

Effects of contrastive focus on prosodic cues to clause boundaries Amy J. Schafer (U. of Hawaii) & Sun-Ah Jun (UCLA)

It's known that syntactic structure can be cued by prosody, and that focus can change the default prosodic structure in English. Therefore, varying a sentence's focal structure could affect prosodic indications of its syntactic structure. Contrastive focus can induce a stronger prosodic boundary at the right edge of a focused phrase in American English [2] as well as deprosodification (deaccentuation and dephrasing) of post-focus regions [3]. We examined the production and comprehension of early vs. late closure sentence pairs, as in (1), normed to have approximately equal early/late closure bias. The primary prosodic cue distinguishing such pairs is the relative strength of the prosodic boundaries surrounding the ambiguous NP (e.g., "the session" in (1)) [4, 5, 6]. If contrastive focus is located prior to this region, deprosodification could reduce the disambiguating prosodic boundary. If contrastive focus occurs on the ambiguous NP for early closure syntactic structures, the resultant strengthening of the right-edge boundary of the NP could create two boundaries of similar strength, again reducing the degree of prosodic disambiguation [1, 6].

We tested these predictions with speech collected in a reading task from untrained speakers of American English. Pairs like (1) were produced in three focal conditions: wide focus, contrastive focus on the subordinate clause subject ("subject focus"), and contrastive focus on the ambiguously attached NP. The resulting utterances were acoustically analyzed, then truncated just before the disambiguating syntactic information (e.g., "is"/"it's" in (1)) and presented to new subjects in a forced-choice continuation selection task.

The results indicate several effects. First, there was a significant main effect of syntactic phrase structure on prosody. Speakers produced distinct prosodic structures for the two syntactic structures, which listeners were able to use for correct categorization. Second, there was a significant effect of focus on prosodic phrasing. For example, durations in the clause-boundary region were shorter with subject focus (vs. wide focus), indicating the expected deprosodification. This resulted in a significant interaction of focus and syntax on categorization. Both types of contrastive focus lowered the percentage of correct categorizations for early but not late closure sentences. This interaction supports [4]'s finding that when unbiased early/late closure fragments are produced with ambiguous prosody, a late closure bias emerges. Overall the results suggest that prosodic disambiguation of syntax is significantly influenced by the focal structure of the sentence, and that therefore both phrase structure and focal structure are important factors in models of prosodic structure.

(1) If Joe starts the session [is/it's] horrible.

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