The acoustics features of Estonian palatalized /t'/ and /s'/
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The purpose of this paper is to study the acoustic correlates which describe Standard Estonian palatalized /t'/ and /s'/ and plain /t/ and /s/ in minimal pairs. Previous studies (Lehiste 1965a; Liiv 1965a,b; Vihman 1967) on the acoustic features of palatalized plosives and fricatives are from 60s and looked qualitatively at a single formant frequency of the vowel preceding the palatalized consonant. This paper will give new data on the acoustic features of palatalized and plain Estonian plosives and fricatives. The measures include duration of the consonants and first (COG) and third (skewness) spectral moments.

Preliminary results show that compared to plain /s/ the COG for palatalized /s/ is higher in the second part of the consonant. Palatalized /s/ had a lower skewness compared to plain /s/, which means that palatalized /s/ has a higher concentration of energy in the higher frequencies. Palatalized and plain /s/ did not differ in duration.

Compared to plain /t/ the COG for palatalized /t/ is higher in the first part of the consonant, but lower in the second part of /t/. This is supported by a negative skewness in the first part of the consonant, which means that palatalized /t/ has a concentration of energy in the higher frequencies. Palatalized and plain /t/ did not differ in duration.

Keywords: Estonian, palatalization, plosives, fricatives, duration

References
Liiv, Georg 1965b. Some experiments on the effect of vowel-consonant transitions upon the perception of palatalization in Estonian. –Soviet Fenno-Ugric Studies, kd I, nr 1, lk 33–36.