Prosodic and gestural marking of contrastive focus in Ikaan

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Contrastive focus, i.e. when a (part of an) utterance is contrasted with a proposition in the immediate preceding common ground (Krifka 2008: 251-252), is marked prosodically in stress languages like English and German (e.g. Baumann et al. 2006). Moreover, there is a temporal alignment between prominent syllables that carry contrastive stress and the target point (“apex”, McClave 1994) of hand gestures: In English, the apex of a pointing gesture is associated with the vowel of a focussed lexically stressed syllable (Rusiewicz 2010), in Dutch it correlates with the syllable onset (de Ruiter 1998), while in Catalan it co-occurs with the intonation peak (Esteve-Gibert & Prieto 2013). Whether and how contrastive focus is marked prosodically in tone languages without stress is still largely unexplored. Similarly, the association of hand gestures with contrastive focus has not yet been investigated for these languages.

This study explores prosodic and gestural marking of contrastive focus in Ikaan (iso639-3:kcf), a two-tone language without stress spoken in south-western Nigeria. The aims of the study are to

i. find out which prosodic features correlate with contrastive focus in Ikaan

ii. describe how gestures are aligned with these prosodic features

Three male Ikaan speakers were recorded doing a director matcher task. 74 utterances with contrastive focus (cf. Krifka 2008) were identified in the recordings. For 37 of the focussed items, a corresponding item in a similar tonal context was extracted as a baseline.

Using Praat, onset pitch, pitch range, duration, mean intensity and maximum intensity in focus and baseline conditions were measured. Results show that none of these prosodic markers are used systematically across speakers. There are, however, indications that one speaker uses a significantly narrower range and higher onset in focussed utterances compared to baselines. The prosodic results suggest that to indicate focus in the tone language Ikaan, prosodic markers are not used in a way similar to stress languages.

Using ELAN, hand gestures occurring during and 200ms before and after the focus and baseline item were coded for gesture type (beat, referential or deictic gesture) and gesture phase (preparation, expressive phase/stroke, hold and retraction). Comparing focus items to baseline items, there were no significant differences in the overall number of co-occurring gestures, the number of beat gestures, and the number of beat gestures in the vicinity of (120ms before and after) the highest high tone. The only difference we found was that there were more representational gestures in focus compared to baseline items. The gesture results indicate a difference in information content of each utterance type, with focus utterances being richer compared to baseline utterances, which is reflected in the use of content-rich gestures.

These divergent patterns from findings for stress languages in prosody and prosody-gesture alignment might be related to Ikaan being a tonal language, where speakers use other strategies for marking focus and, consequently, other targets for prosody-gesture alignment.
References