Speakers Use Prosody to Communicate the Intended Interpretation of an Ambiguous Discourse

Jason Kahn (UNC Chapel Hill), Jason Kahn, jmkahn@email.unc.edu
Joseph Tyler (University of Michigan), jctyler@umich.edu
Jennifer E. Arnold (UNC Chapel Hill), Jennifer, jarnold@email.unc.edu

Background: Speakers use prosody to distinguish between the meanings of ambiguous syntactic structures (Snedeker & Trueswell, 2004). Discourse also has a syntax-like structure (Asher & Lascarides 2003, Kehler 2002), which can be ambiguous. We sought to establish that prosodic variation coordinates systematically to manipulations in discourse structure (also see-den Ouden et al., 2009, for correlational data).

Procedure: Participants saw a three-sentence discourse with two potential interpretations, alongside a picture corresponding with each interpretation. After explaining how the discourse and pictures were related, they saw one or the other picture highlighted. They then read the three sentences aloud, verbatim, while trying to convey the highlighted interpretation.

Discourse Ambiguity 1 (2nd sentence subordinated)

Sentence 1
Pause 1
Sentence 2
Pause 2
Sentence 3

Discourse Ambiguity 2 (2nd & 3rd sentences subordinated)

I drove to Maryland.
I went to the beach.
And I saw an old friend from college.

Conclusions:
• Speakers can, in these circumstances, produce the intended meaning of an ambiguous discourse with distinctive prosody.
• Specifically, they use pause duration, speaking rate, intensity and pitch to signal whether new material elaborates upon earlier material or denotes a subordinate relation.

Theoretical Contributions:
1. Extends our understanding of the interface of prosody and linguistic structure to the level of discourse by demonstrating that prosody can be used to disambiguate discourse structures, not just syntactic structures.
2. A step toward mapping out the psychological processes that underlie the production of coherent discourses, specifically how speakers map discourse relations to prosodic relations and vice versa.

Methodological Contributions:
1. Most discourse prosody research has explored large-scale correlations. This study manipulated discourse structural variation while keeping lexical and sentential content constant.
2. Bringing psychological methods to theoretical discourse research: a) Show whether speakers (and listeners?) actually use the relations specified by theory b) Allow for adjudication among theoretical claims

Questions for Future Research:
• Are listeners able to use the information in production to facilitate the disambiguation of the discourse?
• Would similar production patterns show up in a more natural context?

References: