

Trust in Global Virtual Communities

Qiping Zhang
Long Island University

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Introduction

- Name: pounce as chee-ping (Qiping)
- Current research projects:
 - Video-mediated communication
 - Social software in virtual community
 - Knowledge sharing

Introduction

- Challenges to virtual teams:
 - “possibly the single biggest factor that global teams need to address is culture differences,” (Olson & Olson, 2000)
 - however, CSCW as a field has spent little time examining relationships between culture, media, group processes and outcome measures

Introduction

- Fussell's work
 - There are cultural differences on amount of talk in FTF vs. IM, and audio vs. video conferencing.
- Our work
 - Are there any cultural differences on *trust* perception in different communication media and tasks
- Together:
 - We would like to help overcome the Western bias in CSCW research and raise several sets of research issues

Outline of My Talk

- Are there any cultural differences on
 - trust perception in different communication media and tasks (study 1)
 - trust in blog by revealing different personal information (study 2)

Study 1: trust in CMC

- Research Problem
 - How *culture* and communication *medium* interact in different *tasks* to influence trust perception and performance?

Hypothesis of media effects

- Will video reduce *performance time* for people from different cultures compared to IM?
 - H1a: video < IM
 - H1b: Chinese (high context) > American (low context)
- Will video increase people's *trust perception* compared to IM?
 - H2: video > IM

Hypothesis of culture effects

- How does media (video vs. IM) interplay with culture on trust perception?
 - H3a: China > US (video)
 - H3b: China = US (IM)

Hypothesis of task effects

- How does media (video vs. IM) interplay with tasks on trust perception?
 - H4a: video > IM (negotiation task)
 - H4b: video = IM (brainstorming task)

Method

- Design:
 - 2x2x2 between subject design with culture (US vs. China), media (video vs. IM), task (negotiation vs. brainstorming)
- Participants
 - 40 pairs of Chinese (CC) and 40 pairs of American (AA) undergraduate students. Participants in each pair didn't know each other beforehand.
- Tasks
 - brainstorming task (Hymes & Olson, 1992)
 - negotiation task (Zhang, 2002)

Method

- Procedure:

- one of the following condition:

- Video - Brainstorming
 - Video - Negotiation
 - IM - Brainstorming
 - IM - Negotiation

- After the task, complete the 8-item trust post-questionnaire adapted from McAllister (1995)

- 1-7 Likert-scale
 - 1:strongly disagree; 7: strongly agree

Method

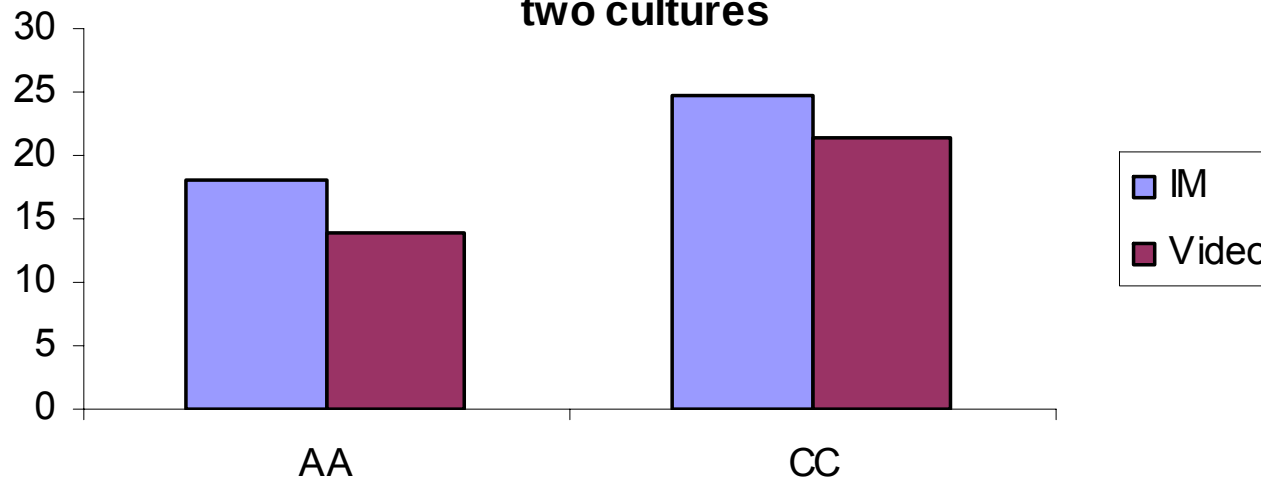
- **Measures:**

- Trust perception by questionnaire
- Performance time
- communication process by activity coding (in process)

Results – Performance time

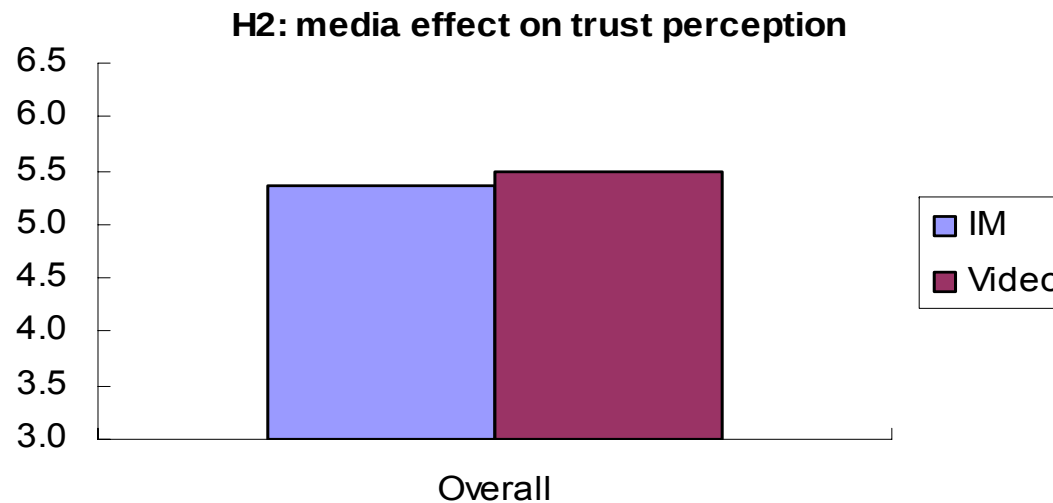
- H1 was confirmed
 - Video did reduce participants performance time compared to IM ($F(1,54)=6.29, p<.015$).
 - It indeed took CC pairs longer time than AA pairs in performing tasks ($F(1,54)=42.01, p<.001$).

H1: media effect on performance time (minutes) in two cultures



Results – Trust perception

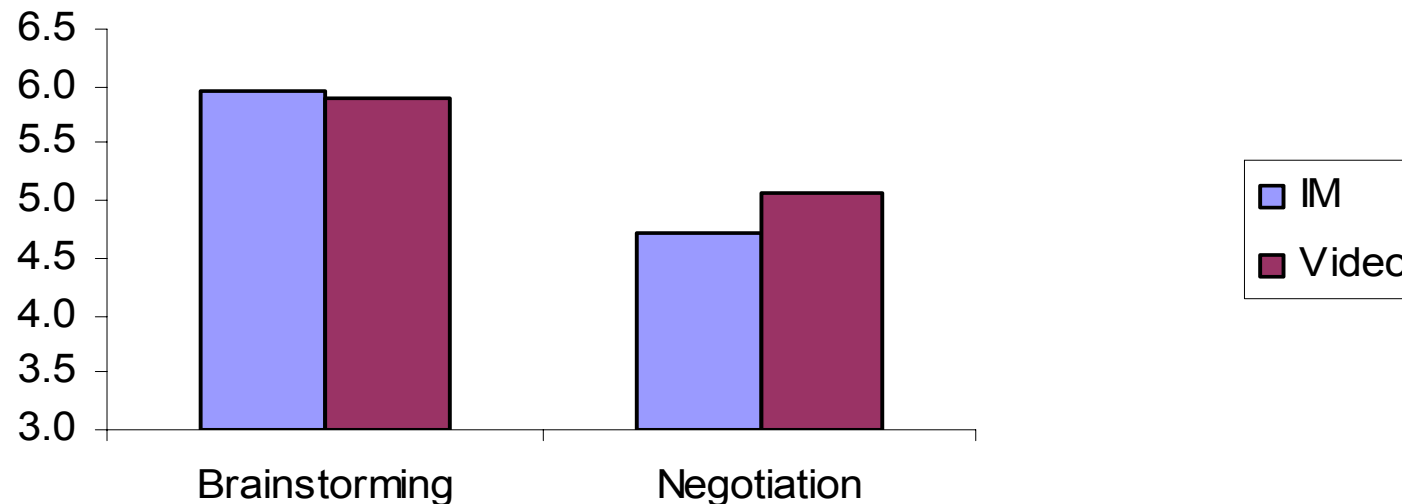
- H2 was not supported
 - Overall, no media effect on trust perception ($F(1,54)=1.31$, $p<.26$). Participants didn't achieve a higher level of trust in video than in IM.



Results – Interaction of media x task

- H4 was supported ($F(1, 70)=3.65, p<.06$)
 - video > IM (negotiation)
 - video = IM (brainstorming)
 - brainstorming > negotiation ($F(1,70)=88.78, p<.00$)

H4: interaction of media and task on trust perception



Media effect on trust perception

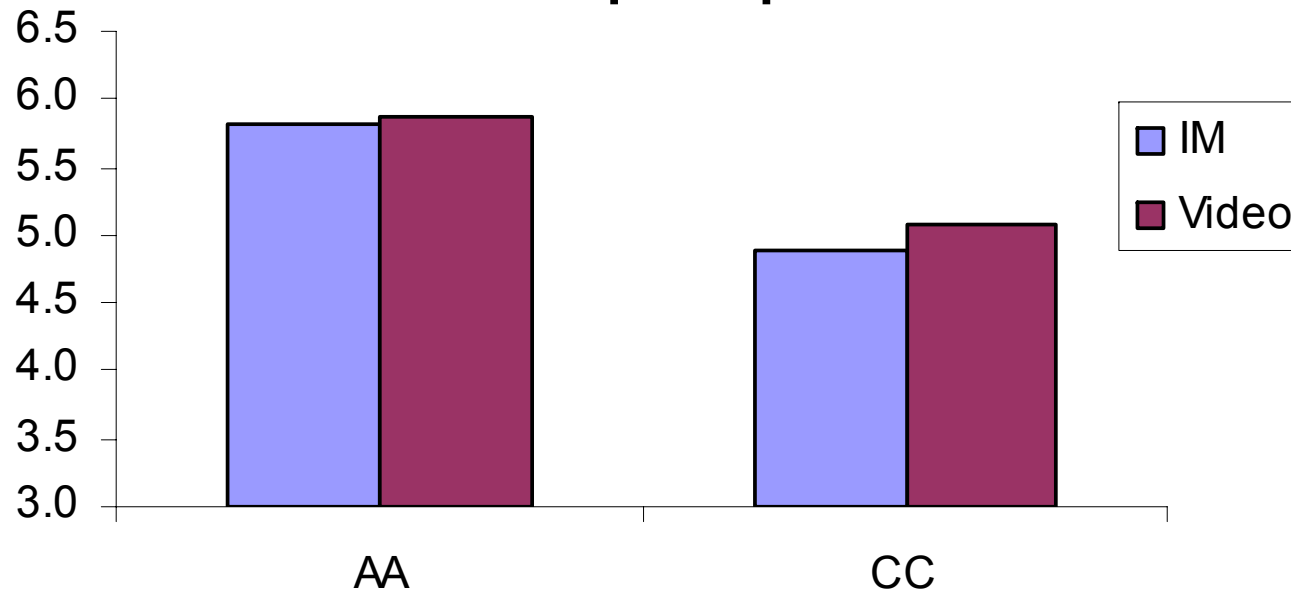
- H2 was not supported
 - Our data showed that video does not increase people's trust perception as always
 - only when the task involve conflict of interest by nature e.g. negotiation task, video will help.
 - In brainstorming task when conflict does not exist, video does not help trust perception much
- H4 was supported

negotiation	video > IM
brainstorming	video = IM

Results – Interaction of media x culture

- AA > CC in both IM and video.

H3: interaction of media and culture on trust perception



Culture effect on trust perception

- H3:

- The results contradicted with our hypothesis (CC>AA).
- The theory of nationality trust and social distance provide a possible explanation.
 - AA pairs seemed more willing to treat each other as a temporary in-group member instead of a “real stranger”
 - CC pairs seemed treating the partner as an out-group relationship due to lack of long-term relationship

Conclusion

- When no prior personal relationship existed (strangers)
 - Trust: American pairs (low-context culture) > Chinese pairs (high-context culture).
 - Time: American pairs < Chinese pairs
- Video does not increase people's trust perception as always
 - only when the task involve conflict of interest by nature, video will help
- Participants perceived higher level of trust in brainstorming than in negotiation task

Future work

- Current study:
 - Analyzing communication process data
 - Collect data for mixed American-Chinese pairs
- Future study:
 - Extend our cultural groups to other
 - high-context cultures: Thailand, Korea, Japan
 - low-context cultures: German, France, Italy
 - mixed culture: India
 - Extend the study from empirical setting to field setting and collaborate with industry partners

Implications

- Providing a media rich channel like video vs. IM to virtual teams with no previous interpersonal relationships may engender high level of trust and thus improve their performance especially when they deal with tasks involving conflicts of interest
- Be cautious to treat performance time measure when dealing with cross-cultural collaboration.
 - Longer performance time does not necessarily mean a bad thing.
 - For people from a high context culture, it is important to offer them such extra time to build up the relationship and personal trust.
 - In the long term, it will contribute to better group performance.

Study 2: trust in blog

- Research problem:
 - We define *online trust* in the context of blog as blogger's willingness to reveal self-reported personal information in user profiles
 - more personal information revealed, more online trust expressed towards the virtual community
 - We are interested in whether bloggers from different cultures reveal similar personal information
 - national culture effect (culture-specific) vs. virtual community effect (culture-universal)

Hypothesis

- Related work:
 - the U.S. being a high trust culture and China and Korea being low trust cultures (Fukuyama, 1995; Park, & Wiedenbeck, 2005)
- Our hypothesis:
 - bloggers from the U.S. reveal more personal information in the self-reported user profiles than bloggers from China and Korea.

Method

- Three popular blog sites chosen in three different cultures;
 - U.S.: blogger.com
 - China: blogcn.com
 - Korea: blog.naver.com
- Cross-cultural comparison of
 - Cultural characteristics of site **interface**
 - Available **fields** in blogger **user profile** (baseline)
 - Sampled user profile (**content**)
 - 4 popular topic categories: hobby, entertainment, philosophy, and technology
 - 40 profiles from each culture

Cultural Interface Comparison

	U.S.	China	Korea
Culture Context	Low Context	High Context	High Context
Individualism	● current news ● log-in feature	● current news ● log-in feature ● collective activities	● current news ● log-in feature ● collective activities
Power-Distance	-	-	-
Uncertainty Avoidance	● no scrolling ● limited choices ● search feature	● redundant info ● search feature	● redundant info - search feature
Long-Term Orientation	● Links to friends	● community info ● links to friends	● community info ● links to friends

Park, & Wiedenbeck's Framework (2005)

Interface of US Site



Low context

Individualistic

Individual actions: recent news, quick cash, log-in

Lack of browsing

High uncertainty avoidance

Shallow hierarchies

Structured info

Interface of Korea Site



High context

Collectivistic

Browsing

Collective activities

High uncertainty avoidance

deep hierarchies

structured info

redundant info

Interface of Chinese Site



High context

Collectivistic

Browsing

Collective activities

High uncertainty avoidance

deep hierarchies

structured info

redundant info

Summary of interface comparison

- Culture-specific characteristics:
 - US: (low context)
 - Simple design: limited info & choices, no scrolling
 - Korean and Chinese: (high context)
 - Deep hierarchy, redundant info, search + browsing
 - Chinese site exhibits the most number of links, features, and information.
- Culture-universal virtual community characteristics:
 - willingness to share personal information
 - links to other bloggers
 - step-by-step instruction on how to create a blog
 - Privacy policy

Comparison of user profile fields

- Number of fields:
 - US: 19, Korea: 10, China: 11
- Culture-universal fields (8):
 - title of the blog, nickname, gender, age, self-photos, location, hobby, link to other blogs
- Culture-specific fields:
 - Korea (2): real names, personality
 - China & US (3): contact info, blogging since, introduction
 - US (8): astrological sign, zodiac year, industry, occupation, favorite movie, favorite music, favorite book, interest.

Summary of profile field comparison

- U.S. site provides more fields in the user profile than Korea and Chinese sites
- U.S. site provides more opportunity for bloggers to reveal their personal info

Comparison of sampled user profiles for culture-universal fields

- No cultural difference in fields of:
 - title of the blog, links to others, nickname
- Chi-square tests reveal in the field of:
 - Gender: $\chi^2(2)=19.00$, $p<.01$
 - US: 82.5%; Korea: 62.5%; China: 35%
 - Age: $\chi^2(2)=18.81$, $p<.01$
 - US: 37.5%; Korea: 17.5%; China: 0
 - Location: $\chi^2(2)=41.88$, $p<.01$
 - US: 67.5%; Korea: 52.5%; China: 0
 - hobby: $\chi^2(2)=30.08$, $p<.01$
 - US: 52.5%; Korea: 72.5%; China: 12.5%
 - Self-photo: $\chi^2(2)=8.07$, $p<.02$
 - US: 37.5%; Korea: 37.5%; China: 12.5%

Summary of content comparison

- Among the eight culture-universal fields in a user profile
 - Overall, the percentage of the U.S. and Korean bloggers who reveal their personal information is significantly higher than that of Chinese
 - Comparison of American and Korea data:
 - American > Korea: gender, age
 - American = Korea: location, hobby, self-pictures.
 - other factors might influences online trust:
 - economic development, democratic institutions, education, postmaterialist values (Inglehart, 1999).

Next step

- Larger sample
- Multidimensional approach
 - content analysis, interviews, and user profile analysis
 - Longitudinal content analysis: how online trust evolves over time

Conclusion

- Our preliminary research results indicate
 - American bloggers reveal more personal information than Korean and Chinese
 - However, Korea bloggers show more cultural similarities to Americans than Chinese
 - Further research is necessary to investigate the evolving culture in the context of blogs and online trust.