## Why *kl~kolj*, *br~ber*, *v~ved*, but never *kl~br* or *kolj~ber*? Restrictions on the phonological shape of root allomorphs in Slovenian

Petra Mišmaš<sup>⊕</sup> & Marko Simonović<sup>⊗⊕</sup> (University of Nova Gorica<sup>⊕</sup> & University of Graz<sup>⊗</sup>)

We start from the observation that Slovenian verbs displaying root allomorphy are restricted in terms of the phonological shape that the altenants can have. Slovenian verbs have the shape Root( $\sqrt{}$ )-Theme Vowel( $\theta$ )-Tense&Agreement Morphology (TA). The theme vowel for non-finite and finite forms can differ (here referred to as  $\theta$ 1 and  $\theta$ 2). In (1a) verbs without root allomorphy are illustrated. Their root allomorphs can either have a vowel (e.g. *vid*) or be consantal (e.g. *sp*). The only restriction we can observe is that there are no verbs which have a zero theme vowel and a consonantal root (i.e. there are no verbs such as \**s*- $\emptyset$ -*ti*~*s*-*e*-*mo*). On the other hand, in the root-allomorphy class, (1b), there is always a combination of the two: one allomorph of the root contains a syllable, whereas the other one is consonantal. This means that there are no verbs which have two consonantal or two syllabic root allomorphs. These impossible verbs are illustrated in (1c).

<ul> <li>(1) √-θ1-INF</li> <li>a. vid-e-ti</li> <li>'to see'</li> </ul>	$\sqrt{-\theta_2-1}$ PL vid-i-mo 'we see'	a.'	$\sqrt{-\theta 1}$ -INF $\sqrt{-\theta 2}$ -1PL sp-a-ti sp-i-mo 'to sleep' 'we sleep'	√-θ1-INF a." pas-Ø-ti 'to graze'	√-θ2-1PL pas-e-mo 'we graze'
b. 3-e-ti 'to harvest'	ʒanj-e-mo 'we harvest'	b.'	br-a-ti ber-e-mo 'to read' 'we read'	b." ved-e-ti 'to know'	v-e-mo 'we know'
c. ʒinj-e-ti	3anj-e-mo	c.'	br-a-ti kr-e-mo		

The proposed account of root allomorphy is based on the structure of the verbal domain proposed in Simonović & Mišmaš (2020). Their proposal aims at accounting for the prosody of the Slovenian verb, where stress consistently gets placed either on the final syllable of the root (e.g. in *vijúg-a-ti* 'wind') or the theme vowel (e.g. in *goljuf-á-ti* 'cheat'). Simonović & Mišmaš argue that verbs in Slovenian are spelled out in two cycles. The verbal root always belongs to the first cycle, whereas tense and agreement morphology consistently belongs to the second cycle. Assuming that Slovenian prosody places stress on the final syllable of the root cycle (Simonović (submitted)), they propose the structure in (2a) for verbs like *goljuf-á-ti* and (2b) for verbs like *vi jugati*. That is, when the theme vowel is in the root cycle, the theme vowel gets stressed, (2a), but if the theme vowel is outside the lowest cycle, the stress ends up on the root, (2b).



We build on this approach to account for the phonological shape of root allomorphs and focus on data which were previously discussed in Božič (2019) as examples of non-local root allomorphy.

In our account, which does not involve non-local allomorphy, we assume that roots which display allomorphy have the representation which is an ordered pair. For instance, the root of  $3-\acute{e}-ti\sim3\acute{a}nj-e-mo$  is /3, 3anj/. Crucially, we propose that there is a minimality condition for the output of the root cycle: it has to be at least one syllable. If we consider the example (1b), in  $3-\acute{e}-ti$  stress is on the theme vowel, implying the structure in (3a). As for the minimality condition, since the root and the theme vowel form a syllable, the outcome is a grammatical one for PF. In the present tense form  $3\acute{a}nj-e-mo$ , however, the stress is on the root, implying that the theme vowel is *not* in the root cycle. The form with the first allomorph \*3-e-mo is ungrammatical, because the output of the root cycle (3) is not a syllable, (3b). This leads to the insertion of the second allomorph as a last resort (3c), which leads to the attested form  $3\acute{a}nj-e-mo$ .



Assuming an ordered-pair representation such as /3, 3an/ may appear to lead to an overgeneration problem. If /3, 3anj/ is a possible representation, then also the reverse representation /3anj, 3/ should be possible, as well as representations with two syllabic allomorphs (e.g. /3anj, 3inj/) or those with two consonantal allomorphs (e.g. /3, b/). However, in our model, each of these representations would lead to a regular, non-allomorphic paradigm. In the case of /3anj, 3/, 3anj would get inserted in both impersonal and personal forms, so we would get 3anj-é-ti~3ánj-e-mo (an attested pattern, e.g. in um-é-ti~um-e-mo 'to know, we know'). The same is true of patterns like /3anj, 3inj/: the first allomorph would always get inserted. Finally, in the case of a representation like /3, b/, a repair would have to apply, but, crucially, it would apply to the first allomorph in both cases, so no root allomorphy would arise. Assuming that this repair would be the insertion of a theme vowel into the empty v<sub>1</sub> position, this would lead to the non-allomorphic paradigm 3-é-ti, 3-é-mo, which is also well attested, e.g. in sm-é-ti, sm-é-mo 'may, we may'.

Finally, our account successfully predicts the gap observed among non-allomorphic roots: the lack of verbs such  $*s-\phi-ti\sim s-e-mo$ . Such structures would also trigger a repair, which would presumably lead to the attested-like structure  $s-\dot{e}-ti$ ,  $s-\dot{e}-mo$ .

We discuss our account in relation to various other proposals of phonology-driven root allomorphy (see Nevins 2011 for an overview) and consider different options of making the order of allomorphs intrinsic (e.g. by ordering the allomorph with less structure first).

**References:** Božič, Jurij. 2019. Constraining long-distance allomorphy. *The Linguistic Review* 36.3. • Nevins, A. (2011). Phonologically Conditioned Allomorph Selection. In M. Oostendorp, C.J. Ewen, E. Hume and K. Rice (eds.) *The Blackwell Companion to Phonology.* • Simonović, Marko. Submitted. Derivational affixes as roots in a lexical stress system. • Simonović, Marko & Petra Mišmaš, 2020. Verb wasn't built in a cycle (it was built in two). Talk given at Slavic Linguistics Society, 15th annual meeting.