The role of prosody in the processing of prominence in contrastive structures

Christine T. Röhr, Martine Grice, Stefan Baumann &
Petra B. Schumacher
University of Cologne

christine.roehr; martine.grice; stefan.baumann; petra.schumacher}@uni-koeln.de

In Alternative Semantics (e.g. Rooth, 1992) the focused element is assumed to imply an abstract or concrete contrast between alternative interpretations that are available in the discourse context. In many languages this contrast is marked by means of pitch accents, while the background information often lacks an accent.

Furthermore, studies on German have shown that words in contrastive and narrow focus involve greater prosodic prominence in relation to words in non-contrastive and broad focus, respectively. These differences in prosodic prominence marking result from discrete and continuous F0 modifications of accent categories (e.g. Ritter & Grice, 2015; Grice et al., 2017).

However, the *perception* of prominence is not only determined by the auditory input, but may also be affected by expectations derived from language-specific interpretations of pragmatic and phonological context. The present paper is concerned with the role of intonation in building up expectations for subsequent material. Appropriateness and prominence rating tasks using a visual analogue scale and event-related brain potentials are employed to investigate expectation-based effects arising from prosody on the perception and processing of prominence in contrastive structures.

A set-up with two prosodically different pre-contexts for each of 60 test items was designed in which test sentences match or mismatch the prosodically induced expectation. A test sentence expressing surprise or contrast on the proper name (1b), for example, matches (1a) but not (2a). Listeners judged the appropriateness of the test sentences as well as the perceived prominence of each of their words. First experimental results indicate that prosodically induced expectations have a subtle effect on the perception and processing of contrast.

(1) (a) *Wir haben MiLEna getroffen.* (b) *Eigentlich wollten wir PEter treffen.*
          'We met Milena.   Actually, we wanted to meet Peter.'
(2) (a) *Wir haben Milena geTROFfen.* (b) *Eigentlich wollten wir sie ANrufen.*
          'We met Milena.   Actually, we wanted to call her.'

References: • Grice, M., S. Ritter, H. Niemann & T. B. Roettger. 2017. Integrating the discreteness and continuity of intonational categories. *Journal of Phonetics* 64. 90–107. • Ritter, S. & M. Grice. 2015. The role of tonal onglides in German nuclear pitch accents. *Language and Speech* 58(1). 114–128. • Rooth, M. 1992. A theory of focus interpretation. *Natural Language Semantics* 1. 75–116.