Researching multimodal constructions. Theoretical & empirical foundations II

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This talk aims at the extension of the theoretical and empirical foundations of research on multimodal syntactic constructions, asking in which way claims about 'multimodal constructions' may go beyond observations on the multimodal nature of constructional instantiations in face-to-face usage ('constructs'). We present a corpus study testing hypotheses created through a preceding pilot study on new data (Hampe et al., *in prep*.).

The pilot study had investigated 161 presentational uses of the *there*-construction in multimodal TV data from the Little Red Hen Lab (the 2015 recordings of *The View*) accessed through the NewsScape v4 corpus (Uhrig 2018). Of these, 136 tokens showed spontaneous co-speech gestures. The pilot was to develop a methodology for the quantitative analysis of multimodal data and to generate testable hypotheses, both theory- and data-driven, to be applied to a new and larger sample in a second/the main study. Data coding included vital dimensions of the verbal instantiations (presence of a LOCATIVE, POLARITY as well as ANIMACY and COMPLEXITY of the NP) as well as selected gestural features (PRESENCE, ONSET and degree of INDEXICALITY). The relatively high amount of divergence resulting from the independent coding done by all authors was resolved through extensive discussion intended to calibrate descriptive approaches as a preparation of the main study.

Due to the functionality of the *there*-cx, gestures of a high degree of indexicality were initially expected to dominate cx-related co-speech gesturing. Pilot results did not straightforwardly confirm this: At a mono-variate level of investigation of the gesture data, the frequencies of gestures of higher vs. lower degrees of indexicality did not significantly differ. In the absence of hypotheses about the relations between specific characteristics of the verbal plane of expression and those of co-speech gesturing, HCFAs (Gries 2018) of the entire dataset and of the gesture data only were employed to unearth any significant feature-level combinations. At a combinatorial level involving five of the six variables coded for the gesture data, the following feature-level combination occured significantly more frequent than expected (20 tokens, p = 0.03): Gestures of a high-mid level of INDEXICALITY and an early ONSET (during "there" or earlier) accompanying verbalisations of a positive POLARITY with an ANIMATE NP referent and CLAUSAL POSTMODIFICATION of N. Furthermore, the qualitative inspection of the examples with low degrees of indexicality revealed a recurrent, typically double-handed gesture visualizing a (referential?) area in central gesture space (hands vertical, palms facing center, fingers slightly bent and spread). Clearly, this schematic iconic gesture is also functionally related to the *there*-construction.

The hypotheses to be tested in the main study have emerged from these results. In particular, we expect the following gestural features to occur with a significantly higher frequency than others (including absence of gesture): (i) gestures with an early onset (during or before "there"), (ii) a set of gestures consisting of pointing gestures, presentational gestures and iconic gestures visualizing referential space (including combinations thereof), and (iii), within all gestures of low/no indexicality, gestures visualizing referential space.

To make sure that the set of usable tokens for the main study is both larger and more balanced, we not only retrieve a much larger random sample from a wider variety of TV formats, but also support the initial identification of usable data points by (i) an annotation tool developed for the rapid classification of multimodal data and (ii) the automatic detection of speakers and their hands with computer vision methods.

Selected references

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