

Methods in Dialectology XVII  
August 1-5, 2022, Mainz

*Exploring 21st century methods for analysing nonhuman embodied, interactional grammar*

This talk purports to describe a pathway for making (socio)linguistics transcend the assumptions of human exceptionalism and species hierarchy in order to try to understand interactions patterns of nonhuman animals (Patel-Grosz et al. 2020) while making use of the linguistic knowledge, tools and methods we have developed for human language (Cornips & van Koppen subm.).

We will address the question as to whether it is possible to gain a deeper understanding into the communication patterns of cows by applying linguistic insights to them (Cornips 2022). Our study, based on multi-species fieldwork (Kirksey & Heimreich 2010) in industrial barns, answers this question affirmatively. The first important result is that in conducting fieldwork the method of (participant) observation is considered an important tool (Seymour & Wolch 2009) for collecting empirical data. We will show that doing multi-species fieldwork among and with dairy cows reveals, however, that dairy cows take our seeing/looking/staring as gaze, i.e., as a signal to start an interaction (Auer 2018). This outcome should force (socio)linguists to reflect carefully on the concept of (participant) observation and query whether observation among and with humans is also interacting. Second, we will discuss how we apply insights from (socio)linguistics to our fieldwork data, i.e. numerous audio and video recordings of how cows interact with us, human linguists and the farmer(s). By applying (socio)linguistic tools to the interaction between humans and cows it will become possible for the first time to describe and analyse in detail how an interaction between a dairy cow and a human comes into being and proceeds; and what might be relevant in understanding the language of cows in more detail. We emphasize that language does not distinguish humans from other animals (Meijer 2019): the difference is one of degree, not of kind. In order to focus on commonalities, linguists should look beyond 'sound and sign' for a theory of world languages that also includes nonhuman animals (Suzuki & Zuberbühler 2019). Our exploration due to field work reveals that in addition to vocalizations, gaze, gestures, bodily movement and bodily position (Mondada 2016) are crucial as well.

What we will put forward in this talk is that nonhuman animals might have linguistic capacities like human animals, both characterized by bodies or objects in the conversational space via smelling/touching/tasting/movement etc. and eye-gazing. From the development of a theory of animal languages, repercussions for human language may emerge i.e. (i) new avenues to explore human language as involving multimodal (embodied) interaction, and (ii) new avenues to explore methods how to examine human-human interaction.

*References*

- Auer, Peter. 2018. Gaze, addressee selection and turn-taking in three-party interaction. Brône, Geert & Bert Oben (eds.). *Eye-tracking in interaction. Studies on the role of gaze in dialogue*. 197-230. Amsterdam: John Benjamins.
- Cornips, Leonie. 2019. The final frontier: non-human animals on the linguistic research agenda. Berns Janine and Elena Tribushinina (eds.) *Linguistic in the Netherlands, vol. 36, issue 1, Nov 2019*, 13-19. Amsterdam: John Benjamins.

- Cornips Leonie. 2022. The animal turn in postcolonial (socio)linguistics: the interspecies greeting of the dairy cow. *Journal of Postcolonial Linguistics* 6:210-232.
- Cornips, Leonie en Marjo van Koppen. Submitted. *Interactional embodied grammar in diary cows*.
- Cornips, Leonie, Marjo van Koppen, Sterre Leufkens, Kristin Melum Eide & Ronja van Zijverden. Subm. *A linguistic-pragmatic analysis of cat-induced deixis in cat-human interactions*.
- D’Mello, Sidney & Stan Franklin. 2011. A cognitive model’s view of animal cognition. *Current Zoology* 57:4.499-513.
- De Malsche, Fien and Leonie Cornips 2021. Examining Interspecies Interaction in Light of Discourse Analytic Theory: A Case Study on the Genre of Human-Goat Communication at a Petting Farm. *Language and Communication* 79: 53-70.
- Everaert, M & J. Bolhuis. 2013. *Birdsong, Speech, and Language: Exploring the Evolution of Mind and Brain*. Cambridge (Massachusetts): MIT Press.
- Fröhlich, Marlen, Paul Kuchenbuch, Gudrun Müller, Barbara Fruth, Takeshi Furuichi, Roman M. Wittig & Simone Pika. 2016. Unpeeling the layers of language: Bonobos and chimpanzees engage in cooperative turn-taking sequences. *Scientific Reports* 6:25887. DOI: 10.1038/srep/25887.
- Håkansson, Gisela and Jennie Westander 2013. *Communication in humans and other animals*. Amsterdam: John Benjamins.
- Hauser, Marc. D, Noam Chomsky and W. Tecumseh Fitch (2002). The faculty of language: What is it, who has it, and how did it evolve? *Science* 298(5598), 1569-1579.
- Jahns, Gerhard, Wojtek Kowalczyk, and K. Walter. 1997. Sound analysis to recognize different animals. *IFAC Proceedings Mathematical and Control Applications in Agriculture and Horticulture*. Hannover, Germany.
- Jahns, Gerhard. 2012 Computational intelligence to recognize animal vocalization and diagnose animal health status. In C. Moewes et al. (Eds.): *Computational Intelligence in Intelligent Data Analysis*, SCI 445, 239–249. Berlin Heidelberg: Springer-Verlag.
- Kirksey, S.E. and S. Heimreich. 2010. The emergence of multispecies research. *Cultural Anthropology* 25: 545-576.
- Kulick, D. 2017. Human-Animal communication. *Annual review of anthropology*. 46, 357–78.
- Marino, Lori and Kristin Allen 2017. The psychology of cows. *Animal Behavior and Cognition*, 4(4): 474-498.
- Meijer, Eva. 2019. *When animals speak. Toward an interspecies democracy*. New York: New York University Press.
- Mondada, L. 2016. Challenges of multimodality: Language and the body in social interaction. *Journal of Sociolinguistics* 20(3). 336-366.
- Padilla de la Torre, Mónica, Elodie F. Briefer, Tom Reader and Alan G. McElligott (2015). Acoustic analysis of cattle (*Bos taurus*) mother-offspring contact calls from a source-filter theory perspective. *Applied Animal Behaviour Science*, 163, 58-68.
- Patel-Grosz, Pritty, Salvador Mascarenhas, Emmanuel Chemla & Philippe Schlenker. Ms. “Super Linguistics: an Introduction.”
- Pennycook, Alastair 2018. *Posthumanist applied linguistics*. London/New York: Routledge.
- Sandler, W. 2018. The body as evidence for the nature of language. *Frontiers in Psychology. Language Sciences* <https://doi.org/10.3389/fpsyg.2018.01782>
- Schlenker, P., Chemla, E., Schel, A.M., Fuller, J., Gautier, J.P., Kuhn, J., Veselinovic, D., Arnold, K., Casar, C., & Keenan, S. 2016. Formal monkey linguistics: The debate. *Theor. Linguist.* 42, 173–201.

Seymour, Mona and Jennifer Wolch. 2009. "a little bird told me..." Approaching animal through qualitative methods. *The Sage Handbook of Qualitative Geography*. Ed. By Dydia DeLyser, Steve Herbert, Stuart Aitken, Mike Crang and Linda McDowell. Pp. 305-320

Suzuki, Toshitaka N. and Klaus Zuberbühler. 2019. Animal Syntax. In: *Current Biology Magazine* 29, 669-671.