Establishing and Extending Real Space Blends The Shared Use of Gesture Space in Multimodal Narratives

Kashmiri Stec (University of Groningen/Amsterdam Gesture Center) k.k.m.stec@rug.nl

ICLC-12 June 25, 2013



Pink: and the friend that I'm linked with gets put over there

Black: the friend

Outline

Background

Research questions

Corpus info.

Sharing spaces

Three examples

How Black shares space

Summary

Other Participants in the corpus

Conclusions

Background

- Language use is a kind of joint action (H. Clark, 1996; Garrod and Pickering, 2009)
- Physical coordination, such as gesture and eye-gaze, play crucial roles in shaping mental representations and communicating the contents of those representations (R. Clark, 2012)
 - Mental Spaces (Fauconnier, 1994) and Real Space Blends (Liddell, 2003; Dudis, 2004)
- Shared symbolic patterns enable the alignment, joint construction and navigation of conceptual models and actions (Fusaroli & Tylén, 2012; Galantucci et al, 2012)

Monday, July 1, 2013 4

Background

- Different aspects of communication are kept separate by means of gesture space and body orientation (Stec & Sweetser 2012, 2013)
- Gesturing style is affected by the status of information
 - New information vs. common ground can affect viewpoint (Wilkins & Holler, 2011)
 - Narrative function can affect gesture shape and location (Enfield et al., 2007)
 - Type of quote (reported speech vs. fictive interaction) can affect role shift style (Stec, 2012)
- People are sensitive to the locations to which referents are assigned, and expect those locations to be stable (Gunter, 2008 and Weinbrenner & Gunter, 2010)

Monday, July 1, 2013 5

Research Questions

- Are multimodal narratives co-constructed? If so, how?
- Is the use of shared/co-constructed gesture space different than individual space?
 - Which elements are stable?
 - Which elements are shared by participants?

Corpus

- Part of a larger American storytelling corpus, in which pairs of friends were asked to tell autobiographical stories to each other; semispontaneous
 - Around 30 minutes per pair; 10-15 minutes per speaker
- Participants: Pink (25) and Black (26) have known each other for a few years
- Focus: Black's contributions to Pink's stories



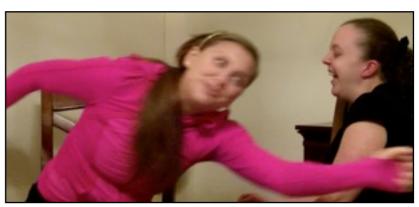




Method

- 15 clips from Pink's storytelling were identified as instances of shared/coconstructed space, and were further annotated for the following:
 - what is shared (gesture shape, real space blends, "sentiment")
 - what is co-constructed (real space blends, different aspects of the narrative)
 - possible functions of Black's contributions (continuation vs. commentary)

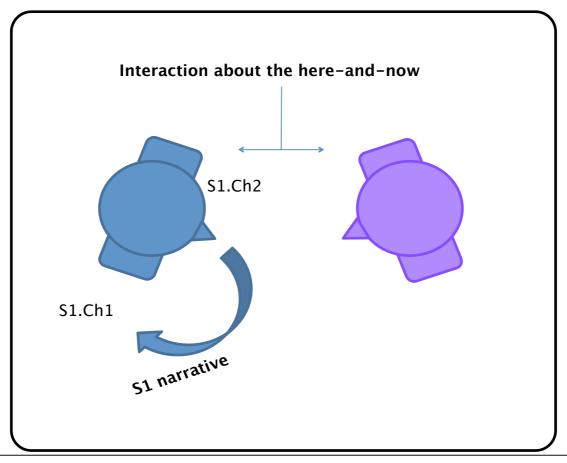






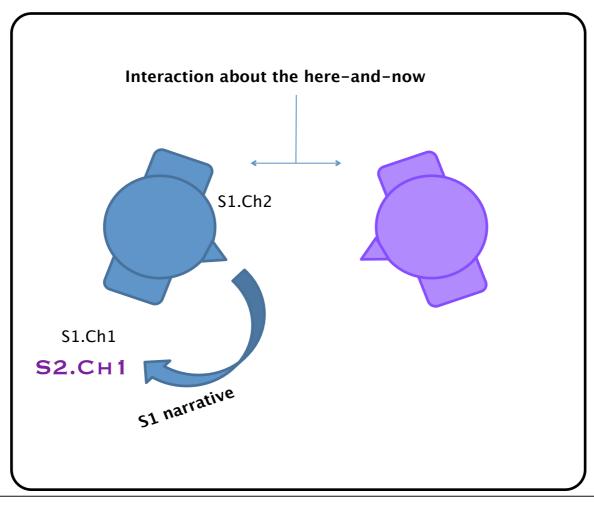
Individual Spaces

- Both Pink and Black consistently maintain separate communicative spaces (real space blends, cf. Liddell 2003) while telling stories
- These spaces are used to organize the location of characters, objects, physical spaces (e.g. a house or concert hall), etc. during the course of the narrative (cf. Stec, 2012), and also help keep track of different kinds of communication, e.g. the narrative itself vs. asides to their addressee (cf. Stec & Sweetser, 2012)



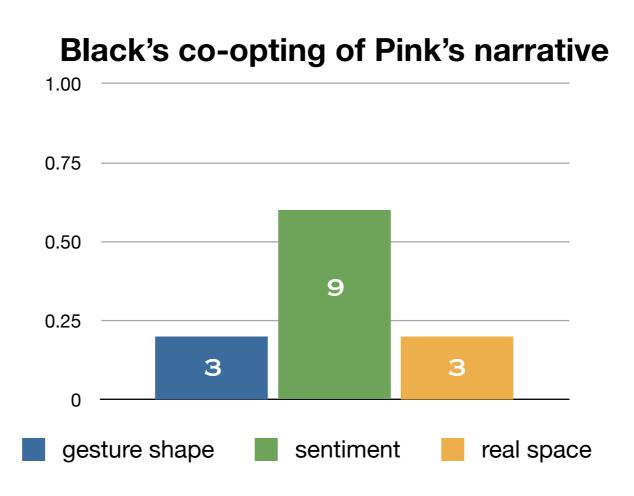
Shared Spaces

- Spatial overlap, such as when both Pink and Black use the center space between them to discuss the here-and-now (unsurprising)
- Spatial sharing, which relies on the stability of real space blends for both participants, especially with regards to landmarks/characters which have been associated with particular locations



Shared Structure

- Black shares Pink's narrative in 3 ways:
 - Gesture shape
 - "Sentiment"
 - Real Space blends



Shared gesture shape



Pink: no it was just

Black: what kind of voices can I hear now?

Pink: no it was just one not two

Black: aw what's all this then

Shared 'Sentiment'



Pink: which I love now but at the time was

Black: whatever

play the music

Pink: mm good

Shared Real Space Blends

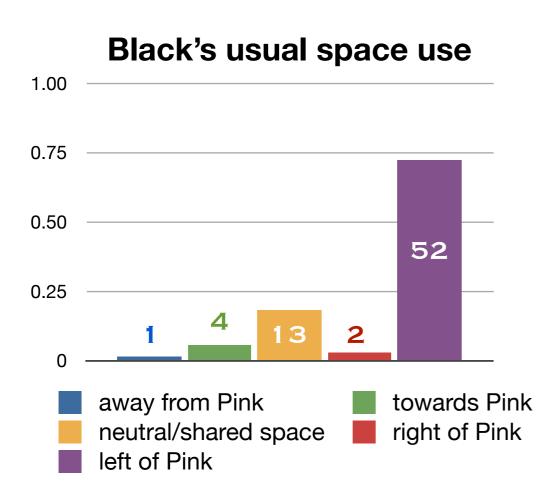


Pink: and the friend that I'm linked with gets put over there

Black: the friend

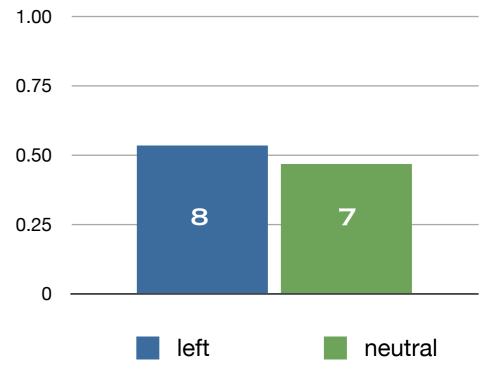
Shared Space: Space

 In her own stories, Black has a strong preference for a left orientation for role shift, and uses other spaces to a limited extent



 But when co-constructing Pink's narrative, she uses her usual role shift space (left) or the neutral space between herself and Pink equally often

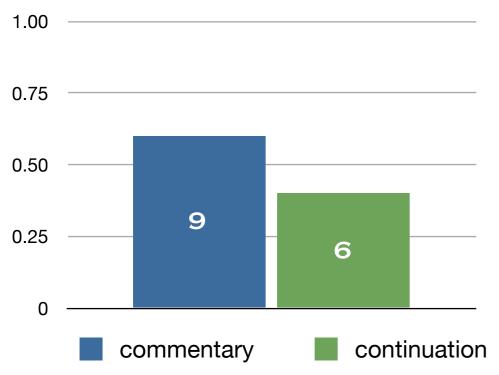
Black's space use when co-constructing



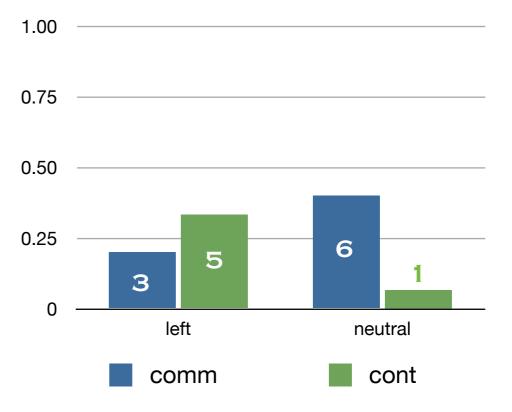
Shared Space: Function & Space

 Black either continues or comments on Pink's narrative Black's spatial orientation preference seems to depend on the function of her contribution

Function of Black's contributions



Black's orientation wrt function



Summary

- Black's collaborative listening style extends Pink's narrative via novel and elaborate use of Pink's real space blends
- Black's co-construction often only manifest multi-modally; speech alone often doesn't suggest that anything "relevant" is taking place
- The use of gestural space varies with regard to the function of the contribution; commentaries are presented directly to Pink on the speaker-addressee line while continuations happen in narrative space
- Real space blends are present and stable for both participants, especially when they involve "focused" entities, such as Pink's friend
- Real space blends (and therefore, real space referents) may be shared; form, orientation and location follow, per the blend

Collaborative Spaces

- Four other pairs in the corpus also demonstrate this kind of collaborative co-construction of narrative and physical space, but to a much lesser extent
- The listener's contributions have similar functions:
 - Extend the main storyteller's real space blends
 - Continue or comment on the main storyteller's narrative





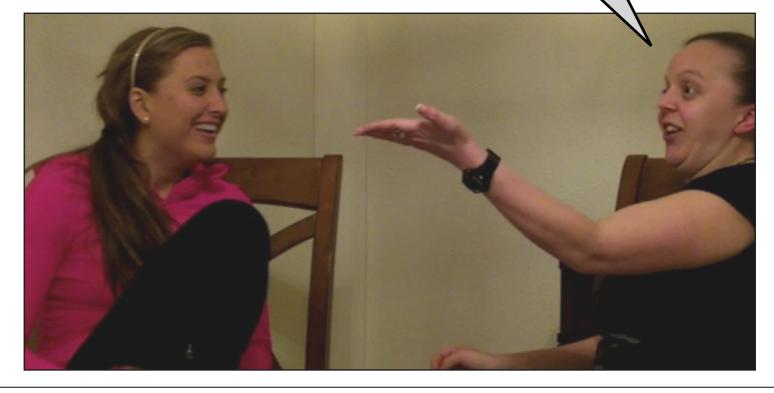
Discussion

- Narratives may be co-constructed multimodally, in which case participants make use of the same real space blends
- Real space blends, and the spatial organization of different landmarks and referents they entail, play both an organizational and creative role in discourse
- They are mutually accessible to the speaker and addressee, as well as stable across longer stretches of discourse (cf. Weinbrenner & Gunter, 2010)
- The use of physical space reflects the structure, function and kind of discourse, and is continuously updated and extended by the participants.

Thanks

- members of the Amsterdam Gesture Center & the Berkeley Gesture Project
- The Netherlands Organization for Scientific Research, for funding the *Vidi* project (awarded to Dr. Esther Pascual) on which I work
- Mike Huiskes and Gisela Redeker for helpful comments

Licensed by CreativeCommons3.0 (http://creativecommons.org/licenses/by-nc-nd/3.0/)



References

- Clark, Herbert H. (1996). Using Language. Cambridge University Press.
- Dudis, Paul (2004). Body partitioning and real-space blends. Cognitive Linguistics, 15(2), 223-238.
- Enfield, Nick J., Sotaro Kita, & Jan P. de Ruiter (2007). Primary and secondary pragmatic functions of pointing gestures. *Journal of Pragmatics*, 39, 1722-1741.
- Fusaroli, Riccardo & Kristian Tylén. 2012. "Carving language for social coordination". Interaction Studies, 13(1), 103-124.
- Galantucci, Bruno, Simon Garrod & Gareth Roberts. 2012. "Experimental semiotics". Language and Linguistics Compass 6(8), 477-493.
- Gunter, Thomas C., Weinbrenner, J. E. D., & Holle, H. (2008). What's the Point of Gestures? ERPs during Co-Speech Pointing in Abstract Space. Poster presented at The 15th Annual Meeting of the Cognitive Neuroscience Society (CNS), San Francisco, USA.
- Kendon, Adam K. 2004. Gesture: Visible action as utterance. Cambridge University Press.
- Liddell, Scott K. 2003. Grammar, gesture and meaning in American Sign Language. Cambridge University Press.
- McNeill, David. 1996. Hand and mind: What gestures reveal about thought. University of Chicago Press.
- **Pickering, Martin J. & Simon C. Garrod** (2009). "Prediction and embodiment in dialogue". European Journal of Social Psychology, 39, 1162-1168.
- **Stec, Kashmiri.** 2012. "Constantly shifting: How gesturing speakers use role shifted space". Presented at Conceptual Structure Discourse and Language, Vancouver Canada, May.
- **Stec, Kashmiri & Eve Sweetser.** 2012. "Significant breaks: Space and viewpoint transitions in gesture". Presented at *International Society for Gesture Studies 5*, Lund Sweden, July.
- Weinbrenner, J. E. D., & Gunter, Thomas C. (2010). An ERP study about abstract pointing in a verbally ambiguous situation. Poster presented at the 4th Conference of the International Society for Gesture Studies, European University Viadrina Frankfurt/Oder, Germany.
- Wilkin, Kate & Judith Holler. 2011. Speakers' use of 'action' and 'entity' gestures with definite and indefinite reference. In Gale Stam and Mika Ishino (Eds.), *Integrating gestures: The interdisciplinary nature of gesture* (pp. 293-308). Amsterdam & Philadelphia: John Benjamins Publishing company.