

Reconstructing construction networks from patterns in first language acquisition data

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Due to its prominent occurrence in languages of the world and relevance for the build-up and anchoring of mental representations in early childhood (cf. Lakoff & Johnson 1980, Mandler 2010), the study of the semantics of spatial referential expressions has received much attention within the field of Cognitive Linguistics. Surprisingly, implications arising from findings in children's speech for the development and description of relations within construction networks are rarely taken into account by publications grounded in cognitive construction grammar. Most usage-based models of construction networks tend to underspecify the influence of different cognitive processes that facilitate the build-up and development of linguistic knowledge, oftentimes relying on frequency as a quantitatively operationalizable criterion for measuring the entrenchment of a linguistic pattern – as has been criticized repeatedly (cf. Schmid 2010, Kasper 2022) – and its constructional status. The present research aims to bridge the underspecified gap between the early entrenchment of chunk-like and partially schematized constructions in the construction network of a child and its subsequent development into a highly branched web of constructions varying in schematicity, idiomacity, and productivity (cf. Ziem 2022, among others). Drawing on cognitive constructionist approaches (for an overview, see Goldberg 2013, Langacker 1999), I argue that the cognitive plausibility of a usage-based network model relies on the identification of network root nodes that are stored and schematized from the beginning of first language acquisition, e.g. the onset of entrenchment of linguistic units in early childhood.

This paper presents results from a corpus-study on early pattern-like usage of four positional verbs in children's speech on the basis of spoken language data (the LEO corpus, cf. Behrens 2006), addressing questions raised in previous studies on the acquisition of spatial referential expressions in German (Kutscher & Schultze-Berndt 2007, Bryant 2012, Madlener et al. 2017) that are considered to be of interest in regard to a cognitive plausible description of the semantics of positional verbs and the structuring of verb-specific construction networks. I combined a quantitative approach to identify syntactic patterns occurring in both the input and the child's utterances with qualitative analyses, drawing on metadata as well as overall caretaker-child interactions in order to reconstruct potential constructional meaning. A main objective of the study is to determine whether children acquire a single "core" meaning of a verb as a starting point (cf. Behrens 2003, Theakston et al. 2002, centered around the location of an entity) or different variants of meaning and their corresponding syntactic patterns (including semantically weakened patterns e.g. *X steht auf dem Kopf* 'X is positioned upside down') without necessarily mapping them onto each other (thus serving as initially independent root nodes with separate event-related constructional meaning). First results point to the early emergence of polysemous network structures that encompass partially schematic constructions with abstract constructional meaning (e.g. referring to the informational value of textual elements or correlations between abstract entities) and confirm the profound role of early acquired verb particles (in German) in marking differences in meaning (e.g. *abstehen* 'to stick out, stand off' or *festsitzen* 'to sit tight, to be stuck').

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