

---

## Interactions of Figurative Language, Abstractness and Plausibility in Verb-Object Event Descriptions

---

Sabine Schulte im Walde

Universität Stuttgart

schulte@ims.uni-stuttgart.de

Across research disciplines, figurative language usage has long been viewed as strongly interacting with abstract concepts and contexts, cf. a cognitive perspective in Cognitive Metaphor Theory (Lakoff & Johnson, 1980), and a computational perspective in a range of distributional models such as Turney et al. (2011), Tsvetkov et al. (2014), and Köper & Schulte im Walde (2016), among many others. This interaction may be illustrated by the literal vs. figurative meanings of *abschminken* in *die Augen abschminken* ('remove eye makeup') vs. *die Karriere abschminken* ('forget about the career'), with the concrete word *Augen* ('eyes') in the literal phrase and the abstract word *Karriere* ('career') in the figurative phrase.

In the first part of my talk I will present a selection of studies where contextual occurrences indeed provide salient empirical features for these distributional computational models when automatically detecting figurative language usage, in contrast to models where this interaction is not successful (Piccirilli & Schulte im Walde, 2022). The second part of my talk will then shift the focus from contexts to targets, and present studies that zoom into the degrees of abstractness of individual verbs and their corresponding subject and object nouns. Regarding this target-specific perspective, I will discuss quantitative textual analyses (Frassinelli & Schulte im Walde, 2019), a dataset with plausibility and metaphoricity ratings of subject-verb-object events (Eichel & Schulte im Walde, 2023), and automatically generated images of events whose descriptions vary across degrees of abstractness and metaphoricity (Khaliq et al., Under review).

**References:** • Lakoff, G. & M. Johnson (1980). *Metaphors we live by*. University of Chicago Press. • Turney, P., Y. Neuman, D. Assaf & Y. Cohen (2011). Literal and metaphorical sense identification through concrete and abstract contexts. In *Proceedings of EMNLP*, 680–690. • Tsvetkov, Y., L. Boytsov, A. Gershman, E. Nyberg & C. Dyer (2014). Metaphor detection with cross-lingual model transfer. In *Proceedings of ACL*, 248–258. • Köper, M. & S. Schulte im Walde (2016). Distinguishing literal and non-literal usage of German particle verbs. In *Proceedings of NAACL*, 353–362. • Frassinelli, D. & S. Schulte im Walde (2019). Distributional interaction of concreteness and abstractness in verb-noun subcategorization. In *Proceedings of IWCS*. • Piccirilli, P. & S. Schulte im Walde (2022). What *drives* the use of metaphorical language? Negative insights from abstractness, affect, discourse coherence and contextualised word representations. In *Proceedings of \*SEM*, 229–310. • Eichel, A. & S. Schulte im Walde (2023). A dataset for physical and abstract plausibility and sources of disagreement. In *Proceedings of LAW*, 31–45. • Khaliq, M.A., D. Frassinelli & S. Schulte im Walde (Under Review). Comparison of image generation models for abstract and concrete events.