

Intonational Phrasing in Language Production and Comprehension

By

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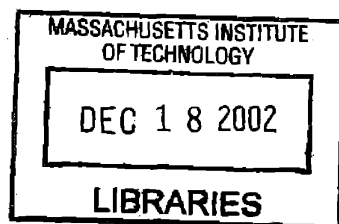
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A number of researchers have claimed that intonational phrases serve as the initial domain of syntactic analysis for the parser, and that this influences ambiguity resolution (Pynte & Priuer, 1996; Schafer, 1997; Speer, Kjelgaard, & Dobroth, 1996; Kjelgaard and Speer, 1999; Frazier & Clifton, 1998). Roughly, the claim is that words that occur within the same intonational phrase undergo syntactic analysis at the same stage of processing and words that occur in different intonational phrases are analyzed at different processing stages. Therefore constructing syntactic dependencies within an intonational phrase is less difficult than constructing dependencies between intonational phrases because the syntactic analysis in the former case involves words that are processed at roughly the same stage. Although these researchers state this hypothesis in different ways, the claims are essentially the same:

“In our view of the language processing system, a syllable-based prosodic representation maintains utterances in memory, providing an initial grouping structure for spoken language input.” Speer, Kjelgaard & Dobroth, 1996, p.251.

“Phonological phrases separate the input into domains of material. Attachments are made within a domain before they are made across domains.” Schafer, 1997, p. 48

“Visibility Hypothesis: In first analysis and reanalysis, attachment to a visible node is less costly in terms of processing/attentional resources than attachment to a less visible node. (i) Node X is more visible than node Y if X was postulated later than Y. (ii) Nodes within a *perceptually-given package* (e.g., intermediate phonological phrase) are more visible than nodes outside the package...” Frazier & Clifton, 1998, p.163. (emphasis added)

The above hypotheses are discussed in terms of domains of processing, but the claims boil down to the simplified hypothesis presented in (5).

(5) Disruption Hypothesis: The presence of an intervening intonational phrase boundary between two dependent heads results in an increase in processing difficulty.

This hypothesis simply states that sentences are more difficult to process when syntactic dependents do not occur within the same intonational phrase.

Evidence for the disruption hypothesis comes mainly from work on the influence of intonational phrases on ambiguity resolution. For example, (5) accounts for biases towards low attachment in globally ambiguous structures such as the one presented in (6) below:

