

**Consonant length in Russian:
sociolinguistic and linguistic constraints**
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Geminate consonants in Russian can be freely degeminated in speech. A number of linguistic and sociolinguistic factors were identified by previous researchers as affecting the frequency of degemination under certain phonetic and morphological conditions. For example, geminates in Russian were observed to degeminate less frequently when preceded or followed by a stressed vowel. Similarly, geminates on the morpheme boundary degeminate less than their morpheme-internal counterparts. Intervocalic or word-initial geminates have better chances for length preservation than preconsonantal or word-final geminates. Manner of articulation of the geminate consonant, its voicing, speaking style, age, and gender of the speaker are also hypothesized to influence the probability of degemination.

The present study provides an investigation of geminate consonants in four experimental tasks: sociolinguistic interview, picture description task, text reading, and word-list reading. In addition to analysis of discrete, or categorical variables, investigated in previous works, the present study examines continuous variable: duration of the target consonants measured instrumentally. Categorical variable represents the same tokens used for acoustic measurements, perceptually labeled as pronounced with or without length preservation, as a geminate or a singleton.

Statistical analysis showed that, first of all, there was a strong correlation between results for categorical variable and continuous variable. Main effects and direction of their influence were largely similar for both types of variables. On the whole, predictions formulated in previous research in this area were confirmed in the present study. All of investigated linguistic factors significantly effected frequency of degemination in the predicted direction. Results for sociolinguistic factors were inconclusive and require further investigation.

In addition, analysis of continuous variable allowed to determine that difference between two categories - geminates and singletons - in Russian spontaneous casual speech is not categorical but acoustically gradual. Only careful speech with lower speaking rate allows for more distinct separation of the two phonemic categories.

Importantly, the effects of the linguistic factors were gradual as well. In fact, examined linguistic factors not only played a role in defining the probability of occurrence of a variable, but also imposed durational differences on the members of the same category. This finding supports the view that consonant length is preserved more often in positions that favor phonetic lengthening of segments articulatorily or perceptually. In this way phonetic, or allophonic variations in Russian participate in establishing phonemic distributions.