

# Cross-linguistic considerations on preverb stacking (with special reference to Bulgarian)\*

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## 1. Introduction

Preverbatation is a cross-linguistically common strategy languages use to derive complex verbal bases from various types of verbal roots. It is a subtype of prefixation: preverbs are prefixes with mainly adverbial semantics, first and foremost spatial; they can also specify manner (with meanings such as ‘together’) or quantify a core argument (e.g. ‘all’ or ‘one by one’). Some preverbs tend to become lexicalized, forming morphologically more or less opaque and semantically unitary combinations with their host lexical roots. Other preverbs grammaticalize, taking on the function of telicity operators in addition to their original meaning. A further step is the bleaching of the adverbial meaning of some preverbs, which further evolve into pure telicity operators or markers of aspectual meanings (most especially the perfective viewpoint). The exceptional degree of productivity of this last grammaticalization stage is what makes the Slavic languages unique, as is well known.

However, there is also another respect under which the Slavic languages are unique, a phenomenon that is less well studied: *preverb stacking* (PS), i.e. the simultaneous occurrence of two or more preverbs on a single verbal base. This phenomenon is very ancient within the Indo-European language family, as we will see. It is also attested in non-Indo-European languages as far as Central America (Cora, see further). In this paper I will show various types of PS to be

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found in different languages, paying special attention to processes of lexicalization at work between the inner preverbs and their host roots or between members of compound preverbs. We will devote special attention to Bulgarian, a language where PS is exceptionally productive. However, the comparison between the Bulgarian data and superficially similar data from other Slavic languages such as Russian will also show that PS is not just a marginal phenomenon; rather, it is important in order to delineate the aspectual profile of a particular Slavic language, since superficially similar preverb strings trigger different syntactic configurations in terms of the *perfective* vs. *imperfective* dichotomy.

## 2. PS in a typological perspective

### 2.1. Non-Slavic Indo-European languages

Apart from the innermost preverbs (which can function as telicity operators), prevervation contributes a semantic content which in most cases is spatial in nature. The only non-spatial adverbial meaning found in several Indo-European languages outside of the Slavic branch is, to my knowledge, ‘together’ (cf. Gothic, Lithuanian, Greek, Sanskrit). Let us consider the following sentences from the Gothic and the *koiné* Greek versions of the New Testament (John 18:15)<sup>1</sup>:

- (1) *sa=h*                      *þan*   *siponeis* ...                      *mip-inn-ga-laiþ*                      (Gothic)  
 that:M:NOM:SG=and   then   disciple:NOM:SG ...   **together-in-off-went**:3SGS  
*mip*   *iesua*   **in**   *rohsn*                      *þis*                      *gudjins*  
**with** J:DAT   **into**   palace:ACC:SG   the:M:GEN:SG   high.priest:GEN:SG  
 ‘(And then) that disciple ... went in with Jesus into the palace of the High Priest.’

In the above example, the form *mip-inn-ga-laiþ* shows the stacking of no less than three preverbs: the innermost one, *ga-*, appears to be lexicalized (we have forms like *galeiþan* ‘start, depart’ or with other preverbs, but we never find *\*leiþan* alone in the Gothic corpus)<sup>2</sup>. The other two preverbs, *mip-* and *inn-*, on the other hand, show totally different syntactic properties: they are both doubled by independent PPs, headed by their corresponding prepositions (*mip* and *in*, respectively).

<sup>1</sup> The following abbreviations are used in morpheme glosses: 1, 2, 3 – persons of verbal agreement; A – agent; ACC – accusative; AOR – aorist; CIS – cislocative; COMPL – completive; DAT – dative; DECL – declarative; DISTR – distributive; F – feminine; GEN – genitive; IMP – imperative; INF – infinitive; INGR – ingressive; ITER – iterative; M – masculine; NARR – narrative; NOM – nominative; PL – plural; REFL – reflexive; S – subject; SG – singular; STAT – stative. Superscript P,I in Slavic forms indicate perfective and imperfective aspect.

<sup>2</sup> Cf. German *mit-be-gleiten*, where *-gleiten* in turn comes from *ge-leiten* ‘to escort’.



b'. <i>hr̥</i>	‘take, bear, fetch, carry, bring’
<i>ā-hr̥</i>	‘fetch, bring, offer, deliver, bring, put on, use, utter, speak’
<i>vy-ā-hr̥</i>	‘pronounce, mention, converse, call by name, confess’
<i>ab<sup>h</sup>i-vy-ā-hr̥</i>	‘utter, pronounce, converse about sth’
<i>sam-ab<sup>h</sup>i-vy-ā-hr̥</i>	‘mention together; associate together’

As can be noted, the addition of each preverb causes a semantic drift in the meaning of the whole verbal base: in (4a), *ā-* functions mainly as a telicity operator, but a few idiosyncratic semantic extensions can also be observed, as can be seen from the translations. The further addition of *anu-* and *sam-* are however only compatible with the basic interpretation (‘grasp’). The addition of *sam-* without *anu-*<sup>3</sup>, instead, has the effect of making new idiosyncratic meanings appear once again. This shows that conventionalization is at play at each and every stage of preverbatation, which seems to point in the direction suggested by Papke, i.e. that preverbatation proceeds incrementally, one layer at a time. In (4b) we can see a partly similar situation: *ā-* may function as a mere telicity operator or else generate a whole array of secondary meanings, only some of which pertain to the field of thought and speech. The addition of *vi-*, *ab<sup>h</sup>i-*, and *sam-*, instead, restricts the semantics of the complex base exclusively to the linguistic field (i.e. one of the secondary meanings, unlike 4a): the resulting base *samab<sup>h</sup>ivyāhr̥* is used exclusively in metalinguistic discourse. Again, the consistent semantic shift associated with each layer of preverbatation seems to indicate some degree of lexicalization at each stage; the preverbs seem not to be added simultaneously, but incrementally, and most likely at different chronological stages.

To conclude our (partial) survey of PS in Indo-European languages, it will be interesting to have a quick look at the situation exhibited by a language belonging to the branch that is most closely related to Slavic: Baltic. Let us consider the following Lithuanian data (Nevins, Joseph 1993:95-96):

(5) a. <i>žin-ti</i>	b. <i>pa-žin-ti</i>	c. <i>pri-pa-žin-ti</i>	(Lithuanian)
know-INF	/PA/-know-INF	<b>in.front</b> -/PA/-know-INF	
‘to know (sth)’	‘to know (sb)’	‘to acknowledge, admit, recognize’	

Surprisingly, we find that PS is not productive at all in Baltic: (5c) is one of an extremely limited set of examples<sup>4</sup>. Moreover, stacks of more than two prefixes are not found in Baltic. In (5b), the prefix *pa-* restricts the set of possible objects to humans only (simultaneously triggering an inchoative reading of the

<sup>3</sup> In Sanskrit preverbs ending in *-i* and *-u* (such as *ab<sup>h</sup>i-*, *vi-*, *anu-*) are subject to a *sandhi* rule according to which the final vowel of the preverb is replaced by the homorganic semiconsonant (thereby yielding *ab<sup>h</sup>y-*, *vy-*, *anv-*).

<sup>4</sup> I am grateful to Peter Arkadiev for bringing this fact to my attention.

verb). In (5c), *pri-* adds the meaning ‘publicly’<sup>5</sup>. The derivation of (5c) clearly presupposes the lexicalization of (5b), which functions as its starting point.

## 2.2. PS in Native America

The ability of preverbs to stack is not confined to the Indo-European language family. The phenomenon is also attested in different areas such as the Americas. In Cora, a Southern Uto-Aztecan language spoken in Mexico, we can observe a quite elaborate system of preverbs<sup>6</sup>. These quite often come in stacks of two or three units, and quite often the semantics of the stacks is not strictly compositional. Let us consider the following example, taken from a narrative about a female toad (Casad 1984:457):

- (6) *ma-ra-’a-n-’i-tí* (Cora of El Nayar)  
 DECL:3PLS-DISTR-**outside-on.top-up**-carry  
 ‘They picked her up *in their hands*.’

The translation mentions an implied concept (‘in their hands’); the nominal expression for ‘hands’ is *m’áhka’a*, in Cora, but this form does not appear in (6). Similar observations can be made about (7):

- (7) *ú pú=é’-e-h-n’eeri-’i*  
 there DECL:3SGS=**far.away-outside-on.slope**-be.in.sight-STAT  
 ‘[The sky] *over there above the town* is (all) lit up.’

Again, the translation shows that a town is intended as a part of the background, but no explicit mention of the ‘town’ (*čah*) is made. We can thus see that conventionalization and lexicalization play an important role in the preverb system of this language.

Even more noteworthy is that in (6) and (7) we can also observe two different types of predicates: while the situation described in (6) is dynamic, (7) describes a stative concept (clearly marked so by the stative suffix). This is a contrast to all

<sup>5</sup> As my Bulgarian consultants observed, a strikingly similar verb *pri-po-znaja* exists in Bulgarian (cf. also Slovene and Serbo-Croatian *pri-po-znati*). The absence of any known contacts between Southern Slavs and Lithuanians, together with the absence of similar forms in Northern Slavic languages like Russian, might be indicative of a possible Proto-Balto-Slavic origin of the form at issue.

<sup>6</sup> Casad (1982:216-218) and Casad, Langacker (1985:247) list 17 basic prefixes for Cora: *á’-* ‘far away’, *u-* ‘inside’, *a-* ‘outside’, *ii-* ‘CISLOCATIVE’, *uu-* ‘TRANSLOCATIVE’, *h-* ‘on slope’, *n-* ‘on top’, *wa-* ‘EXTENSIVE/DISTRIBUTIVE’, *va’a-* ‘coming over’, *ra-* ‘on face’, *’i-* ‘up’, *ka-* ‘down’, *ta-* ‘across’, *’a-* ‘in middle’, *na-* ‘on edge’, *ku-* ‘around’, *ra’a-* ‘around a corner’.

the other examples we have considered so far, and it means that we can also expect the strings of preverbs in the two examples to perform different functions: in (6) the preverbs describe a *complex path*, whereas in (7) we have a case of PS used to represent the extensional domain of a *static location* configuration. This case is by no means rare in the language, as (8) illustrates:

- (8) a. *a-h-ká-n'eeri-'i*  
**outside-on.slope-down-be.in.sight-STAT**  
 'From a string of lights along the top, [the wall] is all lit up going downwards to its foot.'
- b. *a-n-tá-n'eeri-'i*  
**outside-on.top-across-be.in.sight-STAT**  
 'From a source at one side of the river, it is all lit up going across the water to the opposite bank.'
- c. *a-n-ʔí-n'eeri-'i*  
**outside-on.top-up-be.in.sight-STAT**  
 'It is all lit up around there at the top of the hill.'
- d. *a-i-ré'e-n'eeri-'i*  
**outside-cis-at.corner-be.in.sight-STAT**  
 'By a source coming from behind the house, it is all lit up at the corner of the house.'

In these examples, the addition of stacks of preverbs does not alter the meanings of the verbal bases: all the forms describe configurations of static location. This suggests that the lexicalization process, in cases such as these, might have affected the strings of preverbs, rather than the base and each preverb incrementally.

PS of the Cora type, which allows for the expression of static location as well as complex paths, though unusual from an Indo-European point of view, is found elsewhere in America. I can report an example from Pawnee, a Caddoan language genetically unrelated to Cora (Mithun 1999:372):

- (9) *ri-kata-iri-itik*  
 NARR:3A-**against-horizontally**-hold  
 'She holds (her/him) in her bosom.'

We can thus hypothesize that the use of PS for defining the extensional domains of static situations could be an areal trait typical of the Americas. However, given the paucity of our data, this remains to be proven by further research.

Another more general difference between PS in the two native American languages we have seen and Indo-European languages is the fact that the preverb systems of Cora and Pawnee bear no etymological relation to their adpo-

sition systems: Cora preverbs are rather related to adverbs (a situation which reminds of Hungarian), whereas for Pawnee it is even questionable whether the language has adpositions at all (see the discussion on the closely related Wichita in Baker 1996).

### 3. PS in Bulgarian

As already hinted at in the introduction, in some languages preverbs grammaticalize, evolving into telicity operators or aspectual markers. Slavic languages are the most typical example of this process.

PS too is especially productive in Slavic, and most especially in some Southern languages such as Bulgarian. Focusing on the colloquial language, Istratkova (2004) claims that up to seven preverbs can stack on some verbal bases. Atanasova's (2011) study of the Bulgarian National Corpus yielded forms with up to four preverbs, while Rojzenzon's (1974) monograph on PS in a cross-Slavic perspective reports forms with five preverbs. This number is what my research yields, too: despite a few differences in the opinions expressed by the sources and some disagreement among speakers, my consultants seem to agree on the fact that the Bulgarian language can tolerate quite well stacks of up to five preverbs on a given root, as in (10) below (L. Laskova, p.c.; see also Istratkova 2004):

(10) *iz-po-na-pre-raz.kazacha*

COMPL-DISTR-CUMULATIVE-ITER-narrate<sup>P</sup>:AOR:3PLS

'[They] retold everything little by little.'

In this form, the perfective base *kaz-* ('to show') is modified by the lexical prefix *raz-* ('around') to yield the meaning 'tell, narrate'. The form thus obtained is further modified by the repetitive *pre-*, after which the addition of the fixed quantifying preverb sequence *iz-po-na-* takes place. In this sequence, the cumulative *na-* teams up with the external completive *iz-* to yield the idea of an action affecting a massive amount of material (*na-*) and carried out until the complete exhaustion of the object (*iz-*). The distributive *po-* further adds the concept of an action performed incrementally.

The study of PS in Bulgarian involves different levels of analysis, as shown by Atanasova (2011): there are formal issues, such as which preverbs take part in stacking, how many elements a stack can include, and in which order they can appear. But there are also semantic issues, such as the problem of the lexicalization of *compound preverbs* like *o-po-* in *o-po-vestjavam!* 'to announce, proclaim'. Other semantic issues are *iteration* (where a preverb appears twice in a stack, as in the sequence *po-po-*), and *variable ordering* (as in *iz-po-draskvam!* 'to scratch all over' vs. *po-iz-draskvam!* 'to scratch a little'). In what follows, a discussion of these issues will be provided.

### 3.1. Formal issues

Atanasova (2011) is a descriptive study of literary Bulgarian. It analyses 2,680 verbal forms with multiple prefixes, mainly taken from *Bălgarski Tălkoven Rečnik*, plus additional material from the Bulgarian National Corpus (<http://search.dcl.bas.bg/>), as well as other sources.

Preverbatation in contemporary Bulgarian involves 18 preverbs: *v-/vǎ-, vǎz-, do-, za-, iz-, na-, nad-, o-/ob-, ot-, po-, pod-, pre-, pred-, pri-, pro-, raz-, s-/sǎ-, u-*<sup>7</sup>. All of these except *v-/vǎ-* and *ot-* can be found as a second-layer preverb (or further to the left) in PS constructions. Other prefixal morphemes (such as *zad-, prez-, bez-*) are not involved in PS. As with the other Slavic languages, most Bulgarian preverbs are etymologically related to prepositions; exceptions are *pre-, pro-* and *raz-*.

PS can occur with various types of verbal bases (Atanasova 2011):

- A. Underived verbal bases: *po-na-gleždam*<sup>l</sup> ‘keep an eye on sb’
- B. Nominal bases: *o-po-vestjavam*<sup>l</sup>/*o-po-vestja*<sup>p</sup> ‘announce, proclaim, publish’ (cf. *vest* ‘news’)
- C. Derived verbal bases: *raz-o-čarovam*<sup>l,p</sup> ‘dispel, disappoint’ (cf. *o-čarovam*<sup>l,p</sup> ‘enchant’, denominal, from *čar* ‘spell’)
- D. Bound verbal roots: *vǎz-pri-émam*<sup>l</sup>/*vǎz-pri-éma*<sup>p</sup> ‘perceive, agree’ (cf. *priemam*<sup>l</sup>/*priema*<sup>p</sup> ‘receive, accept, give shelter’, but *emvam*<sup>l</sup>/*emna*<sup>p</sup> ‘take, catch, attack’)

With simple, underived verbal bases (Type A) the preverbs may be added either incrementally or as a lexicalized preverb compounds. The semantic drift, if there is any, may be slight, and it is not always clear whether a given combination of preverbs forms a compound or not. In Type B the preverbs are clearly added as a compound, as a singly-prefixed form *\*po-vestjavam*<sup>l</sup> does not exist. Types C and D are instead by definition cases of incremental preverbatation (a simple stem *\*čarovam*<sup>l</sup> is not available for Type C, nor is an underived form *\*emam*<sup>l</sup> available for Type D).

Atanasova’s approach provides an insightful, fine-grained classification methodology for dealing with PS as the phenomenon manifests itself in Bulgarian. However, a few observations are in order. The author correctly excludes from her study verbs formed by prefixed nominal roots, such as *o-bezcvetjavam*<sup>l</sup>/*o-bezcvetja*<sup>p</sup> ‘bleach, discolor’ (*cvjat* ‘color’ > *cvet-en* ‘colored’ > *bez-cvet-en* ‘bleached’ > *o-bez-cvet-ja* ‘to bleach’<sup>8</sup>). Loan verbs with etymological preverbs are also not considered (quite understandably).

<sup>7</sup> The common Slavic prefixes *\*vy-* and *\*nizь-* do not have productive reflexes in modern Bulgarian.

<sup>8</sup> It must be noted that in forms such as *o-bez-cvetja* only *o-* is a *preverb* in our sense, *bez-* being a negative *prefix* that modifies an adjectival stem at an intermediate stage of the derivation of the form at issue. Thus, we cannot speak of PS in this form.

On the other hand, the author does not deal with the negative prefix *ne-* in the combination *ne-do-*, since this prefix is not a preverb *strictu sensu* (verbs such as *ne-do-viždam!*/*ne-do-vidja*<sup>9</sup> ‘be short-sighted’ are not considered instances of PS). Problems may emerge if this assumption is carried on to the level of cross-Slavic comparison, however, since we have formations like OCS *vъz-ne-na-viděti* ‘despise, hate’ (Rojzenzon 1974:152). Even though we can agree with the author that *ne-* is not a preverb, this element does in fact take part in PS in OCS (and other Slavic languages). Most likely, it forms compound preverbs with the elements occurring to its immediate right: OCS *vъz-[ne-na-]viděti* could then be analyzed as an instance of double preverbatation, and Bulgarian *[ne-do-]viždam* as an instance of single preverbatation.

### 3.2. Semantic issues

3.2.1. LEXICAL/SUPERLEXICAL DISTINCTION. Following Smith’s (1991/1996) distinction between *lexical* (perfectivizing or resultative) and *superlexical* (phasal or adverbial) preverbs, Istratkova (2004) proposes that only the innermost preverb in a stack can be lexical, all the others being superlexical. The meanings of superlexical preverbs are given as follows by Istratkova (2004:312)<sup>9</sup>:

(11) BULGARIAN SUPERLEXICAL PREVERBS (ISTRATKOVA 2004):

<i>pre-</i>	‘to do again’
<i>raz-</i>	‘to do in excess, to the very end, in many directions’
<i>na-</i>	cumulative; requires plural or mass nominal arguments
<i>po-</i>	<b>distributive over subjects and objects</b>
<i>iz-</i>	‘to do completely’
<i>po-</i>	<b>attenuative: ‘do to a certain extent, with low intensity’</b>
<i>za-</i>	‘to begin’
<i>do-</i>	‘to finish’
<i>po-</i>	<b>delimitative: ‘do for a while’</b>

As can be noticed, *po-* is listed three times (with three different semantic values). The semantic range covered by Bulgarian superlexical preverbs varies somewhat with respect to other Slavic languages: e.g. the perdurative *pro-* and the saturative *na-* found in Russian have no Bulgarian counterpart.

3.2.2. PREVERB COMPOUNDS. The distinction between PS on *derived verbal* vs. *nominal* bases is of crucial importance, since it allows to distinguish two

<sup>9</sup> The list of superlexical preverbs reported is not to be conceived as a hierarchy in Cinque’s (1999) sense. Istratkova (2004:318), however, does in fact propose such a hierarchy for Bulgarian. See further (3.2.3, 3.2.4 and the conclusions) for specific issues relevant to phenomena suggestive of hierarchical properties.

key procedures giving rise to PS: *recursive/incremental preverbatation* vs. *adjunction of compound preverbs*. Derived verbal bases can build stacks of prefixes incrementally, i.e. for the doubly prefixed verb *po-văz-măžeja*<sup>P</sup> ‘become a little more virile’ we also have a corresponding verb *văz-măžeja*<sup>P</sup> ‘become a man’, with one single preverb. Things are different with *o-po-vestja*<sup>P</sup> ‘announce, proclaim’, for which no equivalent *\*po-vestja* exists in Bulgarian, as we have seen. The class of compound preverbs can be determined precisely. Atanasova (2011) reports 18 combinations: *iz-pre-*, *o-na-*, *o-po-*, *o-pre-*, *ob-za-*, *po-do-*, *pod-s-/să-*, *pre-o/ob-*, *pred-u-*, *raz-po-*, *raz-pre-*, *raz-pro-*, *s-po-*, *să-pri-*, *să-v-*, *u-s-*, *za-o/ob-*, *za-v-*. The preverbs *văz-*, *ot-* and *nad-* do not form compound preverbs.

The semantic value of some of these prefixal compounds can be compositional. An example is *iz-pre-* (numerous.agents-prolonged/tiresome.action): *iz-pre-vărvjam*<sup>I</sup> *se/iz-pre-vărvja*<sup>P</sup> *se* ‘for many or all to go, passing one after another’. As a further example, we can quote *za-o/ob-* (INGR-extensive.action): *za-ob-lačavam se/za-ob-lača se*<sup>P</sup> ‘become cloudy, overcast’. Other compounds instead seem to be processed as a unit, not compositionally. This seems to be the case of the string *să-v-* (‘for the agents to perform the action simultaneously’ or ‘to turn out to be the same as sb or sth’): *să-v-padam*<sup>I</sup>/*să-v-padna*<sup>P</sup> ‘concur, clash, coincide’. Another such string is *pred-u-* (‘action is performed before a given limit’): *pred-u-preždavam*<sup>I</sup>/*pred-u-predja*<sup>P</sup> ‘forewarn, admonish’.

The innermost preverbs of a stack (generated by *primary prefixation*) can express meanings related to space as well as aspectuality and some adverbial functions (such as i.a. the *attenuative*).

The preverbs occupying the second slot (generated by *secondary prefixation*) can also express such types of meanings, but locative concepts are drastically reduced.

The third (and fourth) preverb layers show a further semantic reduction, with the aspectual meanings being reduced to phase-related concepts; the adverbial meanings such as the *attenuative* are predominant in this domain.

In some cases, the polysemy of a base verb can be inherited by the PS construction (e.g. *po-za-silvam*<sup>I</sup> *se/po-za-silja*<sup>P</sup> *se* I. ‘to become a little stronger’; II. ‘to walk a little faster’). Quite often, though, PS contributes to restricting the semantics of a verb. The prefixed verb *ot-minavam*<sup>I</sup>/*ot-mina*<sup>P</sup> has four meanings: A. ‘to go away from sth/beyond sth’; B. ‘to pass by without stopping or greeting sb’; C. ‘to ignore, pay little attention’; D. ‘for a pain/illness to disappear’). But, as Atanasova (2011) notes, *po-ot-minavam*<sup>I</sup>/*po-ot-mina*<sup>P</sup> is only compatible with meanings A and D (i.e., it can only mean ‘to go a little further away from sth’ or ‘for an illness/pain to decrease a little’). This situation reminds of the Sanskrit facts illustrated by Papke (2010) and seen above.

3.2.3. ITERATION. There are only four preverbs that can undergo iteration in Bulgarian (*po-*, *iz-*, *pre-*, *o-/ob-*). We can talk about two types, differing in terms of adjacency:

- A. Adjacent: *po-po-gleždam<sup>l</sup>* ‘have a look every now and then’  
 B. Non-adjacent: *pre-raz-pre-deljam<sup>l</sup>/pre-raz-pre-delja<sup>p</sup>* ‘redistribute, replan’

Iteration is merely *formal*, never *semantic*: the sequence [*po-po-*] in *po-po-gleždam<sup>l</sup>* conveys a distributive sense that can be ascribed either to the outer preverb (which could be placed in a hierarchically higher position in the derivation, as Istratkova claims) or the preverb sequence as a whole (since distributivity features are commonly expressed by the iteration of a morpheme, cross-linguistically). The inner preverb seems to be delimitative, rather than attenuative<sup>10</sup>. In *pre-raz-pre-deljam<sup>l</sup>*, on the other hand, the inner *pre-* is lexical and the outer one iterative. There are also combinations of different prefixes with very similar meanings, which at first sight might be taken as suggestive of semantic iteration<sup>11</sup>:

- (12) *technologijata, po kojato se pre-váz-pro.iz.vežda edin takáv artefakt*  
 the.technology by which REFL ITER-ITER-produces<sup>l</sup> one such artifact  
*v dnešno vreme, ne dava vázmožnostta toj da bǎde na sto procenta*  
 in nowadays time not gives<sup>l</sup> the.possibility it that will.be by 100 percent  
*ednakǎv po kriterii kato teglo, razmeri [...]*  
 identical on criteria like weight dimensions [...]  
 ‘The technology by which such an artifact is reproduced nowadays does not allow [the copy] to be 100% identical (to the original) in terms of criteria such as weight, size [...]

The form *prevázproizvežda se* ‘it is reproduced’ shows four preverbs stacked on the root  $\sqrt{\text{ved}}$  ‘lead’ (which continues OCS *vesti* and only in some dialects surfaces as a pair *veda<sup>p</sup>/veždam<sup>l</sup>*): the preverbs of the first two layers are however lexicalized, as is evidenced by the semantic drift (*iz-veda<sup>p</sup>/iz-veždam<sup>l</sup>* ‘take out, lead’ > *pro-iz-veda<sup>p</sup>/pro-iz-veždam<sup>l</sup>* ‘produce, carry out, promote’). The preverb *váz-* in *váz-pro-iz-veda<sup>p</sup>/váz-pro-iz-veždam<sup>l</sup>* ‘reproduce, renew’ indicates the production of an object similar to an original, whereas *pre-* can be taken to mean ‘again, anew’, or else it could emphasize the idea of similarity to the original already expressed by *váz*<sup>12</sup>. Anyhow, we cannot speak about semantic iteration, even in such cases.

Turning our attention to other Slavic varieties, there is even one attested case of what seems to be the non-adjacent iteration of a preverb stack similar to the one seen in (12). It is described as the Perm dialect of Russian, as recorded in the 1930s (SRNG 6:27, cited in Ludwig 1995):

<sup>10</sup> This could be a counterexample to Istratkova’s (2004) claim that the delimitative *po-* does not allow for stacking.

<sup>11</sup> Example accessed through Google on 4/17/2015.

<sup>12</sup> I am indebted to the judgements of Ilyana Krapova and Svetlana Slavkova on this point.

- (13) a. *nado izbušku vyspovyizobichodit'*  
 necessary little.izba.F.SG.ACC clean.up.well:INF  
 'We must clean up well our little *izba*.' (6 preverbs!)

a'. [*vy-iz-po-[vy-iz]-obi-chodit'*  
 [COMPL-COMPL-]DISTR-[COMPL-COMPL-]around-walk

I analyze the form *vyspovyizobichodit'* as a case of a compound preverb made up of two different completive preverbs (*vy-+iz-*) and added to a base containing a lexicalized preverb (*obi-chodit'* 'tidy up'); the compound preverb seems to be iterated after the merger of a distributive *po-*. The overall impression one gains from this form is that we have to do with nothing less than 6 preverbs, even though the synchronic operations at play seem to be no more than 3. The iteration of the completive preverbs, once again, could be explained as the expression of a distributivity feature, with no need to hypothesize semantic iteration.

3.2.4. VARIABLE ORDERING. When two preverbs appear stacked in reverse order on the same verbal base, one of three semantic effects may obtain:

- A. Antonymy: *iz-po-draskvam*<sup>l</sup>/*iz-po-draskam*<sup>P</sup> 'to scratch all over' vs. *po-iz-draskvam*<sup>l</sup>/*po-iz-draskam*<sup>P</sup> 'to scratch a little'.  
 B. Idiosyncratic drifts (due to lexicalization): *pre-za-pisvam*<sup>l</sup>/*pre-za-piša*<sup>P</sup> 're-register' vs. *za-pre-pisvam*<sup>l</sup> 'begin to transcribe/rewrite'.  
 C. Synonymy: *iz-na-draskvam*<sup>l</sup>/*iz-na-draskam*<sup>P</sup> 'to scratch all over' vs. *na-iz-draskvam*<sup>l</sup>/*na-iz-draskam*<sup>P</sup> 'id.'.

The antonymy effect seems to fall out neatly from Istratkova's (2004) hierarchy of superlexical preverbs:

- (14) HIERARCHY OF SUPERLEXICAL PREVERBS (ISTRATKOVA 2004):

**attenuative** *po-* > *za-* > *do-* > ***iz-*** > **distributive** *po-* > *na-* > *raz-* > *pre-* > superlexical prefix/semelfactive suffix > lexical prefix > VP

The hierarchy predicts that *po-* in *iz-po-draskvam* and *po-iz-draskvam* should spell out two different syntactic projections (distributive in the former case and attenuative in the latter): given the meanings reported for the two forms as reported above, the prediction seems to be borne out<sup>13</sup>.

However, we must distinguish grammaticalization from lexicalization: whereas the former is likely to generate hierarchy effects, the latter is apparently at work in the remaining cases described above. The problem is too complex to be dealt with in this paper, but the first step toward a solution should be a thorough semantic analysis of each form involved.

<sup>13</sup> I am grateful to an anonymous reviewer for drawing my attention to the possibility of a hierarchy effect in the point at issue.

### 3.3. PS and viewpoint aspect

The issue of *viewpoint aspect*, as applied to verbs with PS, has been a matter of controversy. The most widely accepted guiding principle is that the last added aspectually relevant affix (including suffixes) determines viewpoint: thus, from *piša<sup>l</sup>*, we obtain *na-piša<sup>p</sup>*. Is then the prefix *na-* a marker of perfective viewpoint (cf. Istratkova 2004)? Once we obtain the secondary imperfective *na-pis-v-am<sup>l</sup>*, what will be the viewpoint value of a form with PS like *pre-na-pis-v-am* ‘rewrite’? This form differs from *na-pis-v-am* only for the presence of an additional preverb. But if preverbs are markers of perfectivity, this form should be perfective. As a diagnostic test, Atanasova (2011) constructs a sentence where the polyprefixed verb is used in a negative imperative context:

- (15) *ne pre-na-pisvaj teksta otnačalo, a redaktiraj samo*  
 not rewrite<sup>l:IMP:2SG</sup> the.text from.the.start but edit<sup>l:IMP:2SG</sup> just  
*sāotvetnite mesta, kato se sāobraziš s posočenite beleški*  
 the.relevant places like REFL comply<sup>p:IMP:2SG</sup> with the.indicated comments  
 ‘Don’t rewrite the text right from the start, just edit the relevant passages, so you comply with the enclosed comments.’

Because a negative imperative context excludes the perfective viewpoint in Bulgarian, the form must be considered imperfective.

As noted by Istratkova (2004), then, stacked preverbs do not uniformly contribute to perfectivity in Bulgarian. The so-called *perfectivizing* preverbs actually *quantize* the predicate; preverbs from the second layer on are all superlexical. In this respect, Bulgarian differs from other Slavic languages such as Russian, Ukrainian and Polish<sup>14</sup>. Ludwig (1995) shows how these languages do in fact allow some outer prefixes to perfectivize a singly-prefixed verb, even when the base verb is imperfective. To see this, we can consider the Russian aspectual pair *na-birat<sup>l</sup>/na-brat<sup>p</sup>* ‘gather a lot, assemble’: a further preverbation layer results not in an aspectual pair, but rather in two aspectually equivalent perfectives: *po-na-birat<sup>p</sup>=po-na-brat<sup>p</sup>* ‘to gather a lot, little by little’. This situation is a contrast to Bulgarian, where *po-na-biram<sup>l</sup>/po-na-bera<sup>p</sup>* can be argued to form a pair with opposite aspectual values. In Russian, Polish, and possibly also in Ukrainian, this phenomenon of *reperfectivization of imperfective prefixed verbs* mainly happens with *po-* and *na-*. As Tatevosov (2008) notes, reperfectivization even involves verbal bases with PS and the secondary imperfectivization suffix *-(y)vat<sup>l</sup>*, if the second preverb has been merged after the suffix, as in [*na-[[za-pis]<sup>p</sup>-yv<sup>l</sup>at<sup>l</sup>]<sup>p</sup>*] *diskov* ‘record a lot of CDs’. In other words, for Russian one has to know the history of a particular form to know its aspectual value; such a problem does not exist in Bulgarian.

As far as the interactions between viewpoint aspect and PS are concerned, then, we have thus unveiled an important difference between languages like Rus-

<sup>14</sup> I am grateful to Francesca Fici for helpful discussion on this point.

sian and Polish on the one hand and Bulgarian on the other hand: while in Russian and Polish PS some preverbs of the second layer and higher can still maintain their perfectivizing/quantizing force, preverbs of these layers are aspectually inert in Bulgarian (as Istratkova 2004 and Atanasova 2011 show). This means that PS can actually take part in defining the aspectual profile of any Slavic language.

#### 4. Conclusions

The cross-linguistic considerations on the phenomenology of PS exposed in this paper show that the Slavic preverb system, although unique in the constellation of its properties, works according to principles which are not unique to Slavic, especially as far as the grammaticalization of aspectual meanings is concerned. Given the high degree of similarity between the phonological shapes of preverbs and adpositions in Indo-European languages generally, it is tempting to equate the two systems: in the case of Slavic, this means equating preverbs with prepositions. On a typological level, however, we must bear in mind that the Indo-European phenomenology is a rare case, and that the most privileged interaction of the category of preverbs is with adverbs. Even so, a grammaticalization path leading from preverbs to markers of aspectual meanings can be observed in typologically very different languages: in Cora (Casad 1984) the spatial preverbs *wa-* ‘throughout’ and *ta-* ‘across’ often function as perfectivizers (or quantization/telicity operators?). They can even stack in the sequence *wa-ta-* to emphasize the completion of an event.

In a cross-linguistic perspective, Indo-European PS obeys a semantic constraint: it is limited to dynamic predicates. The mechanism by which it is generated is mainly the (incremental) conventionalization and lexicalization of compounds of preverbs and verbal bases. The phenomenon may well go back to the proto-language, but we cannot know whether other mechanisms (such as the formation of compound preverbs) were already active at that stage. In any case, it is only in the Slavic languages that PS developed into the phenomenon we can observe now. In these languages, preverbs extended their semantics, very likely entering more than one grammaticalization path; these paths determined their evolution from spatial particles to superlexical preverbs, and from telicity markers to markers of quantization and, later on, perfectivity.

These paths, however, seem to have taken different directions in different languages such as Bulgarian and Russian: superlexical preverbs, in particular, have not gained any quantizing or perfectivizing power in Bulgarian, whereas they have in Russian. This difference is responsible for the tendency of Russian PS to be associated with perfectivity, whereas Bulgarian PS tends to be aspectually inert.

Some phenomena, such as variable preverb ordering and iteration, may be explained by means of a hierarchy, as proposed by Istratkova (2004). This approach is promising; however, working out the details of the cross-Slavic (as well as cross-Indo-European and more generally cross-linguistic) variation in the

domain of PS is a task that will require intensive research at the levels of both morphosyntax and semantics.

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## **Abstract**

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### ***Cross-linguistic considerations on preverb stacking (with special reference to Bulgarian)***

The term *preverb stacking* (PS) designates the co-occurrence on one verbal base of two or more prefixes bearing spatial, aspectual, or quantificational meanings. The phenomenon is best known from its high productivity in the Slavic languages. However, PS is also attested in several other Indo-European branches, and it is found even in genetically unrelated and geographically remote languages. This paper will provide a first attempt at a cross-linguistic typology of PS, but it will also pay special attention to problems typical of Slavic languages (such as the interaction of PS and the aspectual value of the verb in terms of the typically Slavic *perfective* vs. *imperfective* dichotomy). Special attention will be paid to Bulgarian, where the phenomenon is especially productive.

**Keywords:** Preverbs, verbal prefixes, stacking, aspect, Bulgarian