The prosody of impersonating characters in storytelling speech

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Storytellers capture their audience's attention by varying their voice. They use prosody to impersonate the different characters. Previous studies indicate that storytellers use much more variation in pitch and intensity than other speakers, for example newsreaders [1, 2]. They also found that storytellers tend to speak slower and take longer pauses than newsreaders. Another study compared storytellers' speech to neutral speech [3] and observed that storytellers' average pitch and intensity values are larger than in neutral style. They also found that neutral style is faster than storytellers' speech. Doukhan et al. [4] showed that changes in pitch and intensity are relevant to impersonate different kinds of characters.

The phenomenon, however, has not been studied for Hungarian. The purpose of this study is to examine which prosodic parameters can play a significant role in impersonating different characters. According to the main hypothesis the participants change the articulation rate and the pitch to impersonate the characters.

Eight female students (17–18-year-olds) specialized in acting from a Budapest secondary grammar school were recorded. A text (consisting of 40 sentences) was written for the experiment. The participants were instructed to read the text five times: first in neutral style and then they were instructed to impersonate four different kinds of characters. The characters were the following: the excited hamster, the lazy sloth, the graceful deer and the sly fox. A drawing depicting the characters was given to the participants to help them to impersonate the characters. The annotation of the recorded text was carried out by using Praat [5]. The sentences, the pause-to-pause intervals and the irregular parts were segmented manually. The duration was extracted using a Praat script and articulation rate was calculated by sentences and measured as the number of syllables by seconds (pauses excluded). Pitch was also extracted using a Praat script (irregular parts were excluded), f0-mean and f0-range were analysed.

Preliminary results show that changes of pitch and articulation rate are relevant to impersonate the different characters. Faster articulation tempo was found in the case of the excited hamster. The other three characters were linked with slower articulation rate, the slowest tempo was measured in the case of the lazy sloth. The participants tend to exhibit a higher pitch when impersonating the excited hamster or the graceful deer and a lower pitch when impersonating the lazy sloth or the sly fox.

The study proved that Hungarians also use pitch and articulation rate to impersonate different characters. Future work will consist of investigating what other prosodic features are used for impersonating characters.
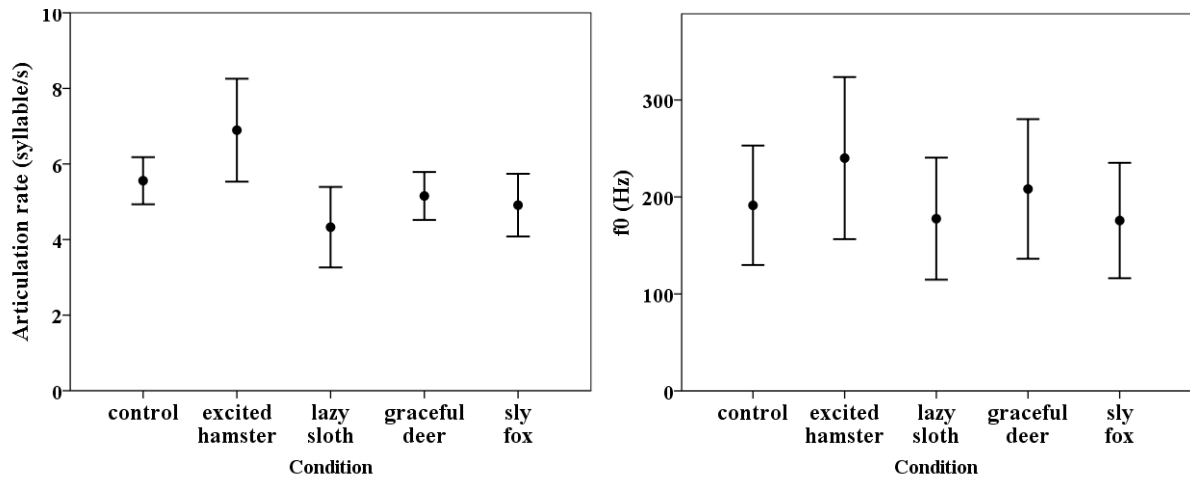
Figure 1. *The mean and the standard deviation of articulation rate and f0 across the conditions.*

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