
The Distribution of Iconic Co-speech Gestures, Information Structure and Prosody: A Corpus Study on Prominence Peak Alignment

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In this talk, we explore the impact of different degrees of prominence on the prosody-gesture alignment of iconic and non-referential gestures in spontaneous German speech. Iconic gestures show a semantic connection to speech, non-referential gestures support speech structurally. Both have been found to align with prosodic features (McNeill 1992, Im & Baumann 2020, Loehr 2012). Given that prosodic prominence varies as a function of information structure (IS, Baumann & Röhr 2015, Kügler & Calhoun 2020), we address the research question whether the alignment of prosody and gestures is sensitive to IS in German spontaneous speech.

Conducting a corpus analysis using the SaGA corpus (Lücking et al. 2010), we analysed 204 min of spontaneous speech dialogues. Gesture types were already annotated in the corpus; the annotation of gesture peaks, intonation, and IS (focus, givenness) was performed for this analysis. The occurrence of gestures in relation to pitch accents and IS categories was extracted. Out of 1.630 iconic and 775 non-referential gestures in the corpus, 53% of the iconic gestures and 39,5% of the non-referential gestures occurred on referents coded for IS. All gestures more frequently aligned with more prominent information status referents than less prominent referents. Regarding focus, iconic gestures occurred predominantly on unfocused constituents, while non-referential gestures rather occurred on focused referents. A negative correlation between co-speech gestures and pitch accents was found. The correlation of intonation and IS is influenced by both gesture types, such that their prominence correlation is more precise when a gesture is present.

While a general prosody-gesture link is assumed, the observation of iconic gestures occurring on more prominent information status but not focus referents calls for a distinct identification of the semantic and discourse functions of iconic gestures.

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