

Dr.sc. Goran Bubaš
Faculty of Organization and Informatics
Varaždin

**Computer Mediated Communication
Theories and Phenomena:
Factors that Influence Collaboration
Over the Internet**

3rd CARNet Users Conference, Zagreb, September 24-26, 2001

Varied forms of Internet communication

- E-mail and file transfer
- Newsgroups and mailing lists
- Bulletin boards and chat systems
- Text or audio and video conferences
- Group calendars and workflow systems
- Collaborative writing systems
- Decision support systems
- Group support systems and computer-supported cooperative work systems

Potential advantages of *Groupware*

- Communication where it wouldn't otherwise be possible.
- Telecommuting and reduce travel costs.
- Brings together multiple perspectives and expertise.
- Formation of groups with common interests that can not meet face-to-face.
- Saves time and cost in coordinating group work.
- Facilitates group problem-solving.
- New modes of communication: *anonymous interchanges or structured interactions.*

Computer Mediated Communication (CMC)

- *"Computer-Mediated Communication is a process of human communication via computers, involving people, situated in particular contexts, engaging in processes to shape media for a variety of purposes"* .
- CMC involves exchanges of information in textual, audio, and/or video formats that are transmitted and controlled by the use of computer and telecommunication technology.
- CMC is the basis of interpersonal interaction *via* groupware systems.

CMC related theories and phenomena

- Social presence theory
- Media richness theory
- Uses and gratifications theory
- Model of competence in CMC
- Impression management
- Hyperpersonal communication
- Behavioral disinhibition, flaming, aggression, inappropriate self-disclosure
- Risky CMC

Social presence theory and CMC

- *Social presence theory* (Short, Williams & Christie, 1976) states that different communication media enable different levels of experience of the social presence of other individuals who are engaged in communication.
- Media differ in relation to the quantity of different social cues or active nonverbal channels when social/interpersonal information is transmitted through a medium.
- *Face-to-face* (FtF) communication has the highest level of social presence and the level of social presence in *CMC* is considerably lower.

FtF versus CMC and social presence

- Auditory and visual channels are not activated in most CMC.
- There is much less immediacy in CMC because of its asynchronicity and lack of nonverbal cues.
- Reduced message feedback in CMC can lead to more uncertainty and misunderstanding.
- Communication exchange can be anonymous in CMC and with no information on body image.
- In CMC problematic behaviors are facilitated like disinhibition, flaming, aggression, etc.

Conclusion on social presence & CMC

- CMC is rated as less *effective* and less *appropriate* than FtF, telephone, and voice mail (Westmyer *et al.*, 1998).
- CMC can lead to:
 - *depersonalized* communication
 - more *business-like* interaction
 - a lower degree of *friendliness* and *emotional display*

Media richness theory and CMC

- *Media richness theory* (Daft & Lengel, 1986) stated that the transmission of *rich information* requires instantaneous feedback and a higher level of interactivity of a *rich medium*.
- FtF has greater "richness" than CMC because of *numerous channels* (verbal, audio, visual, tactile, etc.) and *immediate feedback*.
- Effectiveness in communication is related to the appropriate choice of a medium to deliver a *specific message*.
- CMC is better for *lean and task-related* messages, while FtF is better for *interpersonal, socially sensitive, and complex messages*.

Impression management and CMC

- *Impression management (IM)* is related to the *tactics* people use to *present themselves* and create favorable impressions on others in a certain *social context* (Wallace, 1999).
- *Asynchronous and text-only* communication in most CMC interactions place less importance on *interpersonal skills* and *physical appearance*
- Implications of *IM* for collaboration via CMC:
 - potential increase in work related effectiveness in case of different gender, age, and ethnicity
 - improved IM can create *greater interpersonal satisfaction* and *mutual attraction* in interaction

Hyperpersonal communication and CMC

- *Hyperpersonal communication* (Walther, 1996) denotes communication that *appears more desirable than what we tend to experience in analogue FtF interactions.*
- Hyperpersonal communication in CMC is characterized by *strong involvement, intense relationships, high commonality and closeness.*
- Causes of hyperpersonal communication:
 - idealized perception of message producer(s)
 - optimized self-presentation
 - minimal nonverbal cues that allow positive feedback loop(s) and intensification in interaction

Uses and gratification theory and CMC

- *Uses and gratification theories (U&G) of media use (Blumer & Katz, 1974; Rosengren et al., 1985) try to explain the choice of consumers / users for use of a *specific medium* when other communication media are also available.*
- *U&G theories assume that *people use a given media to satisfy certain needs or desires.**
- *Media differ in the way they can satisfy certain needs and reward their use.*
- *According to Flanagin & Metzger (2001), FtF is most often rated first for the potential to fulfill communication needs, but CMC/Internet/Web is always rated 1st-4th.*

Conclusion on U&G theory and CMC

- Those who *frequently communicate* or engage in *important information exchanges* tend to combine the use of diverse media (Haythornthwaite *et al.*, 1998).
- The *choice of media use* in collaborative work should be made on the basis of utility, group or organizational standards, acceptance of a medium by those that have to use it, and the importance of the message(s) to be conveyed.
- CMC should be only one *opportune media choice* and to ensure *greater gratification* of CMC adequate training and experience is needed

Problematic behaviors in CMC

- Causes of problematic behaviors in CMC:
 - *less self-control* because of the *lower amount of social/interpersonal information*
 - *no immediate nonverbal feedback* in CMC regarding (a) the *emotional impact* of interpersonal messages on *other* people, or (b) the *social evaluation* of one's behavior on the Internet
- Types of interpersonal problematic behaviors in CMC: *behavioral disinhibition, flaming, verbal aggression, and inappropriate self-disclosure.*
- Potential negative influence on collaboration

Risky CMC

- CMC often enables "*Big Brother*" and "*Peeping Tom*" types of privacy violation.
- A substantial percentage of Internet users engage in potentially embarrassing CMC by visiting pornographic sites on the Web, violating copyright by use of the Internet, and through inappropriate self-disclosure in discussion groups, e-mail messages etc.
- Witmer (1998) has found that about 50% of Internet user considered this medium to be *private*, while about 35% considered it *public or extremely public*. However, about 58% of the Internet users *considered privacy unimportant*.

Conclusion on risky CMC and collaboration

- Avoiding risky CMC is an important element of *competent use* of the Internet for collaboration.
- Efforts invested in *impression management* in the workplace, gaining *credibility* and *authority*, or manifesting *competence* and *professionalism* could all be *put to jeopardy* by risky CMC.
- Work results are also at jeopardy since risky behavior on the Internet also involves *neglecting security risks* related to confidential information, passwords, and computer viruses.

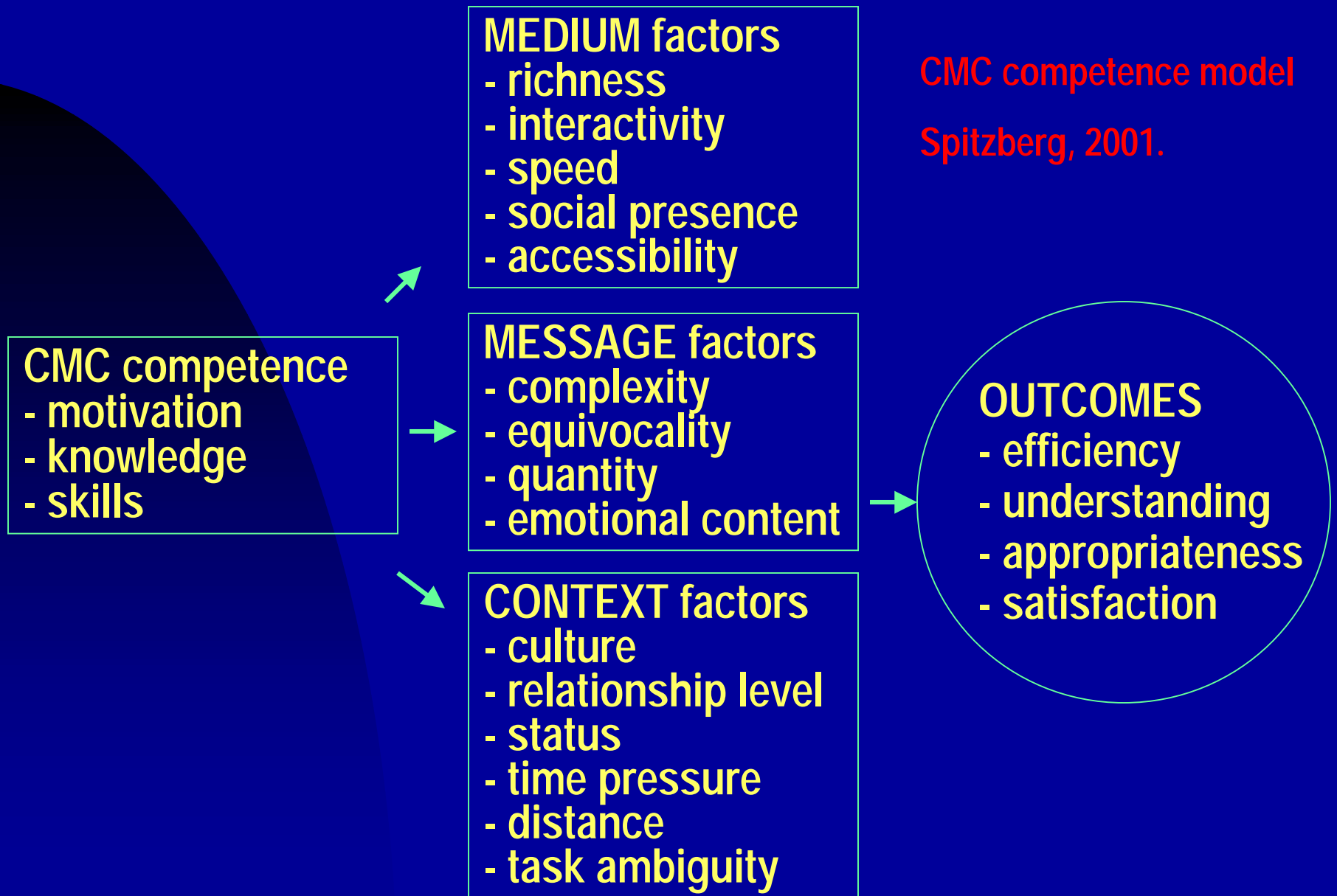
A model of competence in CMC

- Most CMC theories describe, and very few prescribe how to be *more competent* in CMC.
- Spitzberg (2001) has developed the *Model of Mediated Communication Competence* that can be utilized for such purpose.
- Competence in CMC includes motivation for medium use, knowledge of the medium and interaction conventions/rules, and skills that must be utilized for achieving desired outcomes.
- The most important competence related skills in CMC are *attentiveness, interaction management, expressiveness, and composure*.

Skills related to competence in CMC

- Attentiveness is the ability to show interest in and concern for the interaction partner(s), which is difficult in CMC (lack of nonverbal cues).
- Interaction management is related to the ability to control the time and relevance of communication, attract interest, and succeed in regulating the pattern of interaction in a preferred way.
- Expressiveness refers to the ability to animate the message, fill it with emotion, and make it lifelike or vivacious.
- Composure is the ability to display confidence, mastery, and comfortableness in use of a medium.

CMC competence model
Spitzberg, 2001.



Interaction of competence factors in CMC

- The *factors of personal CMC competence* interact with attributes of the *medium, message, and context* to create *outcomes* that can be assessed on the basis of *effectiveness, appropriateness, understanding, and satisfaction*.
- For each of the elements of this model, those who engage in CMC can assess their level of competence, as well as the requirements of their professional and private environments for self-improvement in CMC.
- The Spitzberg (2001) model of CMC competence can be used for increase of media sensitivity and training of those who collaborate via the Internet.

CONCLUSION

- Knowledge of CMC theories and phenomena is important for collaboration via the Internet.
- The Internet is only one of the media that should be utilized for effective collaboration.
- Still, to paraphrase Walther (1997), certain social conditions and technology can lead people from different places, who have never and will never see each other, to communicate more affection, to like each other more, to think they look better, and to work harder in CMC than by working together face-to-face.