Workshop

Spotlights on Linguistic Representations

Dates: September 30 and October 1st, 2024, 9:00–17:15
Location: Research Center Deutscher Sprachatlas (Pilgrimstein 16, Marburg, Germany)
Guest speakers (alphabetical order)**:** Sarah Faidt, Adele Goldberg, Stefan Hartmann, Sonja Kotz, David Poeppel, Yvonne Portele, Christoph Purschke, Stefan Rabanus, Laura Schiffl, Elena Smirnova, Philipp Striedl
Keynote: Adele Goldberg

Workshop programme

The workshop *Spotlights on Linguistic Representations* takes place on September 30, 2024 and October 1st, 2024 at the Research Center Deutscher Sprachatlas in Marburg, Germany. It is organized by the Research Training Group 2700 *Dynamics and stability of linguistic representations* funded by the German Research Foundation.

The aim of the workshop is to give an overview over the diversity of theoretical and methodological approaches to linguistic representations and to enable critical discussions of individual approaches during three specialized thematic sections: *Language and Environment*, *Cognition and Grammar*, and *Brain and Speech*.

Adele Goldberg will open the workshop with a Keynote speech. Both days will be dedicated to two thematic sections, with each section featuring two to three spotlight lectures/talks. As our workshop focuses on active discussion, spotlights are limited to 15 minutes, followed by 10 minutes of Q&A. In the subsequent collaborative sessions, participants are invited to explore possible approaches to the questions posed in the spotlights. At the end of both days, there will also be some time allocated for discussion in plenary sessions, allowing all participants to share concluding thoughts and to address open questions. We will conclude the workshop with a panel discussion that is aimed at synthesizing the insights gained from the spotlights and the collaborative work.

Throughout the duration of the workshop, the foyer will feature a display of selected posters showcasing works from the Research Training Group, providing an opportunity for a more informal exchange. Furthermore, all participants are cordially invited to join us for dinner on Monday evening as well as for a warming-up on Sunday, if desired.

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Schedule

Sunday (September 29, 2024)

18:30 Warming-Up (*Market*, address: Markt 1, 35037 Marburg)

Monday (September 30, 2024)

09:00–09:15 Welcome: Mathias Scharinger & Christina Kauschke

09:15–09:30 Introduction: Organization Committee

09:30–10:30 **Keynote: Adele Goldberg (Princeton)**

10:30–13:00 **Section: Language and Environment**

10:30–11:00 Spotlight 1: Christoph Purschke (Luxembourg, LUX)

11:00–11:30 *Coffee break*

11:30–12:00 Spotlight 2: Philipp Striedl (Zurich, CH)

12:00–13:00 Collaborative session (groups)

13:00–14:00 *Lunch break*

14:00–17:00 **Section: Cognition and Grammar I**

14:00–14:30 Spotlight 1: Stefan Hartmann (Dusseldorf, GER)

14:30–15:00 Spotlight 2: Adele Goldberg (Princeton, USA)

15:00–15:30 Spotlight 3: Sarah Faidt (Basel, CH)

15:30–16:00 *Coffee break*

16:00–17:00 Collaborative session (groups)

17:00–17:15 Concluding thoughts (plenary)

18:30 Dinner (Location t.b.a.)

During the breaks you will find further information about the RTG in the foyer. Posters will be on display there for you.

Tuesday (October 1, 2024)

09:00–12:00 **Section: Cognition and Grammar II**

09:00–09:30 Spotlight 1: Elena Smirnova (Neuchâtel, CH)

09:30–10:00 Spotlight 2: Stefan Rabanus (Verona, IT)

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10:00–10:30 Spotlight 3: Yvonne Portele (Frankfurt, GER)

10:30–11:00 *Coffee break*

11:00–12:00 Collaborative session (groups)

12:00–13:00 *Lunch break*

13:00–16:00 **Section: Brain and Speech**

13:00–13:30 Spotlight 1: Laura Schiffl (Munich, GER)

13:30–14:00 Spotlight 2: David Poeppel (New York, USA)

14:00–14:30 Spotlight 3: Sonja Kotz (Maastricht, NL)

14:30–15:00 *Coffee break*

15:00–16:00 Collaborative session (groups)

16:00–16:15 Concluding thoughts (plenary)

16:15–17:15 **Brain, Cognition and Environment: What now? (Panel discussion)**

During the breaks you will find further information about the RTG in the foyer. Posters will be on display there for you.

General framework

Assuming linguistic representations as an explanation for the specifically human ability to speak was prominently represented in the Chomsky paradigm (Chomsky 1957, 1967, 2005), following the assumption of mental representations within the computational theory of the mind. However, in the course of turning away from Chomsky's generativism towards a more functional theory of language, there has also been a change in the understanding of (linguistic) representations. Following Langacker (1987, 1991, 1999) and Lakoff (1987), we now also speak of representations in relation to concepts and schemata. However, this theoretical expansion has also led to a kind of Babylonian confusion of terminology, since the definition of the term *representation* is not only no longer assignable to any one paradigm, but has also become semantically diverse and, in consequence, somewhat vague. While Chomsky takes the view that representations are largely innate and can merely be activated by linguistic input, in the functional approach they are regarded as the results of acquisition processes. This connection between stability and dynamics is the starting point of our work. We ask ourselves the following questions:

> *Why and how do linguistic representations remain stable despite changes in the environment (referring to variation in linguistic input itself, as well as changing conditions of the world surrounding us), but prove to be flexible enough to allow alterations across a single conversation, a lifespan or several generations?*

From this question several more specific questions arise, which will be examined in three thematic sections with regard to the subject areas of *Cognition and Grammar*, *Brain and Speech,* and *Language and Environment*:

- How do the dynamics of linguistic representations take shape at the micro (e.g. in individual speakers) and macro levels (e.g. within groups of language users) and what are the conditions for the associated synchronous flexibility (e.g. usage variance) in specific situations?
- Which anthropological conditions exist for the construction and access to linguistic representations?
- How can the interactions between the mental representations of individual speakers and the shared language knowledge of a linguistic community be best described?
- How can different methodological approaches (theoretical as well as empirical) contribute to better understanding the tension between diachronic dynamics and change on the one hand and synchronic (relative) stability and flexibility on the other?

References

Chomsky, Noam (1957): Syntactic Structures. Den Haag: Mouton.

Chomsky, Noam (1967): Aspects of the Theory of Syntax. Cambridge, Mass.: MIT Press.

Chomsky, Noam (2005): Rules and Representations. Columbia: University Press.

Lakoff, George (1987): Women, Fire, and Dangerous Things: What Categories Reveal About the Mind. Chicago: University Press.

Langacker, Ronald W. (1987): Foundations of Cognitive Grammar. Vol. 1. Theoretical Prerequisites. Stanford University Press, Stanford.

Langacker, Ronald W. (1991): Foundations of Cognitive Grammar. Vol. 2. Descriptive Application. Stanford University Press, Stanford.

Langacker, Ronald W. (1999): Grammar and Conceptualization. Berlin/New York: Mouton de Gruyter.

Language and Environment

Guest speakers (in order of appearance)**:** Christoph Purschke, Philipp Striedl

Humans are not isolated organisms whose behavior is solely driven by stimuli and responses; rather, they are capable of (linguistic) actions, i.e., performing, refraining, interrupting, and discontinuing actions (cf. Schwemmer 1997, Tomasello 2022). Through their actions, humans refer to aspects of the environment, whether linguistic or non-linguistic (cf. Schmitz 2014). We can render this connection by assuming an impression-expression relation, where impressions represent aspects of the environment and expressions represent actions and behavior. There remains a black box between impressions and expressions, as actions are not consistently explicable through natural scientific operations. We can turn this black box into something clearer – or, at least, more graspable – by assuming the existence of mental (linguistic) representations (cf. e.g. Ramsey 2007, Rey 2020, Shea 2018), attributing to them a mediating role between environmental impressions and expressions via (linguistic) actions and behavior (Anderson & Rosenberg 2008, Croft 1998).

The section *Language and Environment* examines this connection and addresses the following questions, among others:

- What relevance do mental (linguistic) representations have for being human?
- How does a person establish connections to the lifeworld, and what role do mental (linguistic) representations play in this process?
- How should mental (linguistic) representations be structured to fulfill their mediating role between impressions and expressions?
- How do representations change under changing input or within changing representations (dynamics)? What aspects of representations are stable and for what reasons (stability)?

References

Anderson, Michael L. & Gregg Rosenberg (2008): Content and Action: The Guidance Theory of Representation. The Journal of Mind and Behavior 29 (1–2), 55–86.

Croft, William (1998): Linguistic evidence and mental representations. Cognitive Linguistics 9 (2), 151–173.

Ramsey, William M. (2007): Representation Reconsidered. Cambridge: University Press.

Rey, Georges (2020): Representation of language. Oxford: University Press.

Shea, Nicholas (2018): Representation in Cognitive Science. Oxford: University Press.

Schwemmer, Oswald (1997): Die kulturelle Existenz des Menschen. Berlin: Akademie.

Schmitz, Hermann (2014): Kurze Einführung in die Neue Phänomenologie. 4th edition. Munich: Karl Alber.

Tomasello, Michael (2022): The Evolution of Agency: Behavioral Organization from Lizards to Humans. Cambridge: MIT Press.

Cognition and Grammar

Guest speakers (in order of appearance): Stefan Hartmann, Adele Goldberg, Sarah Faidt, Elena Smirnova, Stefan Rabanus, Yvonne Portele

Recent years have seen a rise in works within the fields of Cognitive Semantics and Grammar which focus on the interplay between lifelong language usage of individual speakers and the dynamics of a linguistic community that drives the formation of representations of at least partly shared linguistic knowledge (cf. Gibbs/Steen 1997) as well as language change on the community level (among others, cf. Schmid 2015, 2017, Teich et al. 2021).

Talks and discussions in the section *Cognition and Grammar* could address the questions:

- How can different types of language change (and potential interdependencies) be characterized in a cognitively plausible way, ranging from the acquisition of first words and the development of grammatical patterns during childhood to internally and externally driven lexical semantic change and grammaticalization within a community?
- Can corpus-based/corpus-driven approaches to linguistic representations be considered cognitively realistic, and (assuming they can) which methods are suitable for testing

hypotheses empirically, e.g. in regard to the stability of representations at a certain point in time (in individual speakers)?

- What drives language change in a community and/or individual speakers, and which methods allow us to investigate relations between the variety of factors that facilitate innovation, conventionalization and entrenchment over the course the time and across generations (cf. Beckner et al. 2009, Raviv et al. 2020, Anthonissen 2020)?
- What can historical linguistics contribute to understanding language change driven by cultural (ex)change within and between linguistic communities?

References

Anthonissen, Lynn (2020): Cognition in construction grammar: Connecting individual and community grammars. Cognitive Linguistics 31 (2), 309–337.

Beckner, Clay, Richard Blythe, Joan Bybee, Morten H. Christiansen, William Croft, Nick C. Ellis, John Holland, Jinyun Ke, Diane Larsen-Freeman & Tom Schoenemann (2009): Language is a Complex Adaptive System: Position Paper. Language Learning 59: Supplement, 1–26.

Gibbs, Raymond W. & Gerard J. Steen (eds.) (1997): Metaphor in Cognitive Linguistics. Selected papers from the 5th International Cognitive Linguistics Conference, Amsterdam, 1997. Current Issues in Linguistic Theory 175. Amsterdam: John Benjamins.

Raviv, Limor, Antje Meyer & Shiri Lev-Ari (2020): The Role of Social Network Structure in the Emergence of Linguistic Structure. Cognitive Science 44: e12876.

Schmid, Hans-Jörg (2015): A blueprint of the Entrenchment-and-Conventionalization Model. Yearbook of the German Cognitive Linguistics Association 3, 3–25.

Schmid, Hans-Jörg (2017): A framework for understanding linguistic entrenchment and its psychological foundations. In: Hans-Jörg Schmid (ed.): Entrenchment and the Psychology of Language Learning. Language and the Human Lifespan (LHLS), Berlin: de Gruyter Mouton, 9–36.

Teich, Elke, Peter Fankhauser, Stefania Degaetano-Ortlieb & Yuri Bizzoni (2021): Less is More/More Diverse: On the Communicative Utility of Linguistic Conventionalization. Frontiers in Communication 5.

Brain and Speech

Guest speakers (in order of appearance)**:** Laura Schiffl, David Poeppel, Sonja Kotz

Acoustic signals have many forms and functions of varying complexity: They not only constitute the single "notes", i.e., segments, (Eulitz & Lahiri 2004) but also the entire "melody", i.e., prosody, of language. At the same time, they are not limited to language, but form an eternal "orchestra" of sounds which continuously surrounds us, the most aesthetic of which probably is music (Sammler 2018). The neural processing of these different levels of acoustic signals can be viewed from different angles: From the perspective of adult speakers, on the one hand, from the perspective of infants in the language acquisition phase (Holzgrefe-Lang et al. 2018), on the other hand, thereby including the perspective of language patients (Damico, Müller & Ball 2010). Hence, discussions within this section tackle the seeming paradox that reconciles dynamics and stability in linguistic representations, as they consider how linguistic representations may change across the lifespan and through speech impairment. Even at a single point in a speaker's lifetime, however, the brain can be exposed not only to an enormous *variety* but also with a considerable *variation* of acoustic signals, which it nevertheless processes in a stable manner (Bent & Holt 2017; Kraljic et al. 2020).

Reflecting these various facets of acoustic signals, spotlight presentations in the section *Brain and Speech* could address the following questions:

- What are the advantages and disadvantages of neurophysiological methods, such as EEG measures, for the investigation of linguistic representations compared to offline methods, such as behavioral experiments or corpus analyses?
- How does neurocognition change across the lifespan?
- How does the brain maintain a stable perception of an acoustic signal which continuously varies and occurs along various other acoustic signals?
- What are the similarities and differences in the processing of speech and music and which conclusions on linguistic representation can we draw from them?

References

Bent, Tessa & Rachel F. Holt (2017): Representation of speech variability. WIREs Cognitive Science, 8: 1–14. DOI: 10.1002/wcs.1434.

Damico, Jack S., Müller, Nicole & Martin J. Ball (eds.) (2010): The Handbook of Language and Speech Disorders. UK. Wiley-Blackwell. DOI:10.1002/9781444318975

Eulitz, Carsten & Aditi Lahiri (2004): Neurobiological evidence for abstract phonological representations in the mental lexicon during speech recognition. Journal of Cognitive Neuroscience 16, 577–583. DOI: 10.1162/089892904323057308.

Holzgrefe-Lang, Julia, Caroline Wellmann, Barbara Höhle & Isabell Wartenburger (2018): Infants' Processing of Prosodic Cues: Electrophysiological Evidence for Boundary Perception beyond Pause Detection. Language and Speech, 61(1): 153–169.

Kraljic, Tanja, Brennan, Susan E. & Arthur G. Samuel (2020): Accomodating variation: Dialects, Idiolects, and speech processing. Cognition, 107(1): 54–81. DOI: 10.1016/j.cognition.2007.07.013.

Sammler, Daniela (2018): The melodic mind: Neural bases of intonation in speech and music. (MPI Series in Human Cognitive and Brain Sciences, Vol. 195). Leipzig: Max Planck Institute for Human Cognitive and Brain Sciences.