In intonation, can we infer anything about directions of language change from patterns in the present?

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Like other aspects of language, intonation (the use of pitch, loudness, and duration to express utterance-level meaning (Ladd 2008)) is susceptible to change. In *segments*, we know that a sound change from [t] > [tf] (palatalisation) is much more natural and expected historically than the reverse ([tf] > [t]). But are there analogues of natural sound changes in *intonation* and how could we infer them?

To begin to tackle this issue, I focus on the **alignment** (timing) and **scaling** (relative height) of **H**(igh) target points of intonation contours. Some studies have shown differences in the behaviour of these **H** points with respect to their **alignment** and **scaling** (e.g. Arvaniti et al 2006). **Alignment** is known to be variable, for example, with **H** points often drifting rightwards as the number of following unstressed syllables after the main stress increases. By contrast, **scaling** of **H** points has been shown to be much more stable in such contexts. I explore the hypothesis that in terms of intonational change, we may be able to use intrinsic differences in the behaviour or **alignment** and **scaling** of **H** points to assess whether two intonation contours could have diverged from one underlying contour.

I apply this to the conundrum of final rises found on statements in Belfast English. Historically, these rises may have been final falls, like those found in Cambridge English, which have now become realised as rises (cf. Dalton & Ni Chasaide 2005). This could have happened through a continual rightward drift of the H point beyond the stressed syllable. Despite this, early results of the analysis do indeed show that the scaling of the H in Belfast rises in Cambridge falls (both within and across the two varieties) is very stable. The distributions are almost completely overlapping with minimal pitch variation. This suggests that in a Belfast final rise and a Cambridge final fall, the speaker has precisely located the H at about the same place within their individual vocal range. So although the alignment of the H has much changed, Belfast rises may retain a signal of connection to a fall with their scaling of H.

However, does variability/stability across prosodic contexts *in the present* entail being variable/stable *over time*? Answering this question represents the crux by which my hypothesis may stand or fall.

References

Arvaniti, A., D. R. Ladd, & I. Mennen. 2006. Phonetic effects of focus and "tonal crowding" in intonation: Evidence from Greek polar questions. *Speech Communication* 48, 667-96.

Dalton, M., & Ní Chasaide, A. (2005). Tonal alignment in Irish Dialects. *Language and Speech: Special issue on intonation in language varieties*, 48 (4), 441-464. Ladd, D.R. 2008. *Intonational Phonology*, 2nd edn. Cambridge: CUP.