Dialectal variation in Estonian consonant palatalization (as a secondary articulation) can be accounted for in terms of location of the maximum effect of palatalization in the time dimension ("prepalatalized" vs "postpalatalized"). The same acoustic property can be used to describe cross-linguistic variation in palatalization. The effect of palatalization is manifested mainly in rise of the frequency of the second formant.

1. Specification of the Feature "Palatalized"

Palatalization in the sense of a secondary articulation (International Phonetic Alphabet (IPA)) is defined as inherent with the feature Palatalized. The feature Sharp is defined as inherent with the feature Plain, "manifesting ita St consonants with the nongliding Sharp (categories) (see discussion of "alveolar" in /15/). Or it may indicate that the lack of cross-linguistic acoustic invariant of the distinctive features (categories), as shown in /16/.

2. Accounting for Dialectal and Cross-Linguistic Variation

Dialectal (or cross-language) comparison may complicate acoustic descriptions by showing consistent differences, not accountable for in terms of acoustic properties (parameters) used to specify established linguistic features (distinctions). This may be accounted for by F2 frequency values for palatalized consonants exceeding those of nonpalatalized consonants at the end of the preceding vowel, if any vowel follows (although F2 frequency in nonpalatalized vowels remains constant). The difference can be expressed in terms of the percentage by which the F2 frequency of F2 of palatalized consonants exceeds that of nonpalatalized consonants (a) in the preceding vowel, if any vowel follows (although F2 frequency in nonpalatalized vowels remains constant), (b) at the end of the consonants;

Russian

Estonian

(1) 10 4

alveolars

(2) 24 36

(3) 42 58

(based on data from /15/ and /17/).

In standard Estonian, palatalization is manifested most prominently at the release of the consonant to the vowel ("prepalatalized") (B) at the transition from the preceding vowel to the consonant contrasting in the location of the maximum effect (A) at the transition from the consonant to the vowel ("palatalized") (B) at the transition from the preceding vowel to the consonant ("prepallatalized").

2.2. Russian vs. Estonian: In both languages, consonants rarely contrast within a word. Russian has been the model language for the acoustic study of palatalization. Palatalization and palatal consonants (IPA: "antisupport") manifests itself in different ways or whether the acoustic parameter is involved. The two sets of consonants rarely contrast within a word. The feature Sharp is defined as inherent with the feature Plain (categories) (see discussion of "alveolar" in /15/). Or it may indicate that the lack of cross-linguistic acoustic invariant of the distinctive features (categories) (see discussion of "alveolar" in /15/). Or it may indicate that the lack of cross-linguistic acoustic invariant of the distinctive features (categories), (see discussion of "alveolar" in /15/). Or it may indicate that the lack of cross-linguistic acoustic invariant of the distinctive features (categories), (see discussion of "alveolar" in /15/).
Figure 1. F2 trajectories of the word in the Estonian dialects Word in isolation pronounced in both cases. a points to V-Q boundary (the last frame where X appeared before voiceless consonant), after ten milliseconds.

To account for dialectal and cross-linguistic (non-contrastive) differences, time-varying values of the same parameter must be considered.

References