Competition analysis of non-allomorphs: diminutive suffixes in modern Russian.

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This paper has two main goals, the first one is to show on the example of Russian diminutive suffixes that competition of non-allomorphs can be sensibly analyzed. The second is to show that phonological constraints responsible for the distribution of the suffixes have different weights in productive grammar than in prescriptive grammar.

Although the [-ok, -ik, -t͡ɕik] suffixes were considered allomorphs in previous studies (Gouskova et al., 2015; Polivanova, 1967), they were never tested for allomorphy. The assumption was based on their distribution in standard Russian (dictionaries and literature), which is close to complementary and can be predicted with phonological factors. However, these suffixes appeared to have differences in meaning. In this work I analyze the situation, when the distribution of suffixes can be partially predicted by their semantic context and partially by phonological factors.

The distribution of these suffixes can be usually predicted by stem final segment, stress pattern of a noun and several other factors that have less significant impact (Gouskova et al., 2015). The phonological preferences of suffixes are listed in Table 1.

Table 1. Phonological properties of nouns selected by each suffix.

suffix	stem-final consonant	base stress position	other	changes to the stem the suffix causes	example
-ok	preferably velar	initial	no hiatus	stem-final velar mutation stress shift to the suffix	ˈporax→paraˈʂok, lʲes→ lʲesok
-ik	fricative	final		palatalization may cause stem-final velar mutation	vapˈros→vapˈrosʲik, ˈfrik→ ˈfrit͡ɕik[1]
-t͡ɕik	sonorant	final	no final cluster		baˈton□baˈtont͡ɕik ˈrok→ ˈrokt͡ɕik

Experimental evidence for non-allomorphy.

I argue that all three suffixes [-ok], [-ik] and [-t͡ɕik] have different meanings: [-ok] has pejorative tone, [-ik] has affectionate tone and [-t͡ɕik] is neutral. To test it I conducted a short online survey (forced choice test) with three protocols: affectionate context, pejorative context, no context. Participants had to choose one of the three diminutive forms for each word: with the [-ok], [-ik] or [-t͡ɕik] suffix. **Stimuli:** 10 nonce nouns (same for all protocols), all monosyllable, four nouns had stem-final velars, four had stem-final fricatives and two nouns had stem-final [n]. There were four nouns with stem-final clusters and four with initial clusters. **Participants:** 81 native speakers of Russian, 27 for each protocol. **Results. Semantic context:** Pejorative context significantly increases chances of [-ok] and decreases chances of [-ik]. Affectionate context significantly increases chances of [-ik] and decreases chances of [-ok]. The [-t͡ɕik] suffix remains unaffected. **Results. Phonological context:** stem-final velars increase chances of [-ok] and decrease chances of [-ik]; stem-final fricatives increase chances of [-ik] and decrease chances of [-ok]; stem-final nasal increase chances of [-t͡ɕik] and decrease chances of [-ok] and [-ik]; stem final consonant clusters increase chances of [-ik] and decrease

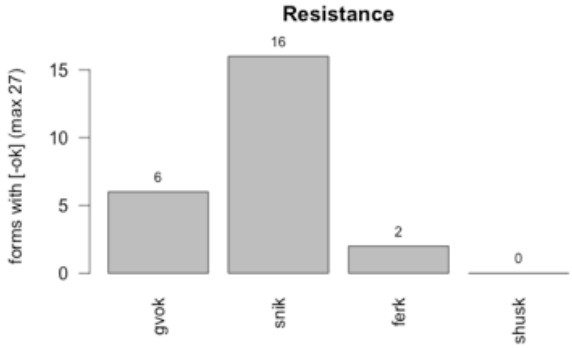
[1] Non-normative example

chances of [-ok]; initial consonant clusters increase chances of [-ok] and decrease chances of [-ik].

Figure 1 illustrates interaction between semantic and phonological factors.

Figure 1. Phonological resistance of [-ok] takers to the affectionate context(requires [-ik])

noun	Stem-final velar	Initial cluster	OCP (front)
snʲik	✓	✓	✓
gvok	✓	✓	
fʲerk	✓		✓
ʂusk	✓		



Phonological factors

In this section, I analyze the distribution of four Russian masculine diminutive suffixes [-ok, -ɔk, -ik, -t͡ɕik] on newly borrowed nouns and on nouns without an established diminutive form. I have found that their distribution is different from reported in previous studies. I propose that the difference is due to promoted faithfulness constraints on the novel and newly loaned words.These suffixes' distribution was analyzed in Gouskova et al., 2015 where they report However, in novel nouns much more variation occurs.

I conducted a forced choice survey to test all possible phonological factors that may influence the suffixes distribution. **Participants**: 60 native speakers of Russian. **Stimuli:** 32 items: 16 real, 16 nonce nouns; 16 loan or loan-like, 16 native or native-like; 16 with stem-final velars, 16 with stem-final dental fricatives; 16 with stem-final consonant cluster, 16 without a cluster; 16 monosyllables, 16 multisyllables; 8 with initial stress, 8 with final stress) I have only used bases that are expected to prefer [-ok] or [-ik], so the [-t͡ɕik] suffix should not appear there at all. I did this on purpose – to see, if participants will still attach [-t͡ɕik] when nothing requires it and there is no possible priming. **Results:** the [-t͡ɕik] suffix is used significantly more often with loan words than with native words. I suppose that this kind of the distribution is due to its morphological transparency: a suffix that causes most changes to the stem loses its productivity and the one that does not cause any changes to the stem is promoted (see Table 1 for the list of changes). To test this hypothesis, I trained a Maxent model (Hayes et al, 2009) on the experimental data. I used markedness constraints (such as "no [-ik] after velars") that define distribution of the suffixes in standard Russian and faithfulness constraints (such as Id(place)) to forbid changes to the stem caused by [-ok] and [-ik]. The weights of faithfulness constraints appear to be as much (or almost as much) as of markedness ones, which predicts the variation.

References

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