

More is less and less is more – vowels, features and assimilations in Russian

There has been a long debate within Russian linguistics about whether the two surface vowels *i* and *y* should be considered as corresponding to two underlying vowels (this was first proposed by the so-called Leningrad approach), or as variants of one underlying vowel /i/, as argued in the so-called Moscow approach (a.o. Timberlake 2004, Padgett 2001). Arguments for the latter approach, assuming only five underlying vowels /a, e, i, o, u/, relied on the distribution of *i* and *y*. After secondarily palatalized (soft) consonants and word initially only *i* is found, whereas *y* is preceded by plain (non-palatalized) consonants and can never stand word initially. This generalization holds across morpheme boundaries and across word boundaries:

- 1) *igrat'* (play-inf.ipf.) – *sygrat'* (play-inf.pf.)
- 2) *ivan* (Ivan) – *s yvanom* (with Ivan)

The apparent acoustic and articulatory differences between both variants are assumed to be due to coarticulation with the preceding consonant (Halle 1971).

Proponents of six underlying vowels /a, e, i, y, o, u/ argued that the acoustic and articulatory differences and words with initial *y* clearly point to two underlying vowels. However, the latter distributional exceptions were small in number and mainly from borrowings which weakened that counterargument (Gabka 1974).

This study presents new arguments for a six vowel system based on the model of phonological underspecification and feature geometry as outlined in Lahiri/Evers (1991) and Lahiri/Reetz (2002), formulating explicit assumptions about the featural specification of Russian phonemes. Generalizations based on soft and hard consonants are reanalyzed as generalizations based on an opposition between coronal and dorsal vowels, holding both at synchronic and diachronic stages. The main result is that an increased vowel inventory leads to a decrease in the complexity of the Russian grammar and to a smaller and less redundant lexicon.

The analysis relies on morphological and phonological considerations. The starting point is a reevaluation of the nature of secondary palatalization, as in the following examples:

- 3) *voda* (water-nom.sg.) – *vod'e* (water-prep.sg.)
- 4) *kol'eno* (knee-nom.sg.) – *kol'en'i* (knee-nom.pl.)

A unified treatment of that rule is offered with the assumption of two generalizations. First, not single sounds but natural classes of vowels have to be considered. The vowels /e/ and /i/ always pattern together as coronal vowels and trigger secondary palatalization of preceding consonants. They stand in opposition to the dorsal vowels /a, y, o, u/.

Second, a simple phonological approach to secondary palatalization is formulated without any resort to morphology and morphophonological alternations. Since consonants are always softened when followed by coronal vowels, secondary palatalization does not need to be specified in the lexicon for these consonants. A natural, general and productive rule of regressive assimilation, whose domain is the morphological word, inserts the redundant values within and across morpheme boundaries. This economical approach with underspecified phonemes is not possible within a five vowel system.

Finally, the proposed feature model is able to easily account for other phenomena like change of place palatalization, vowel reduction in stressless position and the special characteristics of hard sibilants.

References

- Gabka, Kurt. 1974. *Einführung in das Studium der russischen Sprache. Band 1: Phonetik und Phonologie*. VEB Verlag Enzyklopädie Leipzig.
- Halle, Morris. 1971. *The Sound Pattern of Russian*. The Hague, Paris: Mouton. Second printing.
- Lahiri, Aditi; Evers, Vincent. 1991. Palatalization and Coronality. In: Carole Paradis & Jean-Francois Prunet (eds.), *Phonetics and Phonology*. Volume 2. Academic Press, Inc. 79-100.
- Lahiri, A.; Reetz, Henning. 2002. Underspecified recognition. In: Gussenhoven, C., Natasha Werner, and Toni Rietveld (eds.), *Labphon 7*. Berlin: Mouton. 637-676.
- Padgett, Jaye. 2001. Contrast dispersion and Russian palatalization. In: Elizabeth Hume & Keith Johnson (eds.), *The role of speech perception in phonology*. Academic Press. 187-218.
- Timberlake, Alan. 2004. *A Reference Grammar of Russian*. Cambridge University Press.