Dissertation: "Metaphors for Knowledge in Knowledge Intensive Groups – An Inductive Study of How and Which Metaphors Emerge in Conversations"

Linda Greve, Aarhus University, Denmark

1 Introduction

It is widely agreed that knowledge is important in current society (e. g. Andriessen 2008, Klein 1996, Qvortrup 2006), however it seems paradoxical to emphasize the importance of knowledge without defining the concept of knowledge. The research project presented in the dissertation is framed in the emerging field of organizational knowledge communication (Kastberg 2014).The research project presents an investigation of how the concept of knowledge is conceptualized in group-conversations and which concepts emerge, thus addressing the complexity and diversity of knowledge in knowledge intensive groups.

This presentation discusses the data collection method developed in the dissertation as well as the implications for analysis and understanding of the role of metaphors in conversation in general and knowledge metaphors specifically.

2 Theoretical framework and aim of the study

The fundamental assumptions guiding the dissertation are based in three different disciplines: metaphor research, cognitive studies and knowledge management studies. Combining these three perspectives allows for a whole new method to be developed.

Contemporary metaphor research owes a great deal to the pioneering metaphor research done by Lakoff and Johnson (1980, 1999), but has moved past conceptualizing metaphors as cognitive mappings of one concept upon another. Rather, metaphors in conversations are regarded as temporarily stable conceptualizations emerging in the conversation as a co-construction and evident in multiple modalities (Cameron et al. 2009, Jensen/Cuffari 2014).

Regarding metaphors as an emerging phenomenon rather than an expression of pre-existing patterns also points to a certain approach to group conversation and cognition. The dissertation takes the standpoint of distributed cognition (Hutchins 1995) viewing the groups as cognitive systems potentially co-constructing a shared concept.

Last but not least the dissertation has a vantage point in management studies, more specifically in knowledge management. Knowledge in this field has been divided into dichotomies of static/dynamic (Klein 1996) or object/personal (Andriessen 2008). Other dominating approaches to knowledge are a converging phenomenon (Nonaka 1994, Nonaka/Takeuchi 1995) or a hierarchical one (Rowley 2007). However, this approach to knowledge seems to emphasize that knowledge is a question of either/or rather than a combination of different aspects. Metaphors have also played a role in managerial studies (Cornelissen 2005, Greve 2016b). In this field, however, the approach to metaphor seems to be as a tool for understanding thought rather than metaphor as an approach to understanding co-creation.

To sum up, the dissertation addresses the question of "what is knowledge and how is a concept co-created in groups" by looking at how temporarily stable metaphoricities emerge

in groups. This emergence points to co-creation and which conceptualizations of knowledge emerge from this process. The research question guiding the projects was: How do groups conceptualize knowledge metaphorically? In order to answer this question with respect to the above-mentioned approaches to metaphor, group dynamics and conceptualization knowledge a new method was developed.

3 A new method for metaphor detection

The traditional methods for investigating metaphors in language and in conversation did not seem to meet the needs of the research question. Looking only at language and analyzing metaphors in transcripts proved — in pilot studies — not to be sufficient to properly enlighten the problem posed. Thus an alternative approach to data collection was developed and refined through further pilot studies. To move past pure conversational data and gesture data a third mode was introduced: the usage of LEGO bricks for co-constructing a concept for knowledge.

The data collection method was inspired by the approach to joint epistemic action put forward by Bjørndahl et al. (2014). They developed a method consisting of three consecutive building sessions using LEGO Serious Play-bricks. Each building task lasted for five minutes and the task was to build an abstract phenomenon such as trust or justice. The findings in their setup was, that groups approach the building tasks in one of three ways:

1) Illustration – one person in the group dominated the building process and the concept was decided prior to the building.
2) Elaboration – the concept is decided upon prior to building but is elaborated by the group in the building process.
3) Exploration – the concept emerges from the bricks and there is no concept prior to the building process.

Approaches 2 and 3 indicate the potential of a concept being co-created in a group (Greve 2015).

The sample consists of six companies. Each company participating in the study built three models: 'Dream office', 'Experience' and 'Knowledge'. In addition to letting each group build three models, a conversation of the concept of knowledge was facilitated after the bricks were put away. This design was chosen to see if the concepts emerging in the joint epistemic action task involving the LEGO bricks would travel into the following conversation. Each conversation lasted to approximately one hour and consisted of three consecutive building tasks (20 minutes) and a conversation (40 minutes). All conversations were video recorded.

The advantage of this approach to data collection is that the group is provided with an additional mode besides language and gesture and that it is more evident to what degree concepts are mainly present in one participant and in one mode. Other materials than LEGO bricks could have been used, but they were chosen due the large amount of research using LEGO (Bjørndahl et al. 2014, Frick et al. 2013, Heracleous/Jacobs 2008, Jacobs/Heracleous 2006).

4 Analyzing Multimodal Data: How a Concept Emerges

The data from the conversations were analyzed by looking at how metaphoricities emerge in different modes and across participants. This was done by coding for metaphors in language

and gesture the video data using Noldus Observer XT. From the coding different attractors of attention in the conversations emerged. In some conversations an abundance of attractors across modes and participants became evident. In others only very few and unimodal attractors emerged. The metaphorical attractors seem non-conventional and multimodal. In one of the cases a dominant attractor is "Knowledge is a Tower" (Greve 2016a).

The group consisted of five participants (p1–p5). The attractor is first introduced in the very beginning of the third building task (building 'knowledge'). The utterances are presented below (author's translation):

> Time frame: 11.08–11.14:
> P3: *Here I think we should we see how much we can build of the tower*
> [Referring back to a tower being built in the prior building task]
> P4: *Upwards?*
> P3: *Just upwards*
> P2: *Upwards, 100 %*
> [during the last three utterances all three participants make the same gesture: palms facing each other at table level approximately 30 cm apart and moving upwards and inwards, hands converging in an upwards motion]

Following this utterance the participants work together on building a tower, using almost all the bricks. Towards the end of the building task the tower is almost overturned. This triggers the following utterances:

> Time frame: 13.40–13.57
> P2: *Knowledge is not that fragile*
> [P2 stands up and tries to prevent the tower of bricks from overturning]
> P1: *Yes, knowledge is fragile*
> P2: *It is?*
> P3: *Yes it is. That is why the knowledge worker cannot be replaced as easily as everyone else*
> P1: *Knowledge also needs to develop … otherwise it becomes outdated.*

From this example it is evident that the building becomes a shared point of reference as well as a topic of negotiation. The fragility of the tower is transferred to the fragility of knowledge and P3 and P1 make arguments about it.

Towards the end of the conversation, when the bricks have been removed for more than 20 minutes, the gesture from the beginning is re-introduced and used as a topic of negotiation again.

> Time frame: 35.08–35.17
> P5: *… one was rather flat* [palms downwards and moving from the middle and outwards] *and the other was incredibly tall* [repeating the upwards gesture made by P2, P3 and P4 in the beginning]
> [Referring back to the model of experience being flat and the knowledge model being tall]
> P5: *Knowledge. That's because all these employees come* [holds left hand still in mid air in front of torso and pushes something upon the left hand with the right hand] *more employees come, we just build up* [repeats the gesture]

This example shows how a concept travels from mode to mode (from language to gesture to bricks and back to gesture and language) and from participant to participant (all five participants take part in the co-construction). Further, it shows how the shared concept is used to negotiate the nature of the concept in casu the fragility of knowledge.

5 Perspectives of Multimodal Analysis of Metaphors in Conversations

From the short example presented above as well as the data in the dissertation it is evident that metaphorical concepts are only shared and co-constructed when they travel from mode to mode and from participant to participant. Thus when investigating metaphors in conversations a focus on temporal stability is important. Only looking at language might not reveal the non-spoken metaphors and metaphoricities.

Returning to the question of metaphors for knowledge, it is concluded in the dissertation, that the concepts of knowledge co-created in groups cannot be categorized as one or the other of the dichotomies of static/dynamic or object/personal. Knowledge as a concept can hold both static elements like a foundation and dynamic elements like boundedness and network.

The concept of knowledge is complex and diverse in its metaphorical nature. When using and emphasizing knowledge in concepts like knowledge society, knowledge sharing, knowledge transfer, knowledge conversion etc., it becomes paramount not to reduce the concepts of knowledge but to embrace them all and use adequate strategies for the relevant conceptualizations. Knowledge transfer calls for meetings and emails whereas knowledge creation calls for joint epistemic action and co-creational strategies.

References

Andriessen, Daniel (2008): "Stuff or love? How metaphors direct our efforts to manage knowledge in organisations." *Knowledge Management Research and Practice* 6.1: 5–12.

Bjørndahl, Johannes/Fusaroli, Riccardo/Østergaard, Svend/Tylén, Kristian (2014): "Thinking together with material representations: Joint epistemic actions in creative problem solving." *Cognitive Semiotics* 71: 103–123. <http://doi.org/10.1515/cogsem-2014–0006>.

Cameron, Lynne/Deignan, Alice (2006): "The Emergence of Metaphor in Discourse." *Applied Linguistics* 27.4: 671–690. <http://doi.org/10.1093/applin/aml032>.

Cameron, Lynne J. (2007): "Patterns of metaphor use in reconciliation talk." *Discourse & Society* 18.2: 197–222. <http://doi.org/10.1177/0957926507073376>.

Cameron, Lynne/Maslen, Robert/Todd, Zazie/Maule, John/Stratton, Peter/Stanley, Neil (2009): "The Discourse Dynamics Approach to Metaphor and Metaphor-Led Discourse Analysis." *Metaphor and Symbol* 24.2: 63–89. <http://doi.org/10.1080/10926480902830821>.

Cornelissen, Joep P. (2005): "Beyond Compare: Metaphor in Organization Theory." *Academy of Management Review* 30.4: 751–764. <http://doi.org/10.5465/AMR.2005.18378876>.

Frick, Elisabeth/Tardini, Stefano/Cantoni, Lorenzo (2013): *White Paper on LEGO (R) SERIOUS PLAY – A state of the art of its applications in Europe*. Universitá della Svizzera italiana Lugani, Switzerland: European Commission.

Gibbs, Ray W. Jr./Cameron, Lynne (2008): "The social-cognitive dynamics of metaphor performance." *Cognitive Systems Research* 9.1–2, 64–75. <http://doi.org/10.1016/j.cogsys.2007.06.008>.

Greve, Linda (2015): "Knowledge Sharing is Knowledge Creation – An Intervention Study of Metaphors for Knowledge." *Journal of Organizational Knowledge Communication* 2.1: 66–80.

Greve, Linda (2016): "Using Metaphors as a Management Tool." *Handbook of Metaphor and Language*. Eds. Zsofia Demjen/Elena Semino. London/New York: Routledge (forthcoming).

Heracleous, Loizos/Jacobs, Claus D. (2008): "Crafting Strategy: The Role of Embodied Metaphors." *Long Range Planning* 41.3: 309–325. <http://doi.org/10.1016/j.lrp.2008.02.011>.

Hutchins, Edwin (1995): *Cognition in the wild*. Cambridge, Mass.: MIT Press.

Jacobs, Claus D./Heracleous, Loizos T. (2006): "Constructing Shared Understanding The Role of Embodied Metaphors in Organization Development." *The Journal of Applied Behavioral Science* 42.2: 207–226. <http://doi.org/10.1177/0021886305284895>.

Jensen, Thomas W./Cuffari, Elena (2014): "Doubleness in Experience: Toward a Distributed Enactive Approach to Metaphoricity." *Metaphor and Symbol* 29.4: 278–297. <http://doi.org/10.1080/10926488.2014.948798>.

Kastberg, Peter (2014): "Organizational Knowledge Communication – a Nascent 3rd Order Disciplinarity." *Journal of Organizational Knowledge Communication* 1.1: 83–97.

Klein, Julie T. (1996): *Crossing Boundaries: Knowledge, Disciplinarities, and Interdisciplinarities*. Charlottesville: University of Virginia Press.

Lakoff, George/Johnson, Mark (1980): *Metaphors we live by*. Chicago: The University of Chicago Press.

Lakoff, George/Johnson, Mark (1999): *Philosophy in the flesh: the embodied mind and its challenge to Western thought*. New York: Basic Books.

Nonaka, Ikujiro (1994): "A Dynamic Theory of Organizational Knowledge Creation." *Organization Science* 5.1: 14–37.

Nonaka, Ikijiro/Takeuchi, Hiro (1995): *The knowledge-creating company: how Japanese companies create the dynamics of innovation*. New York: Oxford University Press.

Qvortrup, Lars (2006): *Knowledge, Education and Learning*. Copenhagen: Samfundslitteratur.

Rowley, Jennifer (2007): "The wisdom hierarchy: representations of the DIKW hierarchy." *Journal of Information Science* 33.2: 163–180. <http://doi.org/10.1177/0165551506070706>.