## Theories of grammaticalization in relation to embodied language: A commentary on the theme session 'Embodiment and grammaticalization'

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This talk provides a theoretical framework to pull together a number of threads in this theme session. Grammaticalization will be viewed within the cognitive linguistic (predated by Saussurean) theory of linguistic signs as conventionalized pairings of a phonological and a semantic pole, i.e., of expressive behaviors and conceptualizations. Embodiment in grammaticalization with spoken languages can thus be interpreted in terms of changes in articulation (form of expression) that correlate with adoption or transfer of grammatical meaning (function). Examples from the talks in this session will show how this plays out in similar and in different ways when considering sign languages and gesture with speech.

On the side of expression, the gestural view of spoken phonology (e.g., Bybee 2007) provides a fruitful model. Browman & Goldstein (1992) propose that assimilatory sound changes, such as those common in many forms of grammaticalization, result from articulatory gestures having decreased spatial and temporal magnitude and increased temporal overlap. These changes usually involve less exertion of effort by the producer. This kind of schematization of form can be found on different times scales in both sign languages and co-speech gesture (Kendon 1988; Klima & Bellugi 1979). However, whereas in sign languages this can lead to lexical and grammatical items with normative forms, in co-speech gesture the schematization can lead either to recognized forms in a given culture (recurrent gestures, e.g., Ladewig 2011) or to low-effort gestures with loose hand shapes and reduced movement — more likely to serve discourse-structuring functions (e.g., beats showing emphasis) than grammatical ones.

On the semantic side, the origin of many grammatical morphemes from those which had to do with basic human interaction with the environment is well known (Heine et al. 1991). Here we see similarities in both sign language and in co-speech gesture, e.g., the development of modal verbs in ASL from physical meanings (CAN developing from the sign STRONG [Wilcox & Wilcox 1995]) and the development of grammatical functions with certain gestures that have a basis in physical representation (e.g., the rotational 'cyclic' gesture [Ladewig 2011] which can refer to circular motion or can indicate the progressive aspect [Harrison 2009]). Grammaticalization often goes hand in hand with pragmatic strengthening (Traugott 1988), and many gestures that have been discussed as having pragmatic functions can be re-evaluated as involving grammaticalization to varying degrees.

The findings will be related to a model of any given language (spoken or signed) as a flexibly dynamic category which variably involves other modes of expression (Cienki 2012). In this centerperiphery model, spoken words/signs in their grammatical constructions form a center that communicators tend to gravitate towards for expression, with positions outside the center being held by other behaviors that can potentially be highlighted in different usage events. Communication involves a focus on a scope of relevant behaviors that can variably take in more or fewer semiotic systems as being relevant in different contexts. The model helps account for processes of language change, including grammaticalization, on different time scales.

## References

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