Lena Vasilyeva
PhD Candidate
Department of Linguistics
University of Alberta
Edmonton, Alberta
Canada

Vowel harmony in online adaptations of Russian nonce words into Yakut

Yakut (Sakha) is spoken by over 400,000 speakers mainly in the Republic of Sakha (Yakutia) in north-east Siberia within the Russian Federation. Characteristic of other Turkic languages, Yakut has consistent backness and rounding vowel harmony (VH: Kaun, 1995; Krueger, 1962 [2012]), while Russian does not. This study focuses on how native Yakut speakers apply vowel harmony in online adaptation of Russian words. Early studies (Dyachkovskiy, 1962; Sleptsov, 1964) observed that Yakut speakers strictly imposed vowel harmony on Russian loanwords. However, since the Soviet period, when most Yakut speakers became bilingual in Russian, newer Russian loanwords have been adapted without backness or rounding harmony (Sleptsov, 1975). This study investigates the degree to which modern Russian-Yakut bilingual speakers permit violations of rounding and backness harmony in loanwords, both in production and in a rating task.

Speakers were asked to read disyllabic nonce Russian words in a frame sentence and "make them sound Yakut" spontaneously, and to read the words as though they did not speak Russian. The subset of the target words studied here contained stressed and unstressed variants of Russian [o] and [u] combined with [a, e, i, o, u]. Sample responses are given in (1). In addition, the speakers listened to nonce Yakut words that followed and violated the language's vowel harmony constraints, and rated them on a 1-5 scale of acceptability.

1)	Russian nonce word	Yakut production w/ VH	Yakut production w/o VH
a.	leˈrut	lœryːt	leruːt
b.	ˈmufik	muːpuk	muːfik

This work reports preliminary results based on 10 speakers' production of 32 disyllabic Russian nonce words (the full results from 37 speakers productions are currently being analyzed). Table (2) shows the extent of adaptation based on the production of 240 disharmonic words that violated backness harmony. When the first vowel in the input was front (both stressed and unstressed) followed by a back vowel, all the vowel productions were back in 73% of the words and 97% of the words' vowels were all back when the initial vowel was also back.

2) Vowel harmony application

Backness harmony imposed	Rounding harmony imposed	
80.83%	Initial vowel stressed, [+round]	86%
	Initial vowel [-round]	34.17%

As shown in (2), backness harmony is very robust in the adaptations. Rounding harmony was imposed on disharmonic roots when the initial vowel was rounded and stressed as (1b). However, when the initial vowel was unrounded as in (1a), rounding harmony was imposed less

than half as often. In addition, the speakers rated nonce Yakut words in audio files that followed and violated vowel harmony. The mean ratings revealed that Yakut speakers rated words following backness harmony lower (2.7) than the ones following rounding harmony rules (3.1).

Preliminary results show that the input back Russian vowels [o, u] considerably impose their backness feature on driving harmony in online adaptations. Features like syllable position, backness, stress, rounding and height in the input Russian vowels will be investigated further in order to reveal the driving factors of vowel harmonization in loanwords.

References

Dyachkovskiy, N. D. (1962). *O fonetičeskom osvoenii zaimstvovannyx slov v jakutskom jazyke [About phonetic adaptation of borrowed words in the Yakut language].* Yakutsk: Jakutskoe knižnoe izdatel'stvo.

Kaun, Abigail R. (1995). *The typology of rounding harmony: an optimality theoretic approach.* PhD dissertation, UCLA.

Krueger, John R. (1962 [2012]). *Yakut manual. Uralic and Altaic Series, Volume 21.* Reprinted by Routledge: London, New York.

Sleptsov, Petr A. (1964). *Russkie leksičeskie zaimstvovanija v jakutskom jazyke. (Dorevoljucionnyj period) [Russian lexical loanwords in the Yakut language. (Pre-revolutionary period)].* Yakutsk: Jakutskoe knižnoe izdatel'stvo.

Sleptsov, Petr A. (1975). *Russkie leksičeskie zaimstvovanija v jakutskom jazyke. (Poslerevoljucionnyj period) [Russian lexical loanwords in the Yakut language. (Post-revolutionary period)].* Moscow: Izdatel'stvo "Nauka".