Researchers in the CSCW area:

Computer Science

Psychology

Sociology

Etnography (Social anthropology)

Big controversy among CSCW researchers:

Computer scientists: Trying to develop rational, logical models of collaborative work, like petri nets, activity scripts, AI models etc.

Social scientists: Study real cooperation without CSCW support, analyse what really happens, base solutions on the outcome of such studies. The rational, logical models seldom are able to cater to the full variability of real collaboration. CS solutions are misused or circumwented by users in order to accomplish what they really need.

Context of Computer-Mediated Communication

Edited by Martin Lea

Harvester Wheatsheaf, New York 1992

Traditional way of doing research on CMC systems

Look at existing or experimental CMC systems

Try to investigate:

- Cost and benefits
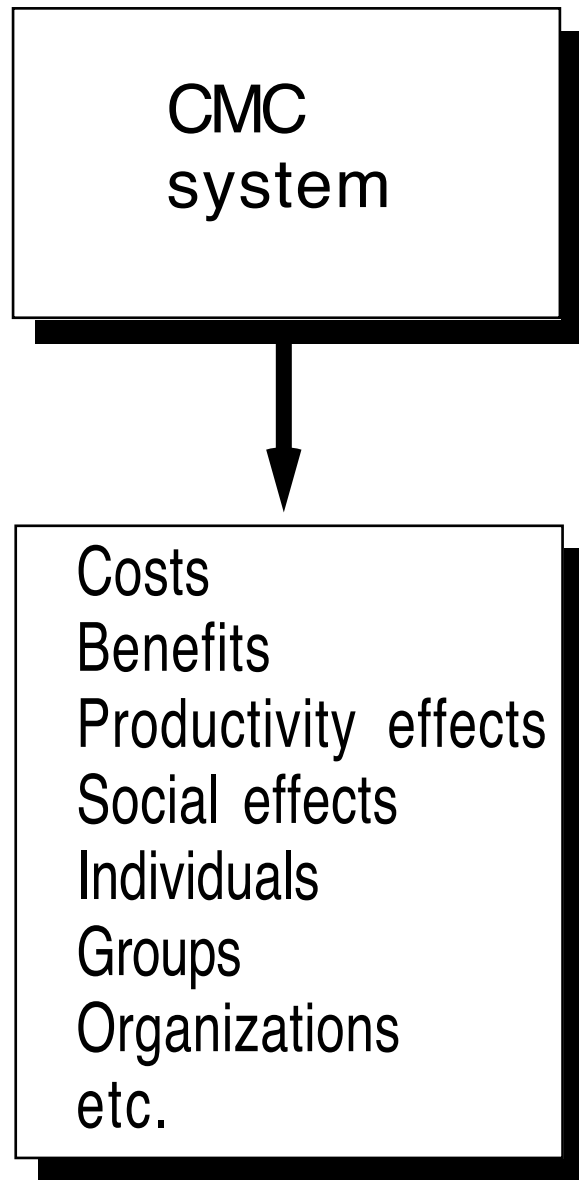- Productivity effects
- Social effects
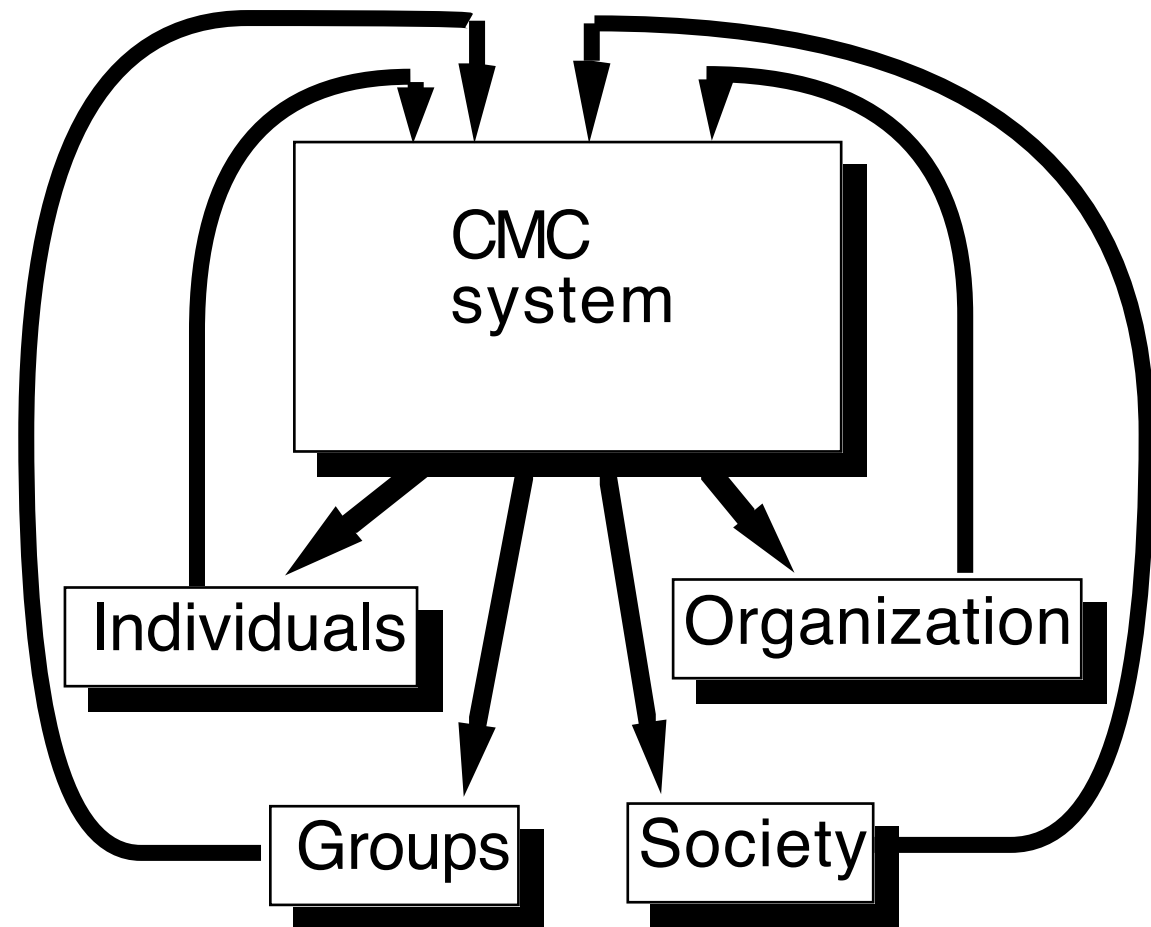- Impacts on individuals
- Impact on groups
- Impact on organizations
- Impact on society
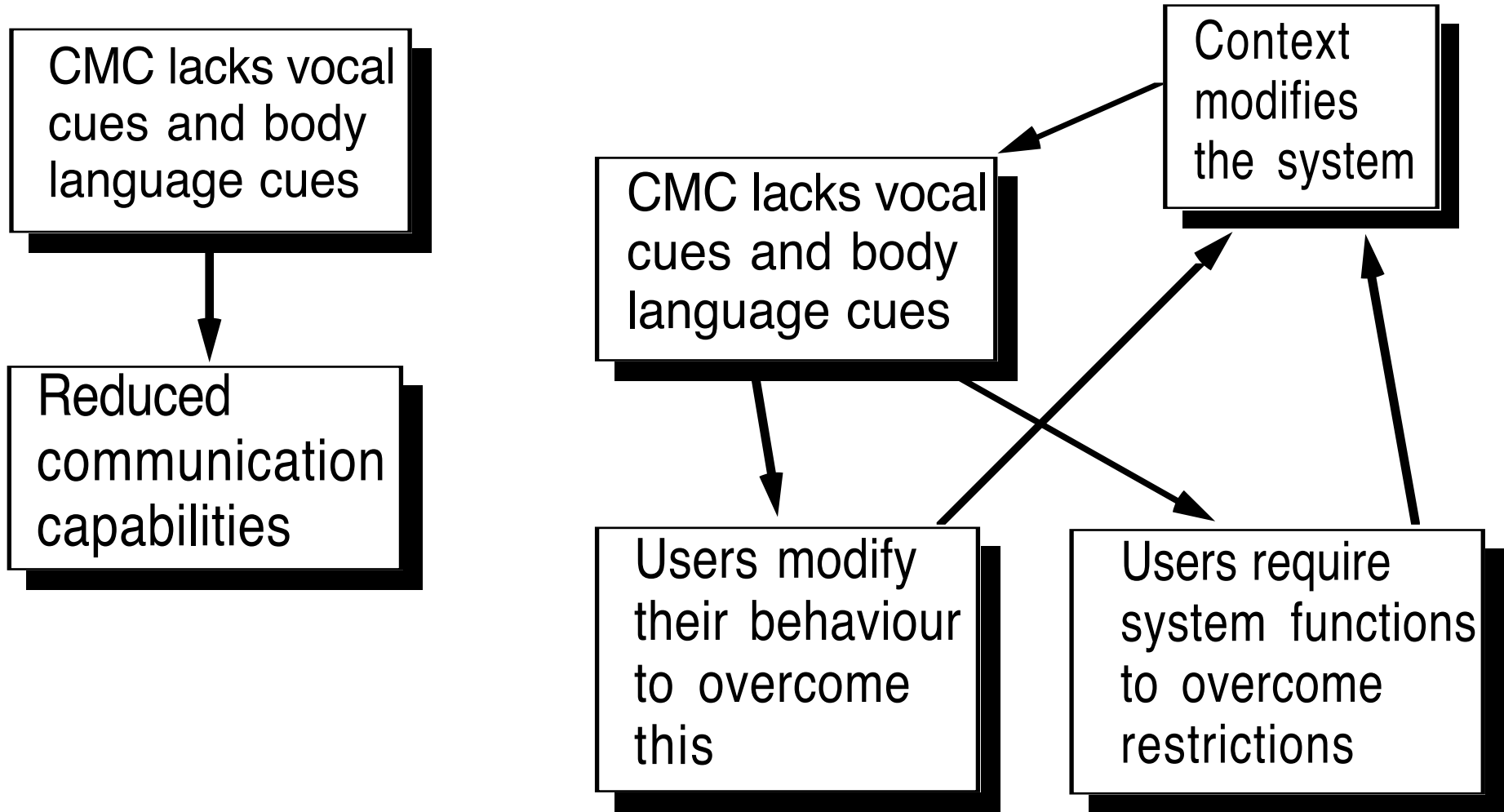
Traditional model versus context model

CMC
system

Costs
Benefits
Productivity effects
Social effects
Individuals
Groups
Organizations
etc.

CMC
system

Individuals

Organization

Groups

Society

Traditional model

Context model

Example: Does cuelessness cause poverty?

CMC lacks vocal cues and body language cues

↓

Reduced communication capabilities

Traditional model

CMC lacks vocal cues and body language cues

Context modifies the system

Users modify their behaviour to overcome this

Users require system functions to overcome restrictions

Context model

Note: Contextual effects take time to develop

A solution in search of a problem

Prestel (U.K.) versus Teletel/Minitel (France)

Initial Prestel concept:

- Producers and consumers
- Each frame refers to other frames

Minitel concept:

- Terminals for everyone
- General-purpose network
- See which applications emerge
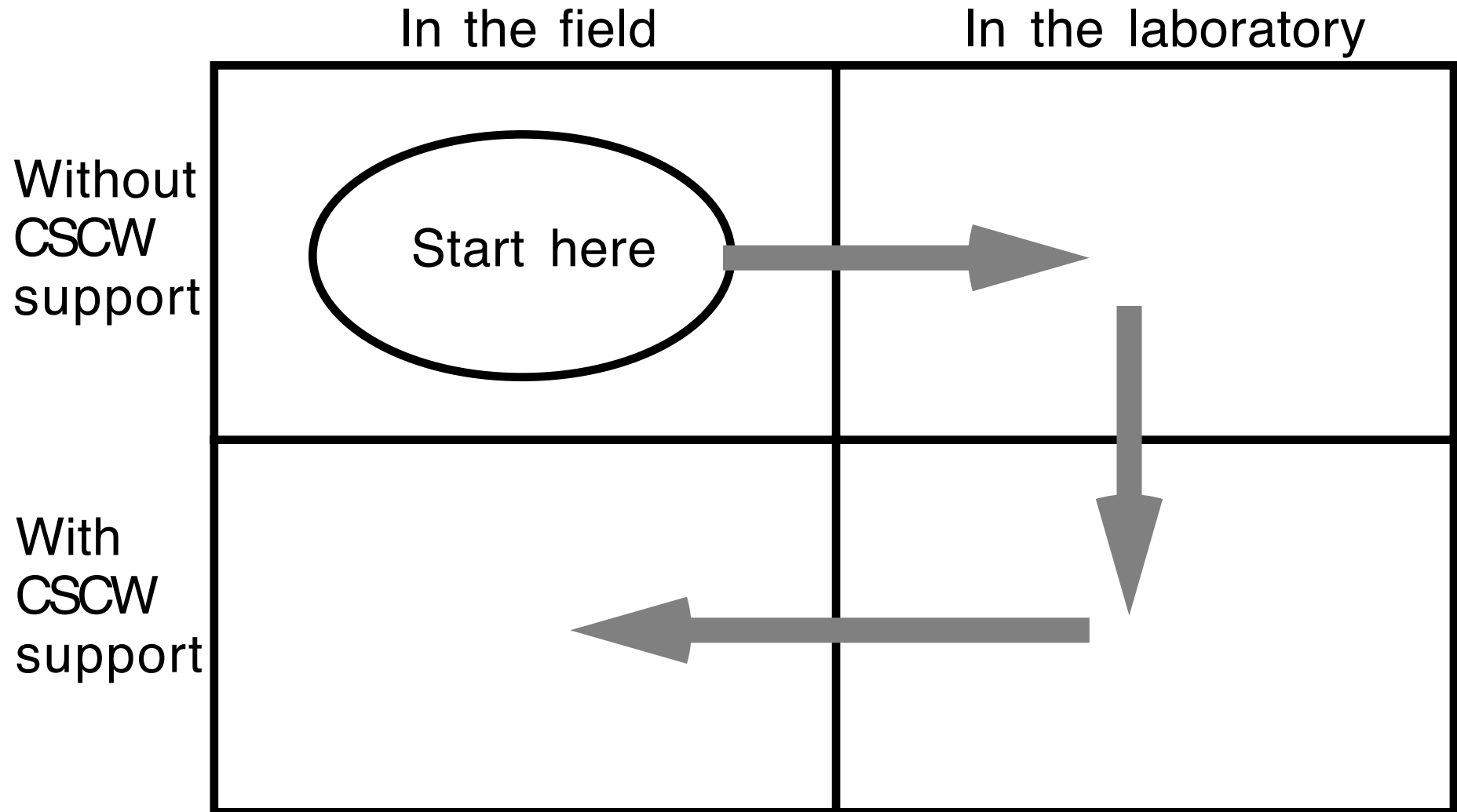- Result: Communication rather than retrieval

Contextual factors

- **Group norms**

- **Social learning**

- **Social identity**

- **Communities of users**

- **Proximity among groups**

- **Network features**

- **Critical mass thresholds**

- **Work group cohesiveness**

- **Group size**

Problems when doing research on CMC/CSCW

- Computer companies are unaware and uninterested in social effects

- Field research expensive

- Experiments not realistic

- Social science studies on real usage: Too late to influence system
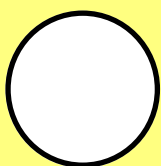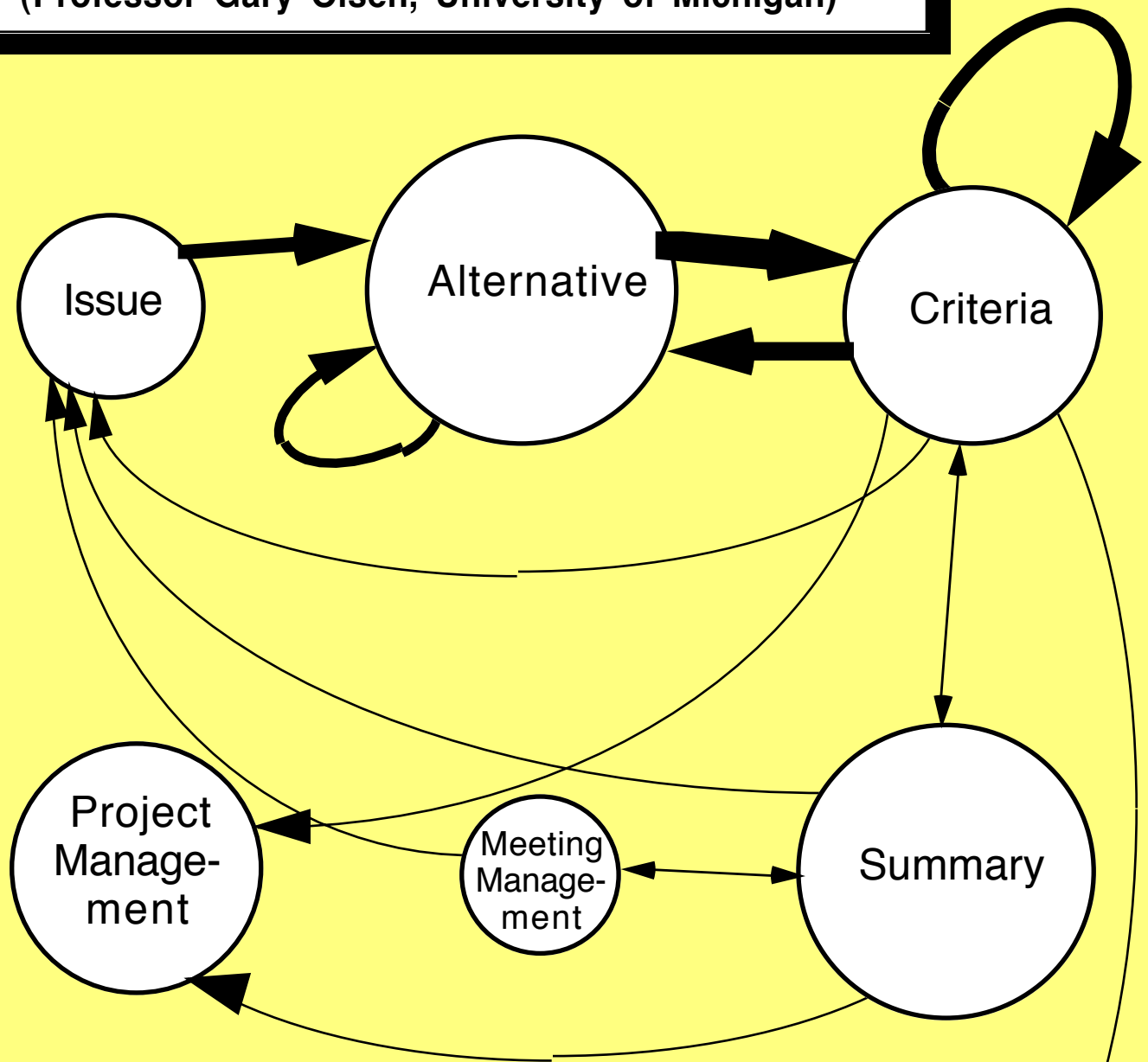
- Prototype building expensive

Stephen Gale: Desktop video conferencing: technical advances and evaluation issues, Computer Communications, Vol 15 no 8 1992

Research strategies

(Professor Gary Olson, University of Michigan)

	In the field	In the laboratory
Without CSCW support	Start here →	↓
With CSCW support	←	

How the group time is spent
(Professor Gary Olsen, University of Michigan)
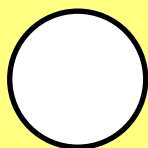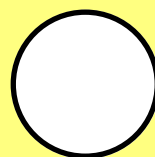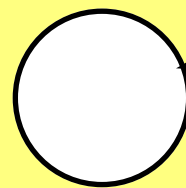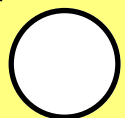
Analysing real decision making

MCC IT research institute experience:

Is it possible to explain why a system (example: Bulding, Highway) turned out the way it did by measuring and understanding the group dynamics involved in its development process?

Very difficult, very complex

Also emotional factors must be analysed (Teldok CSCW report, section 1.4.)

Evaluation of CSCW-CMC systems

- Opportunistic versus planned research
- Participatory evaluation (action research ethnographic studies, development process)
- Interviews (pre, post, intermediate)
- Self-reports (tape, video, diaries)
- Autologging

Use of Video recordings

A common research technique: Based on detailed video recordings of what actually happened, detailed scripts were produced which showed every single utterance and its relation to other utterances, also in cases where several people were talking simultaneously.

These scripts then gave an understanding of the process, which was the basis of proposals for improvement of the communication tools available.

Use of Breakdown Analysis in Synchronous CSCW System Design
(Silvia Ponguta Urquijo)

System: Networked "chalk board".

Breakdown: When users begin think of the communication system, and not of the task they are using it for.

Example: "I cannot read it", "I think we need a new page".

All breakdowns not necessarily negative.

Advantage with breakdown analysis: Fast pick-up of problems.

Controversies:

- Lack of established methods
- Evaluation of what? For whom? Why?
- Experiments not repeatable
- How can participatory research be impartial?
- Is it right to encourage users to use the system?
- Time period for conducting evaluations
- Intrusive methods?
- Ethics, privacy issues

Which is the right question to ask?

Black and white questions:

Is there a need for groupware?

Is groupware worthwhile using?

What are the merits and demerits of groupware?

Do something good questions:

What kind of groupware is useful?

Which is best for what, same time or different time?

How can groupware be made useful?

How should good groupware be designed?

How should information be structured to solve what kinds of problems?

Which research method is best?

Studying Group work without computer?

Studying group work with very flexible computer tools and no advice on how to use it?

Comparing group work with tool A and tool B?

Designing, testing and evaluating new tools?