

Sonorants and the labiodental continuant /v/ in Russian voice assimilation: an OT analysis.

This paper is intended to provide an OT account of sonorant transparency and ambivalent sonorancy of the labiodental continuant /v/ in Russian voice assimilation. Russian belongs to the class of languages with regressive voice assimilation in obstruent clusters and word-final obstruent devoicing (1). In addition, sonorants neither trigger nor undergo voice assimilation (2), but they are transparent to it (i.e. voicing or devoicing can sweep through them) in certain environments (3).

First, in the account of Russian voice assimilation, I postulate the positional faithfulness constraint **IDENTITY PRE SYLLLABIFIED SONORANT VOICE** (requiring laryngeal faithfulness in the position before a syllabified sonorant), which makes it possible to explain the non-syllable-sensitive voice assimilation (as in (4)) without the necessity of assuming obligatory onset-maximization in Russian (inevitably but incorrectly assumed by Lombardi (1996))(Petrova, Plapp, Ringen & Szentgyörgyi 2000).

Second, I assume binary voice and adopt **SONORANT DEFAULT** (requiring that all and only syllabified sonorants be specified for voice) (Rubach 1996, 1997), which allows for the explanation of the phenomenon of sonorant transparency for voice propagation (5).

It has been well-known that /v/ in Russian (phonetically always a labiodental fricative [v]) phonologically vacillates between a sonorant and an obstruent-like behavior: it does not trigger voice assimilation, thereby patterning with sonorants (6), but it undergoes voice assimilation, thus patterning with obstruents (7).

This sonorancy ambivalence of /v/ is a cross-linguistic phenomena: it is manifested to different degrees in other Slavic languages (Rubach 1993), as well as in non-Slavic languages such as Hungarian (Blaho (2001), Siptár (1994, 1996), Siptár and Törkenczy (2000), (2000, 2001), and Zsigri (1994, 1998, 2000), Swedish, Romanian (Lombardi 1995), Pennsylvania Dutchified English (Anderson 2001), Russian loanwords in Yakut (Baertsch 2001). Because of this widespread sonorancy ambivalence of /v/, it is reasonable to assume that there is some kind of phonetic explanation for it. Since it is easier to accommodate more incoming air in the oral cavity behind the labial articulation, the voiced state should be relatively easier and voicelessness relatively harder for more front places of articulation in obstruents. This prediction is borne out by crosslinguistic phonetic inventories. As it turns out, while in the languages of the world the presence of a voiced obstruent in a language generally implies the presence of the voiceless one at the same place of articulation, the reverse markedness scale, i.e. a voiceless labial fricative implying the presence of a voiced one, is claimed for labial fricatives by Gamkrelidze (1978). Thus, it is possible that /v/ is special because, like sonorants, it is voiced by default (Petrova & Szentgyörgyi 2002).

Drawing on the pre-optimality-theoretic accounts of /v/ in Russian (Halle 1959, Hayes 1984, Kiparsky's 1985, Plapp 1990), I propose a licensing constraint that requires that the feature [sonorant] be parasitically licensed on [v]. Thus, the sonorancy patterns of /v/ are claimed to be the outcome of the interaction of **IDENTITY SONORANT** (which requires input/output faithfulness in sonorancy) and **LABIAL SONORANT (LAB SON)**, which requires that /v/ be a sonorant before a syllabified sonorant) (as in (8)). In addition, **SPECIFY** mandates [-sonorant] on /v/ in the environment complementary to the one defined by **LAB SON** in cases with the input /v/ unspecified for sonorancy.

Finally, I account for phonetic implementation of /v/ by proposing the constraint ***W** (which, in collaboration with the phonetic constraint [v]-default, and modified **LAB SON** explains why /v/, phonetically, is always an obstruent). I also discuss alternative possibilities in accounting for phonetic implementation of /v/; performance variation in the data, as well as idiosyncrasies of voice assimilation across the full word boundaries.

- (1) a. le[d]+ok le[t+k]a "ice" nom.sg. – gen.sg.
 b. bra[t]+a bra[d#z]e "brother" gen.sg. – "brother, though"
 c. vra[k]## vra[g]+a "enemy" nom.sg. - gen.sg.
 d. i[zb]+a i[sp]## "hut" nom,sg. - gen.pl.
- (2) a. ba[n+k]a "a jar"
 b. kra[s+n]ii kra[s]en "red" adj. – predicative adj.
- (3) a. i[s#mt^s]enska "out of Mtsensk"
 b. cf. i[z#o]kna "out of the window"
 c. o[d#m]gli "from the darkness"
 d. cf. o[t#o]kna "from the window"

(4)

/pros'ba/ ("request")	Share	ID preson voice	*voice	ID voice
a. pros'ba	*!*		*	
b. \leftarrow proz'ba			**	*
c. pros'pa		*!		*
/pros'b/ (gen.pl)				
a. pros'b	*!*		*	
b. proz'b			*!*	*
c. \leftarrow pros'p				*

(5)¹

/iz#mxa/ ("from moss")	Son Def	ID son	Share	ID presyl son voice	*voice	ID voice
a. z Mxa			*!*		*	
b. \leftarrow sMxa						*
c. z mxa	*!				*	
d. z M γ a				*!	**	*
e. z mla		*!		*	*	*

- (6) a. [sv]et *[zv] "light" nom.sg.
 b. o[t+sv]et *[dzv] "light"
- (7) a. [fs]e cf. [v]es "all" pl. – "whole" sg.
 f. [f#mt^s]enske cf.[v#o]kne "in Mtsensk" – "in window"²

(8)

/svet/	Lab son	Son Def	ID son	Share	ID presyl son voice	*voice	ID voice
a. \leftarrow s?et			*				
b. svet	*!			**		*	
c. svzt			*	*!***		**	
/vse/							
a. Vse ³			*!				
b. \leftarrow fse							*
c. vze					*!	**	*

¹ Boldface indicates unsyllabified segments whereas capitalization signifies segments unspecified for voice

² This example also illustrates the transparency of sonorants for voice assimilation.

³ [V] here is assumed to be unspecified for sonorancy, indicated by capitalization.