

The Meaning of Intonational Structure

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ABSTRACT

The two papers in this symposium describe the relationship between intonation and two other types of linguistic structure. Research results implicate syntagmatic contrasts at both levels. For example, intonational phrasing often marks major syntactic constituents and the alternation between expanded and reduced phrasal pitch range demarcates larger discourse segments. Developing comparably good methods for studying the meaning of paradigmatic contrasts in local tone choice is the next major challenge in understanding intonation and processing.

1. SOME COMMON THEMES

Symposia at previous Congresses have reviewed the physical and formal constraints on the representation of intonational structure. The two papers in this symposium address the less well-studied question of how intonational structure constrains the representation of two other levels of linguistic structure. The first reviews the relationship between prosodic grouping and the syntactic parsing of sentences, and the second discusses the role of intonation in marking discourse structure. At both levels of processing, intonation serves to demarcate constituents and to signal the relationships among these constituents. The relative strengths of intonational juncture before two prepositional phrases can signal whether the second PP is adverbial or modifies the noun in the first PP. Similarly, the relative pitch ranges of successive intonational phrases can signal whether or not a new discourse segment has begun. Generalizing over this common function, we might say that one meaning of intonational structure is segmentation and grouping. The syntagmatic contrasts in the tune of a sequence of utterances that organize the component words into a coherent prosodic hierarchy also serve to mark syntactic constituents and discourse-level relationships. The papers also have in common that both describe new methods for studying these syntagmatic functions. For example, the first paper describes an ingenious game task that elicits spontaneous productions of targeted syntactic contrasts. The second paper reviews ways in which improved gaze-tracking technology is used to monitor the role of intonation in cuing information status in real time.

2. CONTRASTING TONES

With more space, this symposium would have included a third paper, on the function of paradigmatic contrast in local tone shape. The first paper describes much variability in the particular boundary pitch shapes that the game

participants chose when signaling the edges of syntactic constituents. Grouping is a well-established function of intonational phrasing, but characterizing the meanings of different boundary pitch shapes is more difficult. For example, the ToBI system transcribes the initial fall in the American English contour illustrated in Fig. 1 as %H L*, a complex of high initial boundary tone followed by a low pitch accent. How can we describe the meaning of this tone sequence in terms of processing the pragmatic relationship of the utterance to its discourse context? Also, Grice [1] shows that a similar pattern in southern British English is a unitary pitch accent, a H+L*. Can the two ways of falling onto an accent be differentiated in terms of their meanings? Previous research on questions such as these has relied on the careful accumulation of serendipitous observations [2] or on experiments using off-line felicity judgments [3]. Can some of the methods described in this symposium be adapted to these questions of paradigmatic function?

A: I've got a sticker with your name
on it if you say 'eyelashes'. C: You do?
A: Yep. You got to say it first though. C: Eyelashes.
A: Thank you. C: Can I see?
A: Okay, look at this. What's this? C: Let me see.

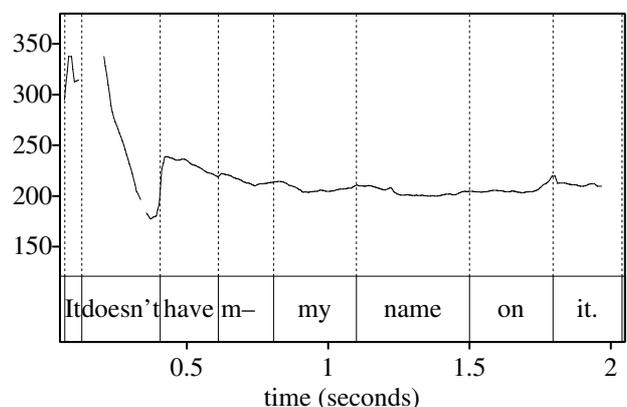


Figure 1. Extract of dialogue between adult experimenter (A) and child (C); F0 contour of C's subsequent utterance.

REFERENCES

- [1] M. Grice, "Leading tones and downstep in English," *Phonology*, vol. 12, pp. 183-233, 1995.
- [2] G. Ward and J. Hirschberg, "Implicating uncertainty," *Language*, vol. 62, pp. 747-776, 1985.
- [3] J. Caspers, "Experiments on the meaning of four types of single-accent intonation patterns in Dutch," *Language and Speech*, vol. 43, pp. 127-161, 2000.

