

Intonational Prominence: Production in dialogue, comprehension during visual search

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Recent psycholinguistic experiments have examined the effects of intonational prominence (pitch accent) as listeners understand dialogue in the context of a visual scene. Results from visual world eye-movement monitoring studies indicate that contrastive accents can be used predictively by listeners, allowing them to determine which of a set of available objects is about to be mentioned by the speaker. These effects can be shown to depend simultaneously on the availability and organization of information present in the visual scene, the preceding global linguistic context, and more localized information about pitch accent placement and type.

I will focus on a recent series of 'holiday tree' experiments studies from our lab. These include an unscripted dialogue production study used to model speakers' pitch accent use and several eye-movement monitoring experiments where participants followed instructions to choose ornaments from complex real-world object arrays, then using them to decorate a miniature tree. Results show immediate use of prominent (L+H*) pitch accents on the modifier in contrastive adjective-noun sequences (e.g. 'green ball... RED ball'), with a faster increase in looks to contrastive targets than that for H*. Results also show an intonational 'garden-path effect' due to the immediate integration of L+H* as contrast marking accent. These effects are robust over changes in the organization of the target object array. We argue for a view of spoken language processing where prominent pitch accents, in combination with information available from the visually present context and the structure of the task, restrict the set of available referents for an upcoming noun phrase in the listener's discourse representation and can be used immediately and predictively in referent resolution.