

Acoustic realisation of long plosives in connected speech in Estonian

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Estonian plosives are conventionally pronounced voiceless and can occur in three quantity degrees. Realisation of word-initial and short intervocalic word-medial plosives in Estonian has been studied in several occasions (Ariste 1933a; Eek & Meister 1996; Suomi & Meister 2012; Ermus 2017). The tendency of short plosives to get voiced in connected speech has always been noted. Similar research into long and geminate plosives, on the other hand, is very scarce. Only systematic study is from the beginning of the last century (Ariste 1933b). Ariste measured the voicing during occlusion phase in carrier words. He found some partial voicing in the beginning of intervocalic long plosives.

The aim of present study is to describe the pronunciation of Estonian geminate plosives in connected speech. I sought for realisation patterns like duration and voicing of geminate plosives in voiced environment (vowels, voiced consonants) and factors influencing it. Material consists of read news texts. Geminate and long word-final plosives were chosen for analysis. Burst phase and voiced and voiceless parts of occlusion phase were annotated manually. Contextual and grammatical information characterising the plosive tokens and carrier words was added to the data.

Preliminary results are in accordance with previous results of Ariste (1933b) and also with similar research on short plosives. Durational patterns were similar to those of short plosives, with /p/ being the longest and /t/ the shortest. Tokens in third quantity degree were longer than the ones in second quantity degree, except in the case of /p/ that had similar durations in both quantity degrees. Partial voicing of plosives emerged regularly. Voicing mostly occurred in the beginning of the occlusion phase, caused probably by carry-over from the previous voiced segment. Influence of preceding vowel seemed to be stronger than influence of preceding voiced consonant.

References

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