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Vz'amši, Šotši, and the Role of Hierarchy in Morphological Variations[1]

0. Introduction

In any diachronic study of morphophonemic variation in a language, one must address the following questions: what is the cause of a specific morphological reanalysis, how is originally constrained morphological reanalysis generalized, and which factors influence particular patterns of variation? Answering these questions is only possible when due attention is paid to conditional relations among a series of innovations, semantic and/or functional associations among different lexical items or grammatical categories, and the role of a phonological system that exists in the given language. On the basis of such tenets as above, this paper will be devoted to a study of morphophonemic variation of the perfective verbal adverb (PVA) suffix in Russian.

In Russian, perfective verbal adverbs (PVA) such as *vstavši* originated from feminine singular nominative short forms of past active participles (PAP$_S$)[2]. In OCS, past active participles were formed by adding *–vъš–* and *–ъš–* followed by the present active participle (PrAP) ending to the 2nd (Past/Inf) vocalic and consonantal stems respectively.

2nd (Past/Inf) stem with suffix *–i–*	+ ъš	
2nd (Past/Inf) vocalic stem	+ vъš	+ present active participle
2nd (Past/Inf) consonantal stem	+ ъš	(PrAP) ending
(All C-nǫ stem > C)		

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[1] In this paper phonemic representation will be used for Slavic words unless otherwise specifically noted. Here vowel reduction and voicing will not be reflected in any phonemic representation in order to avoid confusion due to the presence or absence of those phonological rules in different dialectal systems.

[2] Here I will call forms such as *vstavši* past active participle short forms (PAP$_S$), since the given forms are not only used as verbal adverbs but also used as independent predicates in northwestern dialects, unlike in the standard language.

In Contemporary Standard Russian (CSR), the PAP$_S$ is formed by addition of *–vši* to the vocalic or truncated stems and *–ši* to non-truncated consonantal stems. In CSR the PAP$_S$ does not decline, and instead maintains the old PrAP feminine singular nominative desinence.[3] The morpheme *–ši*, the latter part of the PAP$_S$ suffix, may be dropped after *v*. As the tense system was simplified and the aspect system was elaborated, in formation of PAP$_S$ with non-velar obstruent stem verbs the imperfective verbal adverb suffix *–a* began to be used instead of *–vši*.

{skazá + vš - i}	→	{skazá + vš - i}	*skazavši*
{u-znáj + vš - i}	→	{u-zná + vš - i}	*znavši*	stem truncation
{stán + vš - i}	→	{stá + vš - i}	*stavši*	stem truncation
{pod-str'ig + vš - i}	→	{pod-str'ig + š - i}	*podstr'igši*	{vši > ši}
{ot-v'od + a}	→	{ot-v'od + a}	*otved'a*	*–a* suffixation
{ot-v'od + vš - i}	→	{ot-v'od + š - i}	*otvedši* (archaic)	{vši > ši}

Although the normative form of the PAP$_S$ suffix is *–(v)ši*, there exist many variants such as *–vši, –mši, –lši, –tši/–tči* and so on. In this paper, I will examine the source of these variants, the innovations that created them, and the motivation for those innovations. The variation of the consonantal portion of the PAP$_S$ suffix will be examined both in terms of the morphophonemic paradigm and the syntagmatic context defined in each geographical zone where a specific type of reflex occurs. Such a two-fold approach is justified on the basis of a fundamental tenet of structural linguistics: a linguistic change does not take place in isolation, but is restricted and controlled by conditions present in a given language system. I propose that functional similarity between the PAP$_S$ and the Past motivated the appearance of distinct PAP$_S$ suffixes derived from morphological reanalysis of proto-forms. In section 1, I will make preliminary assessments of the distribution of the variants of the PAP$_S$ suffix. In section 2, I will examine the principles behind the changes that produced each variant form. Finally, in section 3, I will show how systemic context influenced distribution, and suggest that the distribution of the

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[3] The origin of this indeclinable ending is not uncontroversial, but this issue is not crucial to the topic of this paper.

variants should be viewed as a consequence of the distinct nature of the phonological systems in the northern and southern parts of Russia.

1. Distribution of the variants of the PAP$_S$ suffix

The map in (1) illustrates the distribution of each variant form of the PAP$_S$ suffix in detail.

(1) Distribution of the PAP$_S$ suffix variants (Avanesov and Bromlej II. 1989: map 111)
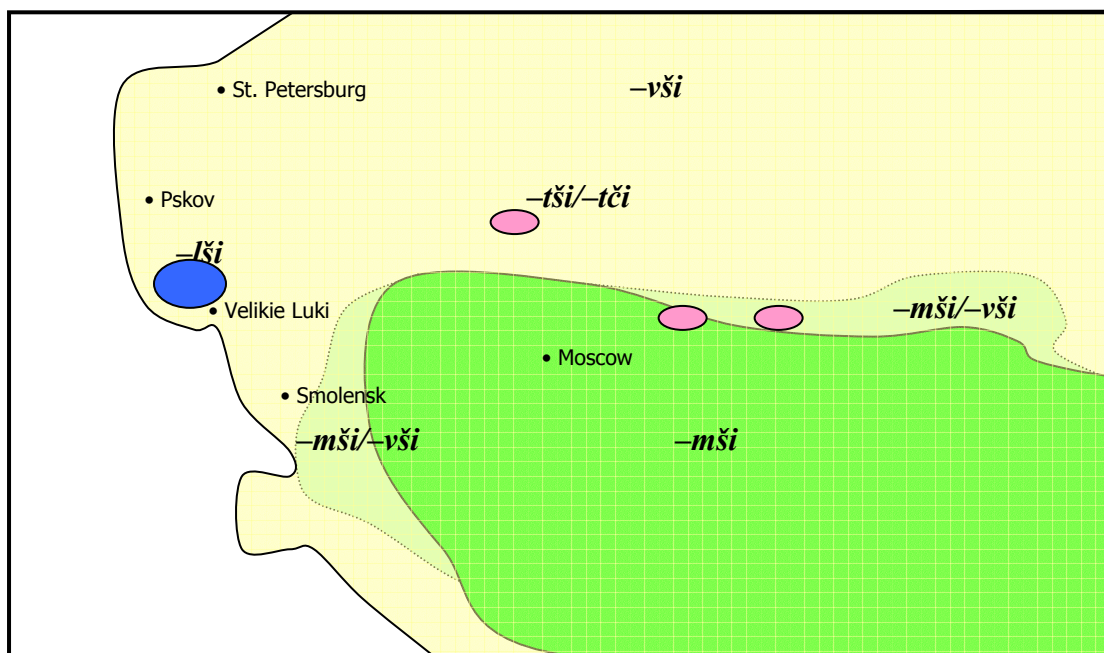
–vši: everywhere	*–mši*: southern and east-central areas
–tši/–tči: central and northern areas	*–lši*: west of Velikie Luki, in the west

Among these variants, *–vši*, the normative phonemic representation of the PAP$_S$ suffix, is found almost everywhere in Russian territory. This variant appears alone in most of the northern area, but frequently appears with other suffixes in the central and southern areas. The ratio between *–vši* and other suffixes in an area varies geographically (Avanesov, R. I. and Bromlej II. Kommentarii 1989:146). The variant *–mši*, which occupies the second largest area after *–vši*, is dominant across the southern dialect zone. According to Kuznecov (1949: 82), *–mši* forms in the middle-central area such as Moscow are colloquial variants, characteristic of urban lower class speakers such as

merchants, maids or stewards. This variant may have been introduced into the urban areas in the center of Russia by the influx of population from southern areas around the 19th century.The reflexes in *–tši/–tči* are sporadically distributed in small areas in the central and northern parts of Russia (Obnorskij 1953:224-225). Finally, the PAP$_S$ forms in *–lši* only appear in the area west of Velikie Luki, which is located in the west-central zone.

2. Morphophonemic Reanalysis of the PAP$_S$ suffix

Avanesov and Orlova (1965:171-172), Borkovskij and Kuznecov (1965:318-319), Obnorskij (1953:224-233), Kuzmina and Nemčenko (1970), etc. are in accord in that the PAP$_S$ forms with the suffix *–mši* and *–tši/–tči* are the result of analogy from such PAP$_S$ forms as *vzemši, snemši, podnemši*, etc. of non-syllabic M/N verbs *vz'at', sn'at', podn'at'*, etc., and *šedši, prišedši*, etc. which share the stem of the verb *idti* respectively.[4] However, they have not investigated the principles this analogy is based on. It also remains unexplained what triggered the spread of a specific suffix form throughout Russian territory.

2.1. *–vši*

2.1.1. The insistence of the linguists above that *vzemši* is the source of analogy is supported by the fact that the consonant *m* occurs before the suffix *–ši* only in this reflex.

(2)   LCS root: vъзьm–
        Pres. stem: voz'm
        Inf. stem: vz'a

|	Middle Russian	CSR	Dialect (A)
Inf.	vz'a-ti	vz'a-t'	vz'a-t'
Past. 3. sg.	vz'a-lъ	vz'a-l	vz'a-l
Pres. 3. pl.	voz'm-utъ	voz'm-ut	voz'm-ut
PAP$_S$	vzem-ši	vz'a-vši	vz'a-mši

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[4]In the rest of this paper I will only deal with *vzemši* and *šedši* for convenience if there is no specific need to enumerate other examples.

As illustrated in table (2), the Middle Russian form *vzemši* is generated from the LCS root *vъzьm–* after the jer shift, in combination with the suffix *–ši* whereas in CSR *vz'avši* is composed of the Inf/Past vocalic stem *vz'a–* and the suffix *–vši*. *Vz'amši* in dialect (A) shares with CSR *vz'avši* the innovation of adopting the Inf/Past stem vowel *a,* but retains the root-final consonant *m*. Then, how can we account for distinct developments of *vz'avši* and *vz'amši* from *vzemši* in MR?

In CSR the Inf/Past vocalic stem is used to create the PAP$_S$ with the consonant *v* maintained in the suffix (*vz'al, sn'al, pon'al* and *vz'avši, sn'avši, pon'avši*). Why did the stem vowel change take place specifically in favor of the Past/Inf stem vowel? Why was the stem-final consonant removed in *vz'avši*? How are these two innovations – stem vowel change and stem-final consonant truncation – related to each other?

2.1.2. Ferrell (1972) and Flier (1981) have examined this type of innovation in the PAP$_S$/PAP forms: Ferrell attributes such PAP$_S$/PAP forms as *klav(ši), klavšij, krav(ši), kravšij, pav(ši), pavšij, pr'av(ši), pr'avšij,* etc. from the root *klad, krad, pad, pr'ad*, etc. to proportional analogy of the form X: *davši* = *klal*: *dal*. This correlation between the Past form and the PAP$_S$ form spreads, for example, to *zabr'ovšij,* which is a stylistic variant (according to *Grammatika russkogo jazyka*, I (1953) as Ferrell mentions) alternating with the standard form *zabredšij*. He further relates such forms as *načotšij, nagn'otšij,* and *m'otšij* to the Past forms *nač'ol, nagn'ol,* and *m'ol*, however, does not elucidate how the stem-final consonant truncation and the stem vocalism innovation are related to each other in the generation of PAP$_S$ forms. Flier, having adopted Ferrell's approach to relate the stem consonant truncation and root vocalism innovation in the PAP$_S$ forms to the corresponding Past forms, further explains how the combination of the two innovations operates to yield the given reflexes. First, he starts by ordering morphophonemic implementation rules in order to account for the synchronic phenomena, for example, *bredši, br'odši, br'ovši* but **brevši*. Historically, the so-called E>O change resulted in *o* in Russian (e.g. *br'o̱dši*) but this change did not take place in Church Slavonic where **e* and **ĭ* remained as *e* (e.g. *bre̱dši*). As the root vowel of *bred ~ br'od* is phonemically represented as {o} in {br'od} synchronically, the synchronic morphophonemic rule yielding the form *bred–* should be [+ *o* > *e*], whereas the rule resulting in the form

br'od– is [– *o* > *e*]. As shown in figure (3) with the root {br'od}, Flier renders the correct results by ordering the rule [– *o* > *e*] before the rule of [+ D-truncation] (D = noncontinuous dental obstruent)[5]:

(3)   + o > e   – o > e

    – D-truncation (redundant) + D-trunctation   – D-truncation

         bredši   *br'ovši*   *br'odši*
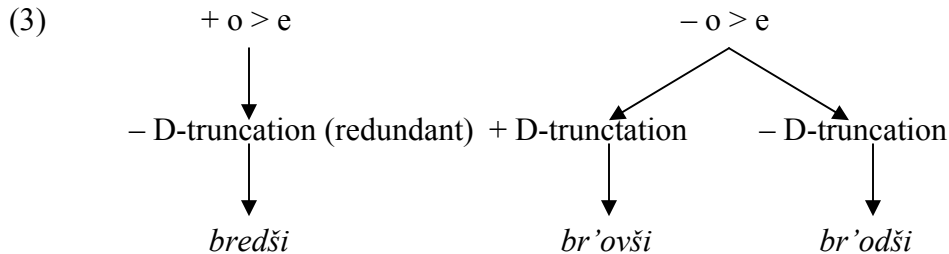
To predict this result, the MP rule [– *o* > *e*] should precede and condition the other MP rule [+ D- truncation]. Given that reflexes that assume [+ *o* > *e*] are regarded as archaic or formal by comparison to those with [– *o* > *e*] and [± D-truncation], as Flier (1981: 86) contends, the diachronic changes can be ordered in the same way. Flier finds the motivation for the approximation of the PAP stem (innovation in root vocalism and stem truncation) with the Past stem in the functional similarity between them, e.g., *načenšij, vzemši, kladšij, šedšij, nesšij, vezšij, istekšij, steršij*, etc. vs. *načal, vz'al, klal, šol, n'os, v'oz, ist'ok, st'or*, etc. which results in *načavšij, vz'avšij, klavšij, šovšij, n'osšij, v'ozšij, ist'okšij, st'oršij*, etc. While long-form participles have maintained their bookish and formal characteristics, the short-form participle, by dint of its establishment in secular writing, must have been subject to these innovations around the 15th-16th centuries. The generation of the PAP$_S$ form *vz'avši* is accounted for in the same way as *br'ovši*. *Vz'avši* resulted from the change of the root vowel *e* to the Past stem vowel *a*, followed by the truncation of the stem-final *m* to assimilate this form to the corresponding Past form. There is no such form as **vzevši* without vowel change but with stem truncation. The lack of **vzevši* confirms that the stem vowel change constitutes a necessary condition for stem truncation.

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[5] D-truncation is a more specific rule than "stem truncation" which applies to stem final nasals and glides. The more general "stem truncation" rule is at issue in our discussion of *vzemši, vz'amši*, and *vz'avši*.

2.2. *–mši*

The approach above not only accounts for the normative reflex *vz'avši* but also can be applied to *vz'amši*.[6] The difference is that in the case of *vz'amši*, speakers reanalyze the morpheme boundary as *vz'a-mši* after the root vowel innovation, and perceive the stem-final consonant *m* as belonging to the PAP$_S$ suffix.[7]

(4) Metanalysis of morpheme boundary in *vz'amši*[8]:

vzem-ši   -- vz'a-vši

             stem vowel innovation > stem truncation

vzem-ši   -- vz'a-mši

             stem vowel innovation > metanalysis

While *vz'avši* is the result of both root vowel innovation and stem truncation (cf. *br'ovši*), *vz'amši* occurs after the first innovation and metanalysis (cf. *br'odši*). As the root vowel innovation conditions the stem truncation in *vz'avši*, the first also conditions the metanalysis. Such instances as *šedši, šodši, šomši* but **šemši* from the root {*š#d*}, where the stem truncation [*d* > Ø] is conditioned by stem vowel change [*e* > *o*] and the morphophonemic string *–mši* is only attached to the stem after the stem vowel change,

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[6] It is ironic that Ferrell (1972) who provided the clue of the motivation of the spread of *–mši* answered "I don't know" to Isačenko's question about such a form as *jemši* in the discussion at the end of the very same article.

[7] The same kind of adoption is also observed in the conjugational paradigm of, for example, *kl'ast'*. The original root for *kl'ast'* was *klьn-*. Its infinitive form was *klęsti* (> *kl'ast'*) and its Present forms were *klenu, klen'oš'* etc., which are the normally expected reflexes of the change of the *tlьt* group. In CSR the Present forms of this verb are regularized with the Inf/Past stem vowel *a*: *kl'anu, kl'an'oš'* etc. The motivation of the root vowel innovation of these verb forms is different from that of *vz'avši*: the phonemic identity of unstressed *e* [ı] was interpreted as *a* because only *a* appears in stressed position across the conjugational paradigm in the infinitive form.

[8] The process of metanalysis is parallel to the innovations that yield the PPP forms in Russian dialects in table (i):

(i)	Middle Russian		Standard Russian		Russian dialects	
Inf.	da-t'	bra-t'	da-t'	bra-t'	da-t'	bra-t'
Past	da-l	bra-l	da-l	bra-l	da-l	bra-l
Pres. 3pl.	dad-ut	b'or-ut	dad-ut	b'or-ut	dad-ut	b'or-ut
PPP	dad'-onnij	bra-nnij	da-nnij	bra-nnij	da-d'onnij	bra-d'onnij

                    - Andersen (1980:24)

clearly support the hierarchy of two morphological rules. This pattern is also parallel to that of the variation '*bredši, br'odši, br'ovši* but **brevši*' we examined in 2.1.2.

    After metanalysis, the suffix *–mši* must have begun to spread to semantically close and/or grammatically related forms such as *brat', dat', jest', pit'*, etc., resulting in *bramši, damši, jemši,* and *pimši*.

2.3. *–tši/–tči*

    Many linguists believe that the variant *–tši/–tči* is from *šodši*, the PAP$_S$ form of the verb *idti*, with the LCS root being {*šьd*}. This is not only because the absolute majority of reflexes with the suffix *–tši* or *–tči* share the root {*šod*}, but also because *šodši* maintains a dental before *–ši*. In this respect, the old PAP$_S$ forms of dental stem verbs such as *vesti, mesti, krast'* could be also considered to be the potential source of the variant *–tši/–tči*. Nonetheless, the extreme frequency of the verb *idti* must have resulted in the relatively broad and frequent occurrence of *šodši* in modern dialects, which must have allowed *šodši* to play the role of the source of the variant *–tši/–tči*.

(5)	MR	CSR	Dialect (B)
PAP$_S$	šed-ši	id-'a	šo-dši (>dči, tši, tči)
Past	šo-lъ	šo-l	šo-l

    As illustrated in table (5), after the stem vocalism innovation *e > o*, the stem-final consonant is reanalyzed as belonging to the suffix. The devoicing and affrication of the palatal must have facilitated this metanalysis.[9] This reanalysis of the suffix attached to the stem {*š#d*} (abductive innovation) can be observed only when it applies to other verb stems (deductive innovation). Considering that such reflexes as *pojedči, napidčis'* from Rzhev (Obnorskij 1953:225) only appear where *šodši* occurs, the crucial condition of the reanalysis resulting in the suffix *–tči/–tši* is the stem vowel change, just as in the case of *–mši*. The metanalysis conditioned by the stem vocalism change must be motivated by approximation between the PAP$_S$ stem and the Past stem. Reflexes with other suffixes, such as *šomši, šolši* and *šovši*, also occur after the stem identification with the

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[9] In different dialects, there are, of course, such variants as *šovši, šomši*, and *šolši*.

corresponding Past forms. Such reflexes as *ujexatči, vz'atši, žitči*, etc. show that once the metanalysis of the morpheme boundary occurred, the innovation spread to semantically close lexemes, as in the case of *vz'amši*.[10]

In comparison with the variant *–mši*, the distribution of *–tči/–tši* is highly restricted. The allomorph *–tši/–tči* occurs in only a few areas on the map in (1). The fact that the PAP$_S$ form of *–idti* in CSR is not *–šedši* but *–id'a* may be considered to be the reason for the low productivity of *–tči/–tši*. The competition between *–a* and *–vši* began in the 16th century. It may have retarded the spread of *–tči/–tši*, since the root vowel innovation in *šedši* was already widespread around the 16th century. The use of *–'a* is not only a different affixation, but also implies the shift from a temporal to an aspectual distinction. This shift must have weakened the association between the PAP$_S$ form and the Past form based on the same tense meaning. New PAP$_S$ forms such as *proid'a, prines'a* do not need to approximate their forms to the corresponding Past forms. It may indicate that the innovation of adopting the stem shape of the Past was retarded by the younger innovation (or tendency) of dissociating PVA category form from the temporal distinction. (see Flier 1981).

2.4. *–lši*

In considering the source of the variant *–lši*, its geographical distribution is crucial. As Obnorskij (232) points out, the area where this suffix is found is within the area where the phonetic value of *v* is the same as that of *l* before an obstruent: [w].[11] However, the identical phonetic realization of two morphophonemes cannot fully account for the use of *–lši*. The morphophonemic reanalysis of the sound [w] (or /W/) as a phoneme /l/ in this form is due to the use of the PAP$_S$ form as an independent past predicate in West Russian, as Avanesov and Bromlej (Komentarii 1989:147) suppose. It should be mentioned that the indeclinable suffix *–ši* does not drop, unlike in the normative language. The suffix *–ši* is retained as a participial marker which denotes the

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[10] Why is it not the case that the morphological reanalysis also takes place in such forms as *nësšij*, yielding another variant of the PVA suffix *–sšij*, which would be pronounced as [š:ij] by assimilation, even in a very small number? Why are *–tši –mši,* and *–lši* allowed but not *-sši*? This may be explained if we consider the natural class of the consonant that can appear as the first portion of regular participle suffixes. Only the phonemes *m, t,* and *l* can occur in the normal participle suffixes: PRPP, PPP and RP respectively.

[11] This pronunciation is characteristic of the Belarusian and Ukrainian languages and the Russian dialects in the areas close to Belarus and Ukraine.

perfect. In the western dialects, the PAP$_S$ with a non-truncated *–ši* suffix is used to express the perfect, whereas the *l*-past is used for an aorist-like meaning. Thus in the PAP$_S$ forms in those dialects, *v* and *l* with the same phonetic value denote the Past, and the *–ši* is used as the perfect marker.[12]

• Morphophonemic reanalysis

    [vz'awšɨ] --> *vz'alši*

                 morphophonemic reanalysis

    [w] *v ~ l*   →   [past]

    –ši   →   [perfect]

3. Factors in the distribution of the variants

    In the previous section it has been shown that the consonantal variation in PAP$_S$ suffixes is due to metanalysis triggered by a stem vocalism innovation. However, a question still remains: given that the reflexes *vzemši* and *šedši*, the sources of the variants, existed across Russian territory, why does *–mši* spread competing (alternating) with *–vši* only in the southern area, whereas *–tši/–tči* appears along with *–vši* only in the central-northern area? In other words, why do southern dialects admit *–mši* and northern dialects allow *–tši/–tči*? Indeed, the ubiquity of *v* is striking as compared to the geographically limited distribution of *m*, *l*, and *t*. Assuming identical morphological environments for the PAP$_S$ suffix, the preference for one or another variant as compared to the original PAP$_S$ suffix must be due to the inherent nature of each distinct linguistic system. In this section, I will examine the effects of geographical distribution as a function of the different nature of the phonological systems in each area. The distribution of the consonant variants illustrated in (1) can be simplified as a continuum between the northeastern and southwestern extremes. In examining this continuum, one must consider the phonemic values of each consonantal variant, the hierarchical ranking of relevant features, and the role of systemic context across the East Slavic territory.

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[12] The retainment of *–ši* in the suffixes must be also necessary for the metanalysis of *–mši* and *–tši* as PAP$_S$ suffixes not only to add the perfect meaning but also to avoid confusion with other grammatical forms in *–m* and *–t*.

3.1. The phonetic feature of the glide *v*

Consonantal variation should be measured against the phonetic features of the glide sound *v* that occurs throughout the Russian territory. Jakobson (1956) pointed out the dual aspect of *v/v'*, which behave as sonorants before sonorous phonemes but as obstruents elsewhere: they are "transparent" before sonorants and between the preceding and following obstruents in terms of voicing assimilation. Nonetheless, Jakobson did not set up a distinct category for *v/v'*, and instead treated them as belonging to a subcategory of fricatives not included among the obstruents. Andersen (1968) resolves this oxymoron of "fricative but not obstruent" by classifying them as glides, considering that *v* and *v'* are realized phonetically as vocalic in weak position in South Russian, analogous to the glide *j*. The difference between *v* and *j* is that in North Russian, the former is realized as an obstruent [f] in weak position, whereas the latter maintains a vocalic realization. Andersen presents the phonetic realization of *v* in the weak position in South Russian as a short *u* (IPA: [ŭ, ʋ, w, ŷ]) forming a diphthong with the preceding full vowel as in *lavka* [laŭka]*, Pravda* [praŭda]*, prav* [praŭ].

In the PAP$_S$ suffix *–vši, v* always appears in the weak position before the voiceless sound [š], therefore, the phonetic realization of the phoneme *v* in *–vši* yields the distribution in (6):

(6) The phonetic realization of /v/ in *–vši*

    North   [f][13] :   obstruent

    South   [w] :   vowel

The distinct phonetic realization of *v* in the weak position depending on area of its occurrence is reminiscent of the notion of two polar types of phonological systems – the vocalic and consonantal – which was first proposed by Isačenko (1939), and then elaborated by Andersen (1978) with underlying principles and examples. Andersen (1978:4) underscores the distinct phonetic realizations of /v/ in North Russian and South Russian by enumerating contrasting examples of *lavka, rov, prav* with the distinct

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[13] In some northern dialects, the devoicing of /v/ yields [x].

realization of southern [laŭka], [roŭ], [praŭ] versus northern [lafk∂], [rof], [praf]. The former realization unites the South Russian dialect area with those of Belarus and Ukraine.

The fact that in the northern and central zones of Russian territory the consonantal variant [f] occurs and in the southern part the vocalic variant [w] occurs is also related to which kind of distinct feature ("diacritic category" in Andersen's term) —vocalic or consonantal—is more highly ranked in each dialect. In the south, where [± vocalic] is more highly ranked, the neutralization takes place in favor of the unmarked higher feature [+ vocalic], whereas in the north where [± consonantal] is more highly ranked, the neutralization in the unmarked higher [+consonantal] feature is favored.

3.2. Distribution of the variants based on different phonemic systems

Can we explain the distribution of the variants [m] and [t], along with the two distinct phonetic realizations of *v* [w] and [f], within the frame of vocalic-consonantal language system?

(7)   South   North

        U +voc   M −voc   U +con   M −con

    U −con   M +con M −con U +con   U −voc   M +voc   M −voc   U +voc

        V   R   J   C   C   R   J   V

      [w]   [m]   [f],[t]

  Neutralization in unmarked feature [+vocalic]   Neutralization in unmarked feature [+consonantal]

As shown in the illustration in (7), this system based on the distinction of [vocalic] and [consonantal] cannot account for the coexistence of [w] and [m] in the south and west. Rather, this phenomenon is better explained when other phonetic features of the given sounds such as [±sonorant] or [±tense] are taken into consideration.

 (8) The phonetic features of the variants

            North   [f], [t]   [obstruent], [tense], [voiceless]

            South   [w], [m]   [sonorant], [lax], [voiced]

3.2.1 Tense-lax vs. voiceless-voiced systems

Before the jer shift, the phonemic system of the East Slavic territory was based on the tense-lax feature opposition. Now the old tense-lax system is preserved in the Ukraine, whereas that of Russian territory was changed to a voiced-voiceless system. In the tense-lax system, the tenues-mediae opposition is distinctive immediately before a tense obstruent while the opposition is neutralized to lax (unmarked) before a lax obstruent. These dialects include the southeastern and southern dialects of Belarus and the northern and southeastern dialects of the Ukraine. In the voiceless-voiced system in Russia, the old tenues-mediae opposition is neutralized into voiceless (unmarked) immediately before a voiceless obstruent (Andersen 1966: Ch. 2). The lack of voiceless assimilation of /v/ before /š/ in southern Russia may be regarded as a repercussion of the old tense-lax system. In this respect, the glide /v/, which is a lax and voiced sound, is realized as /f/ in the central and northern part of Russia through devoicing neutralization, but remains as a lax voiced sound [w] in the southern and south-western part neighboring Ukraine.

(9)   South-West (tense-lax)   North-East (voiced-voiceless)

U +lax   M –lax   U +voiceless   M –voiceless

[m],[w]   [f],[t]

Neutralization in unmarked feature [+lax]   Neutralization in unmarked feature [+voiceless]

3.2.2. Sonorant language vs. obstruent language

It is not difficult to recognize the tendency of the opposition between obstruent (north) and sonorant (south), although the middle area where various reflexes appear concomitantly makes the split rather unclear. The distribution in (8) is better accounted for by the notion of sonorant and obstruent languages in (10) than by the distinction of vocalic and consonantal languages, since the presence of [w] and [m] in the South-West shares the property [+sonorous].

(10) South-West (sonorant) North-East (obstruent)

U +son M −son U +obst M −obst

[m],[w] [f],[t]

Neutralization in unmarked feature [+sonorous] Neutralization in unmarked feature [+obstruent]

4. Conclusion

For an analogy to take place, abductive innovations must occur in the proto-form, such that reanalysis of morphological structure then can apply to other lexemes by deductive innovation. Here, the metanalysis of the PAP_S morpheme boundary occurred when the stem vocalism changed in favor of that of the Past stem, associating the PAP_S form and the Past form. This in turn may be ascribed to the functional similarity between the two grammatical categories as independent predicates and to the sharing of the same tense meaning.

Along with principles of morphological reanalysis (*–vši, –mši, –tši/–tči*) and morphophonemic reanalysis (*–lši*), the nature of the phonological systems in different dialectal areas is also crucial in exploring any morphophonemic variation, since it conditions the geographical distribution of variants: the already existing specific characteristics of a linguistic system favor a specific type of variant. In this paper, I have shown that the PAP_S suffix consonant variants, *v, m, t* and *l*, are distributed according to the nature of the phonological system of northern dialects and southern dialects: tense-lax languages vs. voiced-voiceless languages, and obstruent vs. sonorant languages.

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