On intonational variation in L1 and L2 speech

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The present study investigates intonational variation from a cross-linguistic perspective.

The subjects are L1 German speakers (16 males, 22 females) who had been evaluated as talented, average and poor in their pronunciation aptitude in the course of the DFG funded 'Language Talent and Brain Activity Project' (see Jilka et al. 2008 for a detailed description of the procedure). 12 native English speakers had been recorded as a control group.

The results demonstrate the frequency of distribution of various pitch contours in read and spontaneous speech samples, English and German, on both the phonological and phonetic levels. The former aspect was investigated within the general ToBI framework (Beckman & Elam 1997 – for English, Mayer 1995 – for German). At the labeling stage, both the English and the German inventories of pitch accents and boundary tones were equally considered for each individual token, in order to reflect the instances of the negative L1 transfer, as well as reveal the possible marginal variants in the native speaker productions. Further on, all syllables carrying ToBI pitch accents and/or boundary tones were analyzed using a parametric intonation model (Möhler 2001). On the phonological level, the rising contours, i.e. boundary tones and pitch accents, had a wider distribution in German as well as English productions of the German subjects, as compared to the L1 English speakers. In German the percentages in all the aptitude groups were almost equal covering about 50 % of all contours. The English language realizations, on the other hand, were marked by a scarcer distribution of the rising pattern, with the highest percentages in the poor and average groups and lowest by the talented speakers. Another trend worthy of mention is the fact that subjects of poor aptitude, unlike all the other groups, transferred the typically German pitch accent L*HL into their English language realizations. Consequently, there was a clear-cut tendency for the native pattern in the German speakers' samples. Nonetheless evidence was found for accommodation to the English variation pattern, which was strongest in the talented subjects.

On the phonetic level, the steadiest trend constituted the parameters of F0 peak frequency and the amplitude of the rising sigmoid (see the description of the intonation model mentioned above), whose degree of variation was visibly greater in the talented and native speaker groups. Apart from that, the talented speakers consistently realized these parameters on a significantly higher pitch-level than all the other groups.

Beckman, M. E. & Elam, G. A. (1997). *Guidelines for ToBI Labelling*. Ohio State University.
http://www.ling.ohio-state.edu/research/phonetics/E_ToBI/

Jilka, M., Anufryk, V., Baumotte, H., Lewandowska, N., Rota, G. & Reiterer, S. (2008). Assessing Individual Talent in Second Language Production and Perception. *Proceedings of New Sounds 2007*, Florianópolis, Brazil, 243-258.

Möhler, G. (2001). Improvements of the PaIntE model for F0 parametrization. *Research Papers from the Phonetics Lab, AIMS Universität Stuttgart*.