

Linguistics and the Development of Community in Computer Mediated Conversation

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Online communities

- ◆ In face-to-face (F2F) communication, the communicative function of the spoken interactions is clarified through supporting verbal and nonverbal discourse devices.
- ◆ In CMC, the mediating channel may not be able to carry all those devices.

Online communities

- ◆ How does language function to construct a community where face-to-face cues are unavailable?
- ◆ How does language index changes in individual membership within a community over time?

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Online communities



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What is a community?

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What is a community?

What is an online community?

Community

“A community is a cohesive group to which people have a clear consciousness of who belongs ”

(Bell and Newby 1974)

Online Community

Communities are “cultural aggregations that emerge when enough people bump into each other often enough in cyber space (Reingold 1994: 7).”

“Online communities are neither built nor do they just emerge. They evolve organically and change over time. Developers cannot control online community development but they can influence it (Preece 2000: 24).”

OC's: Are they of interest?

Targeted symposia/conferences include:

- ◆ SigCHI (2002) “What’s SigCHI’s Role in Strengthening Communities?”
- ◆ CSCW (2004) ‘Communities’
- ◆ ICCT (2004) Communities and Technologies
- ◆ HICCS (2005) Online conversation & community
- ◆ Community Next (2007) The present and future of online communities
- ◆ Virtual Communities Forum (2001-present) [online symposia]

To whom?

HCI and CSCW researchers, e.g.:

- ◆ Communities of Practice (Turkle 1995, Wenger 1999)
- ◆ Youth leadership & intercultural communities (Cassell & Taversky 2005, Cassell et al 2006)
- ◆ Health & well-being (Davidson et al 2000, McArthur et al 2006)
- ◆ Developers/designers (Erickson 2005, 2007, Kellogg et al 2006, Preece 2000)
- ◆ Dialog system developers (Allen et al. 2001, Traum et al. 2006)

CMC and Language

◆ Communications between people in:

- online education (Bruckman 1999, Haythornthwaite 2002)
- online health (Hiltz 1989, Maloney-Kritchmar & Preece 2004)
- the workplace (Sproul & Keisler 1991, Sudweek & Simoff 2005)
- shared interest groups (Crystal 2005, Cherny 1999, Paolillo 2002, Rheingold 1998, Werry 1996)
- close relationships (Baym 2005)

The studies

Kelly & Halverson (submitted JCMC) [Pt 1]

Kelly & Halverson (2003) [Pt 2!]

The Current Study: Pt 1

- ◆ RQ1: Are online interactions like F2F communications or written communications?

CMC and Written Language

- ◆ Punctuation

- ◆ Sentence-initial capitalization

- ◆ Greetings offset from body of text

CMC & Face-to-face Language

- ◆ Prosodic marking
- ◆ Grammatical marking
- ◆ Social information marking

CMC & Face-to-face Language

◆ Prosodic marking, e.g.:

- Voice quality, e.g. <YELLING>
- Emphasis, e.g. <*so* happy> <**so** sad>
- Pause/in-breath marking <...>


CMC & Face-to-face Language

◆ Grammatical marking, e.g.:

- Subject omission, e.g.
<∅ really sux>, <∅ hate days like this>
- Subject+copula omission, e.g.
<∅ ∅ outa here>, <∅ ∅ cold today in DK> □

CMC & Face-to-face Language

- ◆ Social Information marking, e.g.:
 - Emoticons <happy ☺, sad ☹ >
 - Acronyms <LOL, ROTFL, afk, g2g, ttyl>
 - Hedges, e.g. <might, just, think, only>
 - 1st plural in task oriented dialogue
 - Apologies & clarifications with some frequency

- 
- ◆ Users can choose to make their interactions more like canonical spoken or written language
 - ◆ Participants use colloquial language features (CLFs) when emulating casual conversation
 - ◆ In general, CMC communications more closely resemble spoken than written language

Online Community

- ◆ Determining what constitutes an online community is problematic.
- ◆ Most claims rely on subjective assessments, either of the researchers or of the participants.

Establishing Community

Social Network Analysis - the study of social relationships between a set of interactants

- ◆ used to characterize a group and the influence of each of its members.
- ◆ relations between the variety and / or frequency of contacts among members of a group.

The Current Study: Pt 2

- ◆ RQ1: Does individual language use differ across different online communities?
- ◆ RQ2: How can we confirm the classification of a discourse community online?

Method: D8a

- ◆ on-line conversations 6 months from three online message boards in a large multi-national organization.
- ◆ message board choices were based on topic, number of participants, and the average length of posts & messages.

Method: Subjects

- ◆ 6 participants who regularly posted to at least two of the three online boards.
- ◆ Participants were:
 - 2 females: WK, TW
 - 4 males: TE, TS, MS, NC

Method: Linguistic Coding

◆ Colloquial Language features (CLF)

- Voice quality, e.g. <EXCITED>
- Emphasis, e.g. <*great* job>
- Emoticons, e.g. < }: - (, :-o >
- Pause, e.g. <...>
- Subject/sub+cop omission <back now>
- Acronyms, e.g. <IMHO, cul8r>

Method: Social Coding

◆ Social Network Analysis (Wellman 1999)

- Who do you recognize from the list?
- Who do you know from the list?

Results: Social Coding

| | BUILDING | LEAPING | KNOWING |
|------|----------|---------|---------|
| REG | 29 | 25 | 26 |
| CORE | 7 | 6 | 8 |

Table 1. # of core and regular participants

Cross-group core members

| | BUILDING | LEAPING | KNOWING |
|----|----------|---------|---------|
| WK | * | | * |
| TW | * | * | |
| TE | * | * | |
| MS | * | | * |
| TS | * | | * |
| NC | * | | * |

Social networks

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Results: CLF across groups

BUILDING

LEAPING

KNOWING

MS

TW

MS

TS

TE

CR

VC, KK

BE

CR, CB

PA, TW

WK

WK

TS

BU, NC, BS

NC, TE

RQ again...

- ◆ RQ1: Does individual language use differ across different online communities?

Results: CLF & SNA

| BUILDING | LEARNING | KNOWING |
|----------|----------|---------|
|----------|----------|---------|

MS(81%)

TW

MS(79%)

TS

TE

CR

VC, KK

BE

PA

CR, CB

TW

WK(39%)

WK(34%)

TS

BU, BS

NC(19%)

NC(14%)

TE

Results: CLF & SNA

Language use doesn't differ across online communities

BUT...

neither does the participant's relative place in the social network

Results: CLF & SNA

BUILDING

LEAPING

KNOWING

MS

TW (82%)

MS

TS (78%)

TE (61%)

CR

VC, KK

BE

PA

CR, CB

TW (38%)

WK

WK

TS (37%)

BU, BS

NC

NC

TE (33%)

Results: CLF & SNA

Language use does differ
AND...

the participant's relative place in the
social network also differs

Results: CLF across groups

BUILDING

MS (81%)

TS (78%)

PA

TW (38%)

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LEAPING

TW (82%)

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VC, KK

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Discussion

- participants in each message board system used CLF
- these suggest more casual, face to face-like interactions
- participants with the most frequent use of CLFs also have the most dense social networks.

Conclusion

- As with F2F interactions, individual language use differs across different online communities.
- SNA presents a promising approach for confirming the classification of online discourse communities via their linguistic behavior and their relationships.

Current & next steps...

- Looking at one participant (NC) over time - 6, 12, 18 months to determine individual movement over time (both synchronic and diachronic data)
- Looking at an online group who identify as a community using a different medium - BABBLE.

Triggers: platforms & software

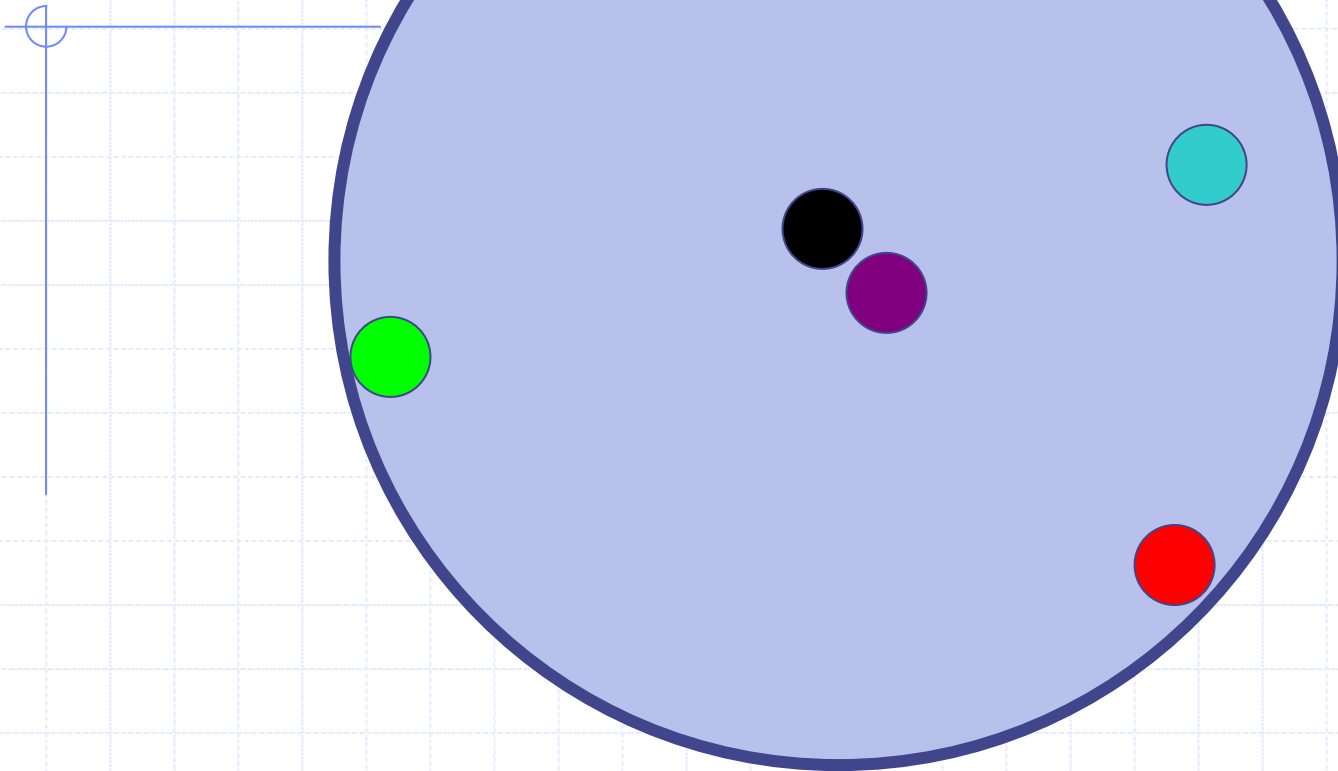
Judging online activity by what is seen in a single medium is likely to give a distorted picture (Brown et al 1999).

Small differences between platforms supporting online interaction can strongly influence social interaction.

E.g. personal information presented in pre-designed tabular format creates different perceptions from free-form descriptions (Preece 2004: 147).

BABBLE (Bradner 1999)

- ◆ messages are displayed to each user in the system.
- ◆ users engage in synchronous or asynchronous textual conversations.
- ◆ messages are persistent
- ◆ the system provides feedback regarding who has recently participated in a conversation.



BABBLE social proxy showing two active and three inactive participants

What about other OCs?

- Distributed network communities, e.g. Friendster, Dogster, MySpace, Facebook, Flickr, LinkedIn
- Distributed workplace communities, e.g. meetings, discussion, online chat
- Distributed MMORPG (competitive/collaborative) communities, e.g. WoW, StillLife, Everquest, Ultima

Difference triggers: Age - adult

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Difference triggers: Age - teen

<kanji>

How wr yr summa hols

<swich>

...my Ps wr so {:-/ BC o 9/11
tht they dcdd 2 stay in SCO &
spnd 2wks up N.

Up N, WUCIWUG -- 0. I ws vvv
brd in the MON. 0 bt baas &

~~~~~.

*(adapted from Lotherington 2004)*

# Linguistics, Community & CMC...

- ◆ Members of online communities make up for non-F2F support through their language use
- ◆ They exhibit linguistic behaviours that identify the presence of community offline
- ◆ They adopt and move toward the language norms of interaction of the group
- ◆ In doing so, they work toward *building* and *maintaining* their online community



thnx 4 havin me...

CU L8er!