

HIGH RISE, LOW RISE: A PERCEPTUAL STUDY OF TUNE VARIATION IN AUSTRALIAN ENGLISH

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Presentation format: POSTER

Abstract

In recent years, there has been renewed interest in statement high rises or the “HRT” in Australian English and other English varieties (including New Zealand English, Canadian English and varieties of American English, and Southern British English). Part of this trend is due to the **diachronic** increase in the occurrence of the HRT in interactive discourse in these varieties (e.g. from .5% to 11-12% in connected discourse for Australian English reported in Fletcher and Loakes 2006). From another perspective, the wide-spread use of the ToBI (Tones and Break Indices) intonational framework (e.g. Beckman et al. 2005) for other English varieties has also led to a new wave of studies (re-investigating) the HRT in Australian English (e.g. Fletcher et al 2002, McGregor 2005). According to this model at least three kinds of simple rise can be transcribed: L* L-H% (low rise), L* H-H% (low rise, expanded range), H* H-H% (high rise), compared to two rises in traditional “British School” models of intonation (i.e. “low rise” “**high** rise”) that were previously applied to Australian English. Earlier work has shown there are clear phonetic differences between these three rises in terms of rise magnitude, and pitch key at the start of each rise. However it has been suggested by Ladd (2008) that the differences between L*H-H% and H*H-H% may not be categorical, i.e. they represent gradient phonetic effects in rise realisation.

What has been missing in the intonational work on Australian English of the past eight years is a perception study to see if listeners are indeed sensitive to these differences in rise span and pitch level of rise onset, particularly with regard to rise *interpretation*. In the experimental study reported here, a range of stimuli **using both a male and female voice** were constructed where:

- a) the pitch value of the nuclear accent was varied from low pitch (L*) to high pitch (H*) and,
 - b) the end point of the intonational phrase-final rise was also varied from mid-level (L-H%) to high (H-H%).
- Native Australian English speaking** subjects were required to listen to the stimuli and determine whether they heard a question or statement. The results showed that both rise magnitude and relative pitch level of the starting point of the rise influenced the number of question responses. Subjects were more likely to hear a question if the F0 values associated with the nuclear accented syllable (rise starting point) and rise endpoint (H%) values were relatively high, with fewer question responses when the rise onset started relatively low in the speakers’ pitch range. The least question responses were obtained when the rise was realised in a relatively narrow range starting from a low pitch onset. We interpret these results as evidence that the three rises, L* L-H%, L* H-H% and H* H-H%, are not interpreted identically by listeners in our experiment, supporting a categorical distinction between L* and H*.

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Keywords: Phonetics, Intonation, ToBI

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