

# Conditioning Factors in the Development of the *-vši* Perfect in West Russian

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## ABSTRACT

This paper explores the conditioning factors in the development and spread of the *-vši* perfect construction in West Russian. The development of the Old Russian predicative past active participle into a fully independent predicate denoting the perfect was pre-conditioned by language contact between Old North Russian and Old Baltic/Finnic languages and was triggered by the tense system reorganization that occurred throughout the entire Russian territory in the thirteenth and fourteenth centuries. The morphological features and geographical distribution of the construction were conditioned by the phonological system of West Russian, in which the feature [+vocalic] was ranked higher than [+consonantal] and the tense-lax opposition was employed. After the jer shift, this system gave rise to potential ambiguity between the suffix *l* [ŭ] of the *l*-participle and *v* [ü] of the past active participle. A functional motivation to avoid the homophony of the simple past and perfect forms resulted in the innovation that assigned the perfect-denoting function to the ending [üşi] and the past-denoting function to [ŭ], thus generalizing the *-vši* desinence for the perfect construction.

## 1. Introduction<sup>1</sup>

The development and distribution of a linguistic feature are often conditioned by other established features in a given language system. For instance, Andersen (1978a) discusses extensively how distinct phonological systems impinged on the *e>o* change in the East Slavic region, resulting in multiple isoglosses. The conditional relationship between language change and the linguistic system may also be posited for morphosyntactic change. Moreover, this conditional relationship may occur across

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phonological, morphological, and syntactic levels. This paper explores such a case in the historical development and distribution of a specific type of perfect construction in West Russian (WR).

In WR, particularly in its northern dialects (NWR), two different participial constructions are used to denote the perfect. One is the *-vši* perfect construction consisting of the indeclinable participial predicate in *-vši*, which originates from the past active participle (PAP), as in example (1). The other is the *-no/-to* perfect construction consisting of the participial predicate in *-no/-to*, which is derived from the past passive participle (PPP), as exemplified in (2).

- (1) The *-vši* perfect

*On by umer-ši<sup>2</sup> byl.*  
 he.NOM PRT die.PARTC-(v)ši be.PST  
 'He could have been dead'. (Kuz'mina 1993:181)

- (2) The *-no/-to* perfect

*U lisicy unese-no kuročka.*  
 at fox.GEN carry.PARTC-no chicken.NOM  
 'A fox has carried off a chicken'. (Kuz'mina & Nemčenko 1971:27)

The *-vši* perfect mostly consists of the participle of intransitive verbs (1), but is also formed from transitive verbs (3); the *-no/-to* perfect is usually formed from transitive verbs (2) but also derives from intransitives (4).

- (3) *Žena xorošaja u menja iz Leningrada vzja-vši.*  
 wife.NOM good.NOM at me.GEN from Leningrad take.PARTC-vši  
 'I have taken a good/pretty wife from Leningrad'.  
 (Sobolev 1998: 83)
- (4) *U volkov tut ide-no.*  
 at wolves.GEN here go.PARTC-no  
 'Wolves have walked here'. (Kuznecov 1960: 120-121)

However, according to Trubinskij (1961: 57), Kuz'mina & Nemčenko (1971: 121, 170-71), and Kuz'mina (1975: 232), the preference of a specific

2 The segment *v* of the suffix *-vši* drops after a consonantal stem. In the example in (1), *v* in *umer-vši* drops after the stem-final *r*.

verb class for each perfect construction is evident. Many of the attestations in Old Russian manuscripts also support this verb class-based split (see also Erker, this volume). In addition, the transitive *-vši* perfect and the intransitive *-no/-to* perfect are distributed mostly in areas around the intersection of the isoglosses of the intransitive *-vši* and the transitive *-no/-to* perfect (Kuz'mina 1975: Map 1, see figure (6)). In this regard, it is reasonable to conclude that each construction was initially formed from one of the two verb classes (with the two participial endings functioning as allomorphs) and spread to the other verb class.

Wiemer & Giger (2005: 33, ch. 4–5) argue that the formation of the two constructions hinges on the distinction between S-oriented and O-oriented structures. This perspective does not necessarily conflict with the purely descriptive discussion of the distribution in terms of verb class: the O-oriented structure presupposes the transitive verb class, and the S-oriented structure corresponds to the intransitive-based structure (see also Erker's discussion of this correlation between the two distinctions in this volume).<sup>3 4</sup>

This paper focuses on the development of the *-vši* perfect construction.<sup>5</sup> The *-vši* construction is considered to be a relatively recent phenomenon, appearing in the sixteenth century and becoming productive only in the nineteenth century. I argue, however, that its development and distribution occurred on the basis of a syntactic and phonological system that predates the sixteenth century.

In Section 2, I examine the morphological, syntactic, and functional features of the construction under consideration. On this basis, I pose concrete questions pertaining to the factors of the construction's evolution. Section 3 addresses the posited questions by investigating the evolutionary process of the syntactic status and function of the past active

3 I thank James Lavine, Ilja Seržant, and Björn Wiemer for their helpful comments and discussion of this question.

4 In this respect, it would be interesting to explore how these two constructions compete with each other and expand their lexical base. I suspect that where both constructions are used, a functional differentiation must have occurred. This possibility has been investigated by L.N. Bulatova (1975), among others. Bulatova suggests that *-vši* intransitive constructions are used to focus on the state of the subject/doer as a result of an action, while the *-no/-to* intransitive focuses on the trace of an action. Wiemer & Giger's O-oriented vs. S-oriented split (2005) also provides an answer to this question.

5 For discussion of the developmental process of the *-no/-to* perfect construction, see Jung (2007).

participle, which was influenced by geographical factors and language-internal system changes. Section 4 is devoted to the examination of the phonological environment in West Russian, which conditioned the morphology and distribution of the given construction. Section 5 contains concluding remarks.

## 2. *The -vši perfect construction in modern WR*

In Russian, the Old Russian past active participle short form in the suffix  $-(v)\bar{v} \sim -(v)\bar{v}\bar{s}$ - developed into a perfective verbal adverb (PVA), which is also referred to as the past gerund or *deepričastie* in Russian. As shown in example (5), in contemporary standard Russian (CSR), the PVA is subordinate to the matrix sentence and has an underlying subject co-referential to the main clause subject.

### (5) CSR. The perfective verbal adverb (PVA)

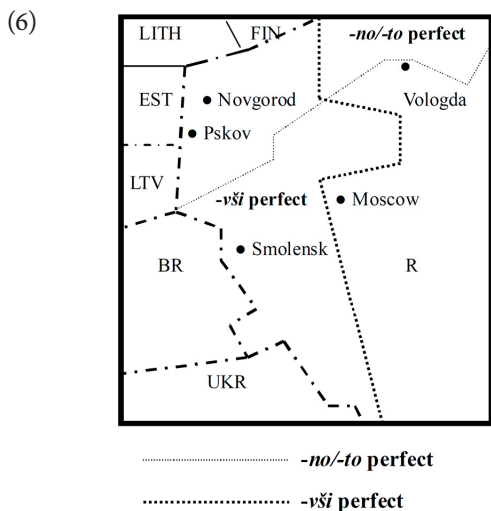
*Uznav èto, on rešil uexat'.*  
 find out.PVA-V this.ACC he.NOM decide.PST leave.INF  
 'Having found this out, he decided to leave'.

The *-vši* perfect construction in WR shares its origin with the PVA, but contrasts with the PVA in terms of morphology, syntax, lexical constraint, and grammatical function. First, at the morphological level, the participle obligatorily ends in *-vši* in the WR construction, while the normative ending of the PVA is *-v*.<sup>6</sup> At the syntactic level, the *-vši* participle in the WR construction is used as an independent predicate, while the PVA is subordinate to the matrix clause. As discussed above, the *-vši* construction derives mostly from intransitive verbs, but the PVA does not have such a lexical constraint. Finally, the *-vši* construction is used to denote the perfect or resultative meaning, whereas the PVA denotes a relative tense.

The geographical distribution of the *-vši* construction is shown in Figure (6). The construction is used from the northwestern part of the Russian territory (NWR), which neighbours the territory of the Baltic and Finnic languages, down to the southern end, including the south-

6 Although *-v* is normative in the PVA, many instances of the PVA form in *-vši* are found in corpora, such as RNC. The *-vši* variant assumes an archaic, bookish flavor. With the reflexive suffix *-sja*, the use of *-vši* is obligatory.

western part neighbouring Belarus and Ukraine (SWR). On the basis of the higher frequency of the given construction in NWR and its spread toward the southeastern area (Kuz'mina & Nemčenko 1971: 117 and Map 1), the centre of the development of the construction is thought to be the NWR region, including Novgorod and Pskov.



Distribution of the -vši perfect (simplified from Kuz'mina 1975: Map 1)

Given the morphological, syntactic, lexical, and distributional features of this construction as illustrated thus far, I explore the construction's developmental process, focusing on the following questions:

- Q1. How did the PAP gain full syntactic independence as a predicate?
- Q2. How did the PAP come to denote the perfect in the WR region?
- Q3. Which innovation(s) resulted in the morphology of the construction?

While I attempt to answer these questions, particular attention will be paid to the phonological factor in the generalization of specific participial suffixes, which will be shown to contribute to the geographical distribution of the construction (Section 4). I will argue that the distribution of

a newly emerging syntactic feature can be influenced by phonological factors in the given language system.

### 3. *The syntactic and functional evolution of the predicative participle*

#### 3.1. *Derivation of the syntactically independent participle*

The predicative use of the PAP in Old Russian and Old Church Slavonic has been observed by linguists such as Potebnja (1958), Istrina (1919), and Šaxmatov (1941), and, more recently, Kunstová (1992) and Hristova (2002). Their work shows that approximately three types of predicative PAPs (short form) existed and that they were more or less independent from the matrix sentence.

One type is the periphrastic PAP construction, in which the auxiliary *byti* ‘be’ is combined with a PAP, as in (7).

- (7) *všed-# bjaše bės Peruna i*  
 enter.PAP-(v) be.IMPRF demon.NOM Perun.GEN and  
*nača kričati*  
 begin.AOR shout.INF  
 ‘Perun’s demon had entered and began to shout’.  
 (*The Novgorod Chronicle* II, 169, 47)

The second type is the Nominative Absolute construction, in which the PAP has its own nominative subject distinct from the matrix subject. For instance, in (8), the subject of the PAP *Izjaslavъ* differs from the omitted subject ‘they’ of the main verb in the 3<sup>rd</sup> person plural form.

- (8) *Izjaslavъ skupi-v-sę s Polovci*  
 Izjaslav.NOM.SG get together.PAP-V-REFL with Polovians  
*i sъ Glěbomъ vyidoša ko Volovesu*  
 and with Gleb set off.AOR.3PL to Volovesu  
 ‘Izjaslav got together with the Polovians and Gleb and [they] set  
 off to Voloves’.  
 (*The Kievan Chronicle*, 474, recit. Hristova 2002: 127)

Finally, the third type is the so-called *vtorostepennoe skazuemoe* (secondary predicate). As exemplified in (9), in the secondary predicate, the matrix verb and the PAP are conjoined by a conjunction *i* ‘and’?

- (9) *vōzvratī-vō že se kamykō na lice knęže*  
 return.PAP-V<sup>o</sup> PRT REFL stone.NOM to face.ACC prince.GEN  
*i sōkruši emu vōse lice*  
 and smash.AOR he.DAT [whole face].ACC  
 ‘The stone came back towards the prince’s face and smashed his  
 whole face’. (*Codex Suprasilensis* 74, 14–16, recit. Hristova 2002: 180)

Istrina (1919) argues that the conjunction *i* in the secondary predicate cannot be definitive evidence of the PAP’s syntactic independence from the matrix sentence, because this conjunction is frequently used in Old Russian manuscripts simply to create a pragmatic pause, or to indicate a shift from one event to another. However, the presence of *i*, in contrast to its absence, indicates a relatively high degree of segmentation between clauses, even in its pragmatic usage in Old Church Slavonic and Old Russian texts. I agree with Hristova (2002), who proposes that *i* functions as a syntactic conjunction, although the participle assumes a semantic dependency on the matrix sentence, being interpreted in temporal/aspectual association with the matrix event.

Potebnja (1958: 138), Obnorskij (1946: 156), Trubinskij (1984: 170–79), and Ambrazas (1990: 189–90) assume that the modern dialectal *-vši* construction originated from the Common Slavic periphrastic participial construction within the Baltic substratum, given that the Baltic languages also utilize the predicative PAP to denote the perfect. In contrast, Borkovskij (1949: 214) and Mel’ničuk (1958: 159) identify the WR *-vši* construction as a continuation of the Old Russian secondary predicate. Hristova (2002) identifies the three types of predicative participles as one single participial structure, in which the participle functions as an independent matrix predicate. She contends that this proto-construction later evolved into the modern *-vši* construction.

7 Examples (7) and (8) may also be regarded as containing secondary predicates since the PAPs *všed* and *skupivšę* are conjoined with the finite verbs *nača* and *vyidoša* by the conjunction *i*, respectively.

Despite the different types of old predicative PAPs and the various syntactic accounts of their structures, I suggest that it is not crucial to pinpoint which of these old constructions is the exact origin of the modern dialectal construction. Rather, it is more important to note that although the independent status of the Old Russian predicative PAP was not absolute, it evidently assumed more independence than the PVA in CSR, occurring with a finite auxiliary, its own subject, or a conjunction. The Old Russian predicative PAP, which had a relatively high level of independence, developed along different trajectories in distinct dialects. On the one hand, in the Muscovite dialect, on which CSR is based, the predicative PAP completely lost its independence and became the PVA, subordinate to the matrix sentence.<sup>8</sup> On the other hand, in the western dialects, it gained complete independence, assuming the function of denoting the perfect.

In this sense, the syntactic independence of the participle of the *-vši* construction is naturally explained as a result of the evolution of the once semi-independent construction(s). The structural ambiguity arising from the semi-independent status of the PAP short form was removed either by the syntactic dependency becoming salient or by the PAP becoming freed from the matrix sentence. I argue that the new function of denoting the perfect, which was also assumed by the *-no/-to* participial predicate, facilitated the increase in the syntactic independence of the *-vši* construction in WR. This immediately raises a question: why was the new function only assigned to the predicative PAP in the western dialects, and not in the central dialects? I examine this question in the following sections.

### 3.2. *Functional reanalysis of the construction: language contact and tense system adjustment*

Potebnja (1888/1958: 138), Trubinskij (1984: 172–79), and Ambrazas (1990: 189–90) point to periphrastic constructions in the Baltic languages, which are similar to the WR *-vši* construction, as a clue to the origin of the WR construction. They argue that both Baltic perfect constructions (10) and the WR construction developed from old periphrastic participial constructions of the same Proto-Indo-European origin (*\*-us-*). As shown in (11), Finnic languages such as Estonian and Finnish also utilize the

8 Kunstová (1992) locates this syntactic change in the general tendency of a paratactic system to shift to a hypotactic system in the Russian language.



same type of perfect construction (*be* + PAP), although the Finnic participles do not share the same etymological origin with the WR and Baltic participles.

## (10) Lithuanian

*Ji yrà dirb-usi.*

*she.NOM be.PRS work.PARTC-usi*

‘She has worked’. (Mathiassen 1996: 115)

## (11) Finnish

*olen otta-nut.*

*be.PRS.1SG take.PARTC-nut*

‘I have taken’.

It is perhaps impossible to deny the influence of the Baltic and Finnic parallels given that the WR construction’s geographical distribution includes the northwestern region neighbouring Lithuania, Latvia, Estonia, and Finland. However, it would be too strong a claim to suggest that the WR construction appeared as a direct result of the Balto-Finnic substratum effect, i.e., as a syntactic borrowing. Active interaction between Baltic and Finnic tribes and northwest Russians occurred before the eleventh century, but the modern type of the *-vši* construction was first attested in manuscripts only in the sixteenth century (Simina 1963: 181), which is rather late. Importantly, the nominative object construction, which Timberlake (1974) analyses as a result of the Balto-Finnic substratum effect, was already well established in early manuscripts (from the twelfth century) of Old North Russian. While the establishment of the nominative object construction reasonably coincides with the period of active language contact between North Russian and the Baltic and Finnic languages, the *-vši* construction appeared too late to be regarded as a direct result of the same language contact.

The rise of the transitive perfect in *-no/-to* (2) must also be taken into consideration since this construction also has its parallels in the Baltic and Finnic languages, as exemplified by the possessive agent constructions in (12–14). The Baltic constructions (12–13) consist of the participle in *-ta*, which is etymologically identical to the NWR *-no/-to* participle.

## (12) Lithuanian

*Gal Jonuko tie grybai atneš-ta.*  
 maybe Jonukas.GEN [these mushrooms].NOM bring.PARTC-*ta*  
 ‘Maybe (referring to the situation) Jonukas brought these mushrooms. (Ambrasas 1997: 281)

## (13) Latvian

*Majā ir tēva cel-ta.*<sup>9</sup>  
 house.NOM be.PRS father.GEN build.PARTC-*ta*  
 ‘The house was built by father = Father built the house’.  
 (Holvoet 2001: 372)

## (14) Finnish

*Talo on Pekan maalaama.*  
 house.NOM be.PRS Peka.GEN paint.PARTC-*ma*  
 ‘Peka painted the house’.

As in the case of the *-vši* construction, the earlier stage of the *-no/-to* construction appears in some manuscripts from the sixteenth century, as shown in (15). It is only well into the nineteenth century that the construction became productive.

- (15) *u carja perelože-no na se lěto*  
 at tsar.GEN undertake.PARTC-*no* for this summer  
*ratb svoja na moskovskuju ukrajnu poslati*  
 [troops own].NOM to Moscow hinterland send.INF  
 ‘by the tsar it was undertaken to send his troops to the Moscow hinterland for this summer’.  
 (PDSK II, 16<sup>th</sup> c., recit. Timberlake 1974: 16)<sup>10</sup>

9 Although this construction is similar to a passive sentence, the verb *būt* ‘be’ cannot be replaced by the dynamic passive auxiliary *tikt* (Holvoet 2001: 372).

10 The *-no/-to* construction developed from the passive with *-n/-t-* participles through voice shift. The sentence in (15), from the sixteenth century, may also be construed as a passive sentence with a benefactive or causer PP subject, which occupied the intermediate stage in the developmental process of the *-no/-to* perfect. The syntactic ambiguity in (15) itself was crucial in the voice shift that resulted in the active perfect construction, conditioning the reanalysis of the grammatical structure of the sentence.

Given that the two perfect constructions developed in the same period, much later than the Baltic/Finnic-influenced establishment of the nominative object construction, I argue that the two constructions appeared as a single phenomenon and were motivated by the same trigger. The complementary lexical bases of these constructions also support this possibility.

In addition to the temporal gap between the language contact and the rise of the perfect constructions, the distinct geographical distributions of the two perfect constructions, as shown in the map in (6), suggest the possibility that the constructions' development and spread were conditioned independently from the Baltic/Finnic influence. The *-no/-to* construction is distributed from the NWR region toward the northeastern part of Russia, while the *-vši* construction spreads from the NWR region down to the southwestern region. Their distinct distributions demonstrate that although these constructions developed concomitantly in the same region, they developed on different linguistic bases, which further determined their spread in different directions (I will explore the phonological and morphosyntactic bases of their distribution in Section 4). If the constructions were purely syntactic borrowings from the neighbouring languages, it would be difficult to explain how their distinct distributions came about.

What then triggered the development of the *-vši* perfect construction? Veyrenc (1966: 164) and Kunstová (1992: 51) argue that the *-vši* construction is a corollary of the tense system adjustment that occurred in the thirteenth and fourteenth centuries. When the *l*-resultative participle became the only means to express the past, the function of denoting the perfect must have been transferred from the *l*-participle to the predicative PAP construction. If the *l*-participle had maintained its perfect-denoting function, the new perfect constructions would not have arisen in WR (or they would have occurred with a function differentiated from the *l*-perfect). In this sense, the reorganization of the entire tense system in Old Russian, i.e., the change in the language-internal environment, was the trigger for the development of the new perfect construction in WR.

#### 4. *The phonological system, morphological differentiation, and functional redistribution*

##### 4.1. *Neutralization of $v$ with $l$ as [ǔ] and its functional reanalysis*

I have previously noted that the different geographical distributions of the two perfect constructions indicate the distinct linguistic bases of the two constructions' development. Jung (2007) argues that the emergence of the *-no/-to* construction was a language-internally conditioned phenomenon. The originally passive construction developed into the active construction through a voice-shifting reanalysis, patterned on the nominative object scheme that was already established in the northern part of Russia. The *-no/-to* construction spread from the NWR toward the NER region, resulting in the isogloss in the map in (6). In other words, the nominative object scheme was the morphosyntactic basis of the development and distribution of the *-no/-to* perfect. On what basis, then, did the *-vši* perfect develop and spread? The answer can be found in the morphological peculiarity of the suffix *-vši*.

In contrast to the CSR PVA's default morphology in *-v*, the segment *-ši* obligatorily follows *-v* in the WR perfect. With respect to this characteristic, it should be noted that the *-vši* construction is used in the area where, after the jer shift (from the thirteenth century on), the phonemes  $v$  and  $l$  were neutralized as a vocalic sound [w/ǔ] before a consonant or in the word-final position (see (17) and (19)).

As Andersen (1978b) notes, in the weak position (before an obstruent or in the word-final position),  $v$  is realized either as an obstruent or a vowel, depending on the feature hierarchy in a given dialect. As exemplified in (16), while  $v$  in the weak position is realized as vocalic [ǔ] in southern dialects of Russian, it is pronounced as consonantal [f/v] in central and northern dialects, including Moscow speech.

(16)	/v/	<i>lavka</i> 'shop'	<i>pravda</i> 'truth'	<i>prav</i> 'right'
CSR	[f/v]	[lafkə]	[pravdə]	[praf]
South Russian	[ǔ]	[laükə]	[praüdə]	[praü]

Andersen explains the distinct phonetic realizations of  $v$  in terms of Issatschenko's typological distinction between "vocalic language" and "consonantal language" (1939). Languages are categorized into vocalic

and consonantal languages depending on the relative hierarchy of [+vocalic] and [+consonantal] features in the phonological system. A vocalic language refers to a language where [+vocalic] is ranked higher than [+consonantal], and a consonantal language refers to the opposite system. Since the neutralization of phonological features occurs in favour of the unmarked feature in a given language system, in a vocalic language, neutralization occurs in favor of [+vocalic], while a consonantal language shows neutralization in favor of [+consonantal]. The glide *v*, whose categorial nature is intermediate (or two-fold) between vowel and consonant, is neutralized as vocalic [ǔ] in South Russian, Belarusian, and Ukrainian. Andersen construes these languages as vocalic languages. In contrast, Central and North Russian, where *v* is neutralized as consonant [f/v], are defined as consonantal languages.

The different realizations of the glide *v* can also be explained on the basis of the different feature oppositions of South and North/Central Russian: the tense-lax opposition in the south and the voiceless-voiced opposition in the north. Before the *jer* shift in the eleventh and twelfth centuries, the phonological system in the East Slavic area was based on a tense-lax opposition. After the *jer* shift, the language system in most of the Russian territory, including the central and northern dialects, shifted into the voiced-voiceless system. However, in the dialects of the southwestern part of Russia, southern and eastern Belarus, and northern and southeastern regions of Ukraine, there remained some repercussions of the old tense-lax system (Andersen 1966).

In the tense-lax system, the unmarked feature is [+lax]; thus, neutralization occurs only before a lax obstruent in favour of [+lax], and no devoicing takes place in a tautosyllabic position. In the voiced-voiceless system, the unmarked feature is [+voiceless], and devoicing takes place in a tautosyllabic position. South Russian, where the glide *v* is realized as lax [ǔ], maintains the old tense-lax opposition, while North and Central Russian, with *v* neutralized as voiceless [f], are based on the voiceless-voiced opposition.

According to the examples offered by Dybo (1988) and Zaliznjak (2004), NWR in the thirteenth and fourteenth centuries must have kept the old tense-lax system. In the examples in (17), the etymologically expected orthography <в> is written as <ѡѣ>.

- (17)  $\nu$  [ǔ] / \_\_C, #  
 ѡѣзѡти ‘take’ (13<sup>th</sup> c., Birch bark No. 534, Zaliznjak 2004: 81)

The neutralization of  $\nu$  in the weak position as lax [ǔ] in the thirteenth and fourteenth centuries indicates that during this period the phonological system in some (if not all) northwestern dialects was based on the tense-lax opposition.

Related to the phonetic realization of  $\nu$  is the fact that in some southwestern Russian dialects, Ukrainian, and Belarusian,  $l$  is also realized as [ǔ] in the weak position. As illustrated in (18), the Common Slavic  $l$  is written as <в>, <ѡ> in the weak position in Ukrainian and Belarusian and is pronounced as [ǔ].

- (18)  $l$  [ǔ] / \_\_C, #  
 Belarusian <ѡ> поўны ‘full’ читаѡ ‘read’ cf. CSR подны читаѡ  
 Ukrainian <в> вовки ‘wolves’ кричаѡ ‘shouted’ воѡки кричаѡ

The example in (19) reveals that \* $l$  was also realized as [ǔ] in NWR after the jer shift. In these examples, \* $l$  is spelled as <ѡ>.

- (19) тоѡкѡ [toǔku] ‘interpreter’ (1418, Obnorskij & Barxudarov 1952,  
 No. 40, I, recit. Zaliznjak 2004: 80)

The vocalic realization of  $l$  in the weak position corresponds to the defining characteristic of Issatschenko’s concept of a vocalic language; that is, the tendency to assign a syllabic function (which is the function of vowels) to consonants. Consonant  $l$  is neutralized as vocalic [ǔ] in the weak position because [+vocalic] is ranked higher than [+consonantal] in the feature composition [+vocalic, +consonantal] of the liquid  $l$ .

The fact that  $\nu$  and  $l$  were neutralized as [ǔ] in western dialects after the jer shift, as shown by the examples in (17–19), suggests that  $\nu$  and  $l$  in the weak position caused phonological ambiguity, which could in turn potentially cause morphological ambiguity. The morphological ambiguity must have occurred in the PAP and the  $l$ -participle in their nominative masculine singular forms. On the one hand, when the jer after  $\nu$  in the PAP desinence dropped as a result of the jer shift ( $-\nu\bar{o}\# > -\nu\#$ ;  $-\nu\bar{o}\check{-} > -\nu\check{-}$ ),  $\nu$  came to appear either in the word-final position in the nominative

masculine singular form or before *š* elsewhere. On the other hand, in the masculine singular form of the *l*-participle, the word-final *jer* following *l* dropped (*lʲ# > l#*), and therefore *l* came to occur in the weak position. In western dialects, *v* and *l* in these forms must have been neutralized as [ǔ]. As the *l*-participle came to represent the simple past while the PAP came to denote the perfect, the suffix [ǔ] was generalized as the marker of the past tense, whereas the desinence [ǔši] was reanalysed as the perfect marker. The segment *-ši* came to distinguish the perfect from the simple past. This functional redistribution of the morphemes following the *jer* shift is illustrated in (20):

(20) Variation of the suffixes of the PAP and the *l*-participle

	PAP		<i>l</i> -participle
Before <i>jer</i> shift:	[vʲ] ~ [vʲš-]	vs.	[lʲ] (~ [la/lo/li])
After <i>jer</i> shift:	[ǔ] ~ [ǔš-]	vs.	[ǔ] (~ [la/lo/li]) <sup>11</sup>
>>	[ǔši]	vs.	[ǔ] (~ [la/lo/li])

As shown in (20), after the *jer* shift, the variation of the desinences of the PAP and the *l*-participle contained [ǔ] in common. This variation was simplified in a manner that clearly distinguished the two categories: the perfect tense was consistently expressed by the suffix [ǔši] and the simple past by [ǔ].

In this respect, the perfect's ending *-vši*, distinct from the PVA's ending *-v*, resulted from the functional motivation to avoid homophony between the perfect and the past, thereby associating different functions to distinct forms. This was possible because the phonological system in western dialects was based on the tense-lax opposition (or because West Russian was a vocalic language). If West Russian had had the voiceless-voiced system, then the word-final *v* would have been realized as [f] and thus would not have caused morphological ambiguity. Then, functionally motivated morphological differentiation would also have been unnecessary. If the suffix *v* had performed the perfect-denoting function by itself, the preference for *-vši* over *-v* would have been unmotivated, just as in the case of the PVA in standard Russian.

11 The Old NWR nominative masculine singular desinence *-e* was waning in the fourteenth and fifteenth centuries. For detailed discussion, see Zaloznjak (2004).

#### 4.2. Morphological strategies to resolve functional ambiguities

There are other instances of morphological innovation conditioned by the morphophonemic ambiguity arising from the phonological system in the languages discussed thus far. In regions where there is no potential ambiguity between the desinences of the PAP and the past, morphological adjustment to distinguish different functions is not motivated. For instance, in CSR, the word-final *v* and *l* are phonetically distinct and are realized as [f] and [l], respectively. In this case, *-ši* is unnecessary to mark the PVA and *-vši* is thus disfavoured in practice. However, as shown in (21), in the case of dental stem verbs, such as *prines-ti* ‘to bring’, the PVA ending *v* drops after the stem-final obstruent and the PVA *prines-(v)* would appear in the same form as the past form *prines-#* (cf. Flier 1981). To remove this ambiguity, CSR adopted *-ši*, an allomorph of *-v*, thus having *prines-ši*. CSR also selected another strategy, distinguishing the PVA from the past forms by extending the suffix of the imperfective verbal adverb *-’a* (< \**-e*) to the PVA, resulting in *prines’a*.

(21) CSR dental stem PVA with the suffix *-’a*

	PVA		PAST.M.SG
	‘having brought’		‘brought’
	<i>prines-(v)</i>	vs.	<i>prines-#</i>
>>	<i>prines-ši</i>	vs.	<i>prines-#</i>
	<i>prines-’a</i>		

Ukrainian and Belarusian, in which *v* and *l* are neutralized as [ǔ], resolved the potential ambiguity between the PVA and the past by generalizing *-vši* for the PVA, just as WR did for the perfect. The segment *-ši* distinguishes the PVA from the simple past form.

(22) Generalization of [ǔši] for the PVA in Ukrainian and Belarusian

	PVA		PAST.M.SG
	‘having learned’		‘learned’
	<i>uzna-[ǔ]</i>	vs.	<i>uzna-[ǔ]-#</i>
>>	<i>uzna-[ǔši]</i>	vs.	<i>uzna-[ǔ]-#</i>

As previously mentioned, in Ukrainian and Belarusian, [ǔ] is represented orthographically by <B> and <ŷ>, respectively. And the sound [ǔ] is a



phonetic realization of the sounds from \*l and \*v in the weak position. Mel'ničuk (1958) argues that the past masculine singular verbal forms, such as <знав, ходив/знаѣ, ходзіѣ>, have evolved from the Old Russian PAP short forms, such as <знавъ(ш)-, ходивъ(ш)->. That is, he links <v> and <ѣ> to \*v. However, this analysis depends only on the surface orthography and lacks consideration of the phonological neutralization. I argue that the past forms in Ukrainian and Belarusian contain a morphophoneme, originating from the suffix \*l. Thus, in contrast to Mel'ničuk's contention, the Ukrainian/Belarusian masculine singular past form, such as <знав/знаѣ>, has the same origin as the past forms with -l [l] in other Person/Number, such as <знала, знали/знала, знали> (see also Flier 1983).

In some western Russian dialects, where v and l are neutralized as [ŭ], the perfect construction utilizes -lši and not -vši.<sup>12</sup> When the neutralization of v and l is taken into consideration, it is reasonable to view this form as the result of the morphophonemic reanalysis, conditioned by the homophony in [ŭ]. This phenomenon is an exact mirror image of the reanalysis of the suffix from \*l as v in Ukrainian and Belarusian.

Given the geographical distribution of the -vši perfect in the area where v and l were neutralized, it appears that the innovation of the -vši perfect construction spread on this phonological basis in the West Russian region. Now, the distribution of the -vši construction is no longer constrained by the phonological system, in which [+vocalic] and [+lax] are ranked higher than [+consonantal] and [+tense]. The -vši perfect construction is also currently in use in dialects, in which the tense-lax opposition is no longer valid and the neutralization of v and l does not continue. Once the -vši perfect construction was established as an independent structure with a clearly distinct function, the construction could continue based on its grammatical function, regardless of the phonological condition.

### 5. Conclusion

Thus far, I have argued that the language-internal system and its changes may serve as either the trigger or the necessary condition for a language

12 For the concrete geographical distribution of -lši and l [ŭ], see *Dialektologičeskij atlas russkogo jazyka I-II* (Avanesov & Bromlej 1989). For discussion of phonological motivations of the phonemic reanalysis of [ŭ] in -lši and its variants, see Jung (2005).

change, by exploring the developmental process of the *-vši* perfect construction. The Old Russian predicative PAP, which assumed syntactic independence to a certain extent, developed into a fully independent predicate denoting the perfect in WR, while it evolved elsewhere into the PVA, completely subordinate to the matrix sentence. The development was triggered by the tense system reorganization that occurred throughout the entire Russian territory in the thirteenth and fourteenth centuries, preconditioned by the language contact between NWR and Old Baltic/Finnic languages. The new function of denoting the perfect allowed the predicative PAP in WR full syntactic independence.

The phonological system of West Russian, particularly the higher rank of the features [+vocalic] and [+lax] features, provided the basic conditions that determined the construction's ending (*-vši*) distinct from the PVA's (*-v*) in CSR. In the WR phonological system, *v* and *l* were neutralized as [ũ], which caused morphological ambiguity between the past and PAP masculine singular forms after the jer shift. To resolve this ambiguity, the past-denoting function and the perfect-denoting function were assigned to the different suffixes [ũ] and [ũši], respectively. As a result, *-vši* became the participial desinence in the perfect construction. Given that the geographical distribution of the *-vši* perfect coincides with the area where *v* and *l* were neutralized after the jer shift, the establishment and spread of the *-vši* perfect must have been based on this phonological condition.

### *Abbreviations*

In addition to the standard abbreviations of volume, this paper contains the following abbreviations:

CSR Contemporary standard Russian

NER Northeast Russian

NWR Northwest Russian

PDSK 1884. *Pamjatniki diplomatičeskix snošenij moskovskogo gosudarstva s krymskoju i nagajskoju ordami i s turcieju*, I: 1474–1505, epoxa sverženija mongol'skogo iga v Rossii, ed. G.F. Karpov.  
1895. II: 1508–21, eds. G.F. Karpov and G.F. Štendman.

RNC Russian National Corpus. <http://www.ruscorpora.ru/en/index.html>.

SWR Southwest Russian

WR West Russian

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