CONSTRUCTION GRAMMAR FOR APES

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Constructionist approaches describe language as a structured network of form-meaning pairings. These pairings vary in their degree of schematicity and prototypicality, ranging from lexical items to highly abstract syntactic patterns. Language acquisition is seen as based on general social and cognitive skills. Starting out from concrete, item-based constructions, children use these skills to extract and gradually abstract constructions from instances of actual language use (Tomasello 2006). Constructions are stored in a fine-grained taxonomic network, the so-called constructicon.

Constructionist approaches have been increasingly applied to language evolution research (e.g. Hurford 2012). In line with this growing research movement, we propose that constructionist approaches can prove useful in elucidating similarities and differences between human language and non-human primate communication systems. Specifically, we will discuss the question whether the nature of great ape gesture systems can be captured in terms of an inventory of (proto-)constructions – a proto-constructicon – and whether such a network is based on cognitive capacities homologous to the cognitive infrastructure underlying the acquisition, usage, and processing of constructions in humans.

Regarding the gesture systems of chimpanzees, Roberts et al. (2012: 586-587) note that they "have a multifaceted and complex repertoire of manual gestures, organised around prototypes, within which there is considerable variation." Schematization and prototypicality can therefore be seen as important foundational features both of great ape gesture systems and of the human constructicon. In a usage-based, constructionist approach, linguistic knowledge

is seen to consist in abstractions from exemplar representations of experience with concrete usage events in context that form radial prototype networks (cf. e.g. Croft 2001). Importantly, Roberts et al. (2012: 587) note that there are gestures that are "intermediate between the prototypical forms" and that are not structurally discrete but instead graded. Similarly, usage-based accounts of language acquisition assume that knowledge of linguistic constructions in young children is characterised by fuzzy boundaries and graded representations (e.g. Abbot-Smith, Lieven & Tomasello 2008).

Another important point of comparison concerns the role of pragmatics in human and non-human primate communication. In studies of the gesture systems of great apes it was found that they flexibly use multiple different gestures in the same context for the same goal. They also use single gestures in different contexts with different goals (Liebal et al. 2014: 155). As Genty & Zuberbühler (2015) note, "several gestures appear to have several outcomes, suggesting that meaning resides more in the pragmatic context than in the morphological form of the signal," although there are also some iconic and deictic gestures. Human linguistic constructions, in contrast, possess more specific conceptual content. Still, the meaning side of human linguistic constructions is characterised by the properties of prototypicality and schematicity. As such the meaning of human linguistic constructions is underdetermined without pragmatic context and is only properly instantiated in actual language use in particular situations (cf. also Scott-Phillips 2015).

Despite the marked differences between human constructions and great ape gestures, we propose that the striking similarities both can be analysed in a shared theoretical format. As a data-driven and bottom-up approach to signaling systems, Construction Grammar seems like an appropriate heuristic tool for that purpose.

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