, boring jobs given to computer
- Organizational theorists have 2 main approaches to identify the process by which benefits or problems IT solves
  - Technological determinist
    - technology is the single most important factor to determine success
  - Social action
    - technology is enabling rather than deterministic

Methods of organizational change

- Scientific management
  - assumption that work obeys scientific laws and can be analysed using scientific methods
  - scientific principles include
    - choose best person for job
    - train workers to perform the tasks
    - determine best form of reward for the different tasks
    - monitor worker performance
• Sociotechnical systems approach
  – show how the social and technical subsystems of an organization interact with each other
  – design of a technical system always has effects on the human aspects and vice versa

  – Sociotechnical design principles to achieve autonomous group working (3 of 9 steps)
    • 1st initial scanning
    • 2nd identification of unit operations
    • 3rd identification of variances

    • Problems with sociotechnical approach
      – difficult to put into practice

• Activity theory
  – used to inform the analysis and implementation of systems that are used in the workplace
  – developed as a method to analyse user interfaces and CSCW systems

  – Activities
    • collective venture of various groups
  – Actions
    • conscious acts of an individual in view of specific intentions
  – Operations
    • mean of realizing an action that are carried out relatively unconsciously
The individual activity is conducted through a series of actions which have purposes in relation to the goal or object of the activity.

Operations contribute to the realization of actions. They are triggered by the encounter with the actual material conditions.

Cont.

- **Breakdowns**
  - occur when there is a conflict between what is assumed to happen and what actually happens
    - users taught commands to print, but commands don’t always work

- **Contradictions**
  - occur when vicious circles develop that prevent the workers from breaking out of inefficient and undesirable situations that have developed in a community practice
    - ex. Doctors - speedy results and demand of quality care
Ethnomethodology

- Ethnomethodology
  - a sociological approach that has been used recently to study how new technologies have been introduced into various work settings.
  - A main issue under consideration is how well new technologies like audio or video links support existing working practices
    - ex. Video and audio links introduced into office environment
      - disrupted the normal communicative practices of staff
    - think twice about introducing any further new technology

CSCW and organizational considerations

- Two aspects
  - 1) Use of CSCW systems is the relative contributions and benefits each member of the organization obtains from the group
    - ex. Managers benefit more from introduction of multi-user systems
    - ex. Managers benefit more from automatic meeting schedule
  - 2) CSCW systems are designed to take into account how the additional workload and benefits are to be shared
    - ex. Introduce networked computer system
      - everyone can equalize and share power by data sharing which lead to improved performance