

### The $\text{ɔ/a}$ alternation in Russian -iva type verbs

0. Russian is known for showing a complex aspectual derivation (Schoorlemmer [1995], Svenonius [2004b]) involving *semantic* and *phonological* operations. I will show how, within the framework of Distributed Morphology, the analyses of these operations conflict.

1. The table in (1) shows aspectual pairs of Russian verbs. The perfective verbs in (1b-c) are derived from  $\text{br}\text{ɔs-}\underline{\text{a-t}}^{\text{t}}$  by prefixation of  $\text{na-}$ . Then, the imperfective forms of these new verbs are derived by suffixation of  $\text{-iva}$ . It must be emphasized that the theme vowel occurring in (1a, b) and in the perfective of (1c) never cooccurs with  $\text{-iva}$ .

(1) *Exemples of aspectual pairs in Russian (Stressed nuclei are underlined)*

	Perfective (PF)	Imperfective (IPF)	Gloss
a.	$\text{br}\text{ɔs-}\underline{\text{i-t}}^{\text{t}}$	$\text{br}\text{ɔs-}\underline{\text{a-t}}^{\text{t}}$	« to throw away »
b.	$\text{na-br}\text{ɔs-}\underline{\text{a-t}}^{\text{t}}$	$(?\text{na-br}\underline{\text{a}}\text{s-iva-t})^{\text{t}}$	« to throw away a lot »
c.	$\text{na-br}\text{ɔs-}\underline{\text{a-t}}^{\text{t}}$	$\text{na-br}\underline{\text{a}}\text{s-iva-t}^{\text{t}}$	« to sketch »

(2) Note:

- **nabrɔsətʲ can have a compositional (1b) or non-compositional (1c) meaning**
- **-iva implies a vocalic alternation ( $\text{ɔ/a}$ ) (1c)**

According to Svenonius (2004), there are two categories of homophonous prefixes:

Lexical prefixes (1c): non-compositional meaning, cannot cooccur with other lexical prefixes.

Superlexical prefixes (1b): compositional meaning, can cooccur with lexical prefixes

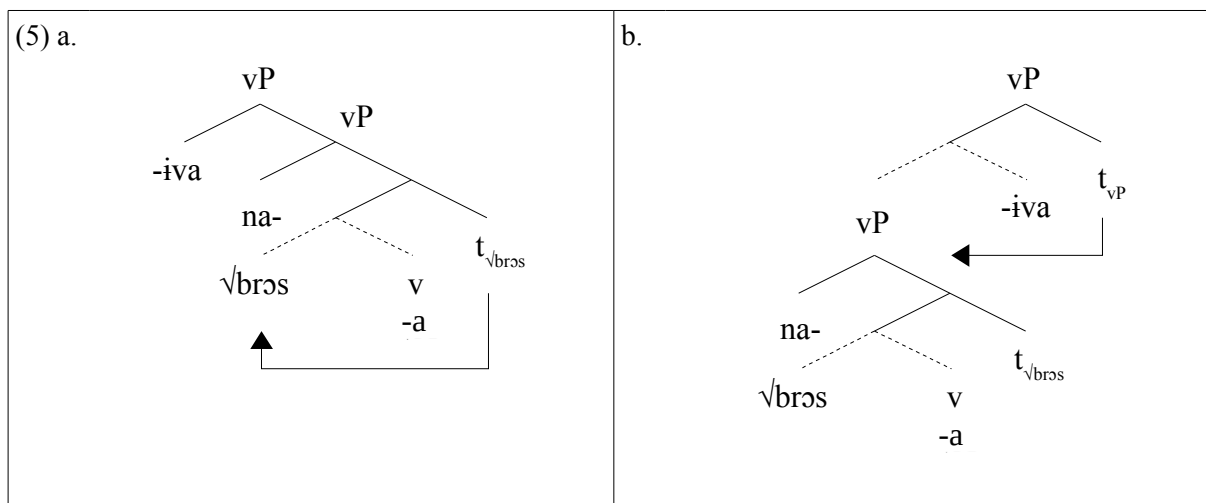
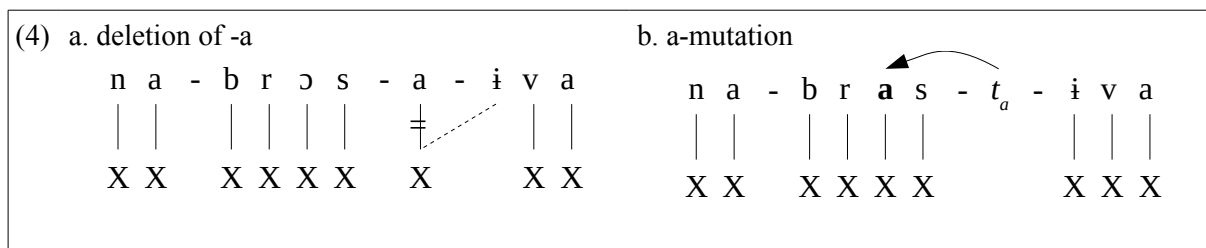
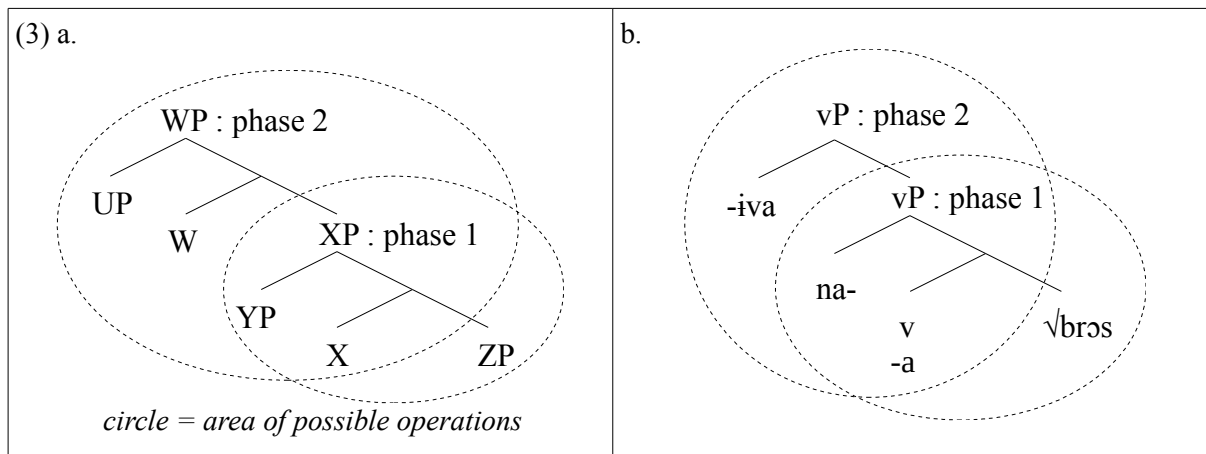
3. The framework of distributed morphology (Halle & Marantz, 1993 and later Lowenstamm, 2010) assumes that a phasal head spells out its complement. Following the *Phase Impenetrability Condition* (Chomsky, 2001), phonological or semantic operations are impossible between a spelled out complement and any material located in a higher phase (3a). Thus, to account for (2), both the lexical prefix and the suffix  $\text{-iva}$  must be included in the same phase as the root. However, their morpho-syntactic features conflict: **lexical prefixes and the suffix -iva cannot be included in a same phase.**

- On the one hand, lexical prefixes are: (i) included within the same phase as the root (ie. they bring non compositional meaning), and (ii) they imply a phase (ie. no more than one lexical prefix can adjoin the root). I analyse them as specifiers of the first phasal head (3b).

- On the other hand, the suffix  $\text{-iva}$  always selects a prefixed form (and rarely selects a superlexical prefix, see Svenonius [2004a] and Gribanova [2011]). Assuming that lexical prefixes are specifiers of a phasal head,  $\text{-iva}$  cannot be included into the first phase (3b).

4. As a conclusion, both the lexical prefix and the suffix  $\text{-iva}$  imply operations that should occur only within the first phase. However, we have shown that  $\text{-iva}$  is included in a higher phase. Thus, we should not expect the vocalic alternation in (2).

I propose the following **hypothesis**: the alternation in (2) is possible only by assuming an underlying morpheme involved in both phases, and phonologically erased by the suffix  $\text{-iva}$  (3b). Such a phenomenon is attested with the thematic vowels  $\text{-i}$  and  $\text{-ε}$ , which are realized as a palatalization of a root consonant in  $\text{-iva}$  type verbs (e.g.  $\text{s-pr}\text{ɔs-}\underline{\text{i-t}}^{\text{PF}}$  /  $\text{s-pr}\underline{\text{a}}\text{f-iva-t}^{\text{IPF}}$  'ask') (Halle, 1963). I assume that the  $\text{ɔ/a}$  alternation is a realization of an underlying  $\text{-a}$  suffix. Like palatalisation and  $\text{-i}$ , the  $\text{a}$ -mutation of the root vowel  $\text{/ɔ/}$  and  $\text{-a}$  are in complementary distribution (e.g.  $\text{na-br}\text{ɔs-}\underline{\text{a-t}}^{\text{PF}}$  /  $\text{na-br}\underline{\text{a}}\text{s-iva-t}^{\text{IPF}}$ ). It follows that phonological operations are possible between  $\text{-a}$  and the root, between  $\text{-a}$  and  $\text{-iva}$ , but not directly between  $\text{-iva}$  and the root. I assume that  $\text{-iva}$  *phonologically* erases the morpheme  $\text{-a}$  following the mechanisms illustrated in (4). It results an  $\text{ɔ/a}$  alternation. The head movement is illustrated in (5): the root left-adjoins to the head  $\text{v}$  (5a), and  $\text{vP}$  left-adjoins to the head of the second phase (5b).



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