Intermediate Prefixes in Russian

Sergei Tatevosov
Moscow State University

1. Introduction: lexical vs. superlexical prefixes in Russian

It has been widely recognized that verbal prefixes in Slavic languages form a heterogeneous class as to their semantic and syntactic properties (e.g., Filip 1999, 2005 and elsewhere). Specifically, prefixes fall into two types, lexical prefixes (LPs) and superlexical prefixes (SLPs), or internal and external. For Russian, this distinction was established and extensively motivated in Babko-Malaya 1999, Ramchand 2004, Romanova 2004, 2006, Svenonius 2004a,b, DiSciullo, Slabakova 2005.

Inventories of SLPs identified by different authors may be slightly different, as (not exhaustively) represented in Table 1. The vast majority agree however, that the list of superlexicals includes at least inceptive za-, delimitative po- and cumulative na-, and in what follows I will take these prefixes as paradigmatic instances of SLPs.

| TABLE 1 AROUND HERE |

SLPs differ from LPs in a number of significant distributional and semantic properties. Semantically, SLPs express adverbial-like meanings (cf. translations in Table 1) that combine with the meaning of a verbal stem in a systematic and predictable way; LPs tend to have idiosyncratic semantics (not counting a few directional prefixes combined with motion verbs, like vo-jti ‘come in’ and vy-jti ‘come out, exit’). (1)-(2) illustrate a contrast between SLPs za- and po- and corresponding LPs za- and po-:

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1 In what follows, I represent examples from Russian using standard transliteration conventions recommended by Slavic and East European Journal. When necessary, morphophonological representations are additionally provided. While I agree completely with the FASL anonymous reviewer that the (transliterated) orthography is not a reliable source of morphological generalizations, I do not provide morphophonological representations for all the material. On the one hand, verbal prefixation addressed in this paper does not involve a large amount of morphophonology. On the other, the field keeps developing — see, e.g., recent proposals by Halle and Matushansky (2004) and Matushansky (2007) that differ from classic Jakobsonian morphophonology in a number of crucial respects. Discussing a lot of surrounding issues will take me too far from the main topic of the present paper, however.
SLPs
a. za-pisat’ ‘start writing’  b. po-pisat’ ‘write for a while’
za-begat’ ‘start running’  po-begat’ ‘run for a while’
za-pet’ ‘start singing’  po-pet’ ‘sing for a while’

LPs
a. za-pisat’ ‘write down, record’  b. po-ljubit’ ‘fall in love’
za-ryt’ ‘dig in’  po-stroit’ ‘build’
za-stroit’ ‘build up’  po-dvinut’ ‘move’

Unlike SLPs in (1), which invariably express inception of a process (za- in (1a)) or indicate that the process is temporally bounded and its duration is relatively short (po- in (1b)), semantic contribution of corresponding LPs in (2) can hardly be reduced to a simple and uniform meaning component.

SLPs do not affect the argument structure, never add an argument to the root verb (Romanova 2004, 2006), do not make the object obligatory (Babko-Malaya 1999, Svenonius 2004a), never change the participant relations of an original object (Ramchand 2004), and do not license unselected objects (Svenonius 2004a:236). LPs have the opposite properties. In case of multiple prefixation, SLPs occur outside LPs, never inside. Further differences between SLPs and LPs mentioned in the literature include telicity (Romanova 2006), lexical restrictions and selection (see Svenonius 2004a, Romanova 2004, 2006 on directed vs. non-directed motion verbs, Babko-Malaya 1999 on so-called I-roots, and Svenonius 2004a and Romanova 2004 on imperfectivity), derivational potential (see Svenonius 2004a and Romanova 2004 on secondary imperfectivization, Romanova 2006 on passive past participle formation and Babko-Malaya 1999 and Svenonius 2004a on nominalization), and iteration/stacking (DiSciullo, Slabakova 2005). For the sake of space I will not go into further details here; a few relevant issues will be addressed in sections 3-7.

There does not seem to be a general agreement about how LP/SLP distinction is syntactically represented. Olga Babko-Malaya (1999:76) in her foundational work suggests that “lexical” prefixes…are adjoined to a lexical head, and ‘superlexical’ prefixes…are adjoined to a functional category.” Accordingly, she analyses sentences like Ivan s-pel pesnju ‘Ivan sang a song’ and Ivan za-pel pesnju ‘Ivan started singing a song’ as (3a-b) respectively.

LPs
d. za-pisat’ ‘write down, record’  b. po-ljubit’ ‘fall in love’
za-ryt’ ‘dig in’  po-stroit’ ‘build’
za-stroit’ ‘build up’  po-dvinut’ ‘move’

Unlike Babko-Malaya, Svenonius (2004:206) takes LPs to be essentially small clause predicates, assuming a Result head below V.
SLPs are analyzed as adverbials occupying a specifier position within the Asp[ect] projection above V. (SLPs in this system are phrases, not heads). Accordingly, LP-verbs like za-brosit’ (mjač v vorota) (‘into-throw a ball in the goal’) involve VP-internal prefixes: [VP throw [RP ball [R za-[VP in goal]]]). SLP-verbs like za-brosat’ (‘INCEP-throw’) contain VP-external prefixes in Spec, Asp: [AspP [PP za-] [Asp′ [VP throw [DP ball]]]]

For Ramchand (2004) all prefixes are heads, not maximal projections. She shares the view that LPs are R[esult] heads with Svenonius (2004a-b), but differs in what she proposes for SLPs: some SLPs (SPrefixes, in her terminology) merge as Asp heads, the rest of SLPs (her DPrefixes) are Cmlt heads that take AspP as a complement.

Romanova (2004:271-272) focuses on how SLPs are located with respect to other functional heads, v and Asp, concluding that all of them are above Asp, and some (e.g., delimitative po-) are also above V: [DlmtP po- [vP … [AspP … [VP … …]]]]. A few other superlexicals (e.g., attenulative prefixes pri- and pod-), Romanova argues, merge below v: [VP pri- [AspP … [VP … …]]]). Finally, Romanova (2006:114) establishes a highly articulated structure below V, thus deriving characteristics of various subclasses of lexical prefixes.

What all these otherwise very different proposals have in common is an intuition that the observed differences between two classes of prefixes can be reduced to their different positions in a hierarchical syntactic structure, hence accounted for. All the authors agree that lexical prefixes originate VP-internally, hence their idiosyncratic meanings, sensitivity to argument structure and a bulk of other characteristics, while superlexicals attach VP-externally, and that is the reason why they occur outside LPs and possess different (if not the opposite) properties.

With this background in mind, in what follows I will argue for a more articulated hierarchical structure, whereby there is a separate projection for intermediate prefixes (ITMPs), distinct from LPs and SLPs. Evidence for this structure comes from the distribution of two prefixes, which pattern with neither SLPs nor LPs, namely, completive do- and repetitive pere- listed in (4a-b) and exemplifies in (5a-b).

(4) Intermediate prefixes:
   a. completive (CMP) do- ‘complete doing sth’: do-pisat’ ‘complete writing’
   b. repetitive (RPT) pere- ‘do sth again, re-do’: pere-pisat’ ‘re-write’

(5) a. Vasja do-pisal pis’mo.
   V. CMPMVTM [CMPP TM p]MVTM leter ACC
   ‘Vasja completed writing the letter.’
b. Vasja *pere-*pisal pis’mo.
V. writePST:M letter:ACC
‘Vasja re-wrote the letter.’

In the literature, the repetitive *pere-* is never listed among SLPs. Furthermore, discussing examples like (8b) Babko-Malaya 1999:200-201 claims explicitly that *pere-* is a lexical prefix. The same is true of *do-* except for Ramchand 2004 who characterizes *do-* (a terminative prefix, in her terminology) as an SLP. In the subsequent sections evidence will be presented that *do-* and *pere-* are neither LPs nor SLPs and that their distribution is best accounted for on the assumption that they originate within a separate intermediate projection located above LPs but below SLPs. Below I present six arguments supporting this analysis. Also, relying on scopal facts, I will suggest that ITMPs can merge either above or below vP. Combining these suggestions yield structures in (6a-b).

(6) a. [[ExtP SLPs [[ItmP* ITMPs [v ... [vP ... LPs ... ]]]]]
   b. [[ExtP SLPs [v ... [ItmP* ITMPs [vP ... LPs ... ]]]]]
   where ExtP is a projection of superlexical prefixes, ItmP is a projection of intermediate prefixes, ‘X*’ reads as ‘one or more instances of X’

Before going on, I would like to make explicit three basic assumptions on which the subsequent discussion relies. First, I assume, with Ramchand 2004 and Romanova 2004, 2006 that SLPs head a functional projection (not necessarily immediately) dominating vP. This projection is labeled as ExtP in (6). (However, I do not see any reasons for the below analysis to be incompatible with alternative views of SLPs advocated in the literature, e.g. with Svenonius’ (2004b) proposal that SLPs are maximal projections.) Secondly, I suggest that the secondary imperfective morpheme */-yva/-/-ivaj/- heads a functional projection, too. In what follows this projection will be labeled as AspP. As for the position of Asp with respect to other functional heads, most importantly, with respect to v, I assume, contrary to Romanova 2004, that the secondary imperfective */-yva/- merges above vP. A number of arguments for this view can be found in Pereltsvaig 2002, 2004 and Pazelskaya, Tatevosov, to appear.

Thirdly, I share the view that lexical prefixes originate VP-internally, but remain agnostic about whether they are lexical V heads that combine with a verbal root presyntactically (Babko-Malaya 1999) or syntactic heads originating within some projection dominated by VP (Svenonius 2004a, Ramchand 2004, Romanova 2006). Presumably, below generalizations do not force us to adopt either of these two types of analysis.
With these assumptions made clear, we have everything we need to proceed to the characteristics of intermediate prefixes. The rest of the paper is organized as follows. In sections 2-7 I present my arguments for the analysis in (6) which rely on semantic characteristics of ITMPs (section 2), on multiple prefixation (section 3), stacking (section 4), aspectual selection (section 5), secondary imperfectivization (section 6), and nominalization (section 7). Finally, in section 8 I will identify the position of ITMPs with respect to \( v \). Main findings of this paper are summarized in the conclusion.

2. The first argument: compositionality and argument structure

The first argument for the analysis in (6) has to do with the semantic characteristics of \( do- \) and \( pere- \) and with the argument structure of stems containing these prefixes. This argument suggests clearly that \( do- \) and \( pere- \) are not LPs, although not as clearly that they are not SLPs.

As was mentioned above, the distributive \( pere- \) is never identified in the literature as an SLP; the completive \( do- \) is only listed among SLPs in Ramchand 2004. In a systems assuming a binary LP/SLP distinction this amounts to the claim that both prefixes are LPs. But if a distinguished characteristic of LPs is that they have idiosyncratic meanings, see (1)-(2) above, \( do- \) and \( pere- \) are not LPs. Unlike LPs, these prefixes are fully compositional: \( pere- \) renders the meaning of repetition, while \( do- \) contributes the meaning of completion:

(7) a. \( do\text{-pisat} \) ‘complete writing’ \( pere\text{-pisat} \) ‘write again, re-write’
    b. \( do\text{-myt} \) ‘complete washing’ \( pere\text{-myt} \) ‘wash again’
    c. \( do\text{-otkryt} \) ‘complete opening’ \( pere\text{-izbrat} \) ‘elect again’

If Svenonius 2004 is right in suggesting that LPs tend to develop highly idiosyncratic meanings because they originate VP-internally (since it is VP that is a domain for idiom assignment), the fact that \( do- \) and \( pere- \) are strictly compositional not only suggests that they are distinct from LPs but also that they are external to VP.

Argument structure facts point towards the same conclusion. Comparing clear instances of SLPs and LPs, one can observe that the former but not the latter can affect argument relations established by a non-derived stem. For instance, the verbal stem \( \text{gryz-} /\text{griz-} \) ‘gnaw’ selects for affected, not effected objects, hence \( \text{gryzt’ kost} \) ‘gnaw a hole’ is appropriate, but *\( \text{gryzt’ dyru} \) ‘gnaw a hole’ is not. The delimitative verb \( \text{po-gryzt’} \) derived from \( \text{gryz-} \) with the SLP \( \text{po-} \) exhibits the same pattern, cf. \( \text{po-gryzt’ kost} \) ‘gnaw a bone for a while’ vs. *\( \text{po-gryzt’ dyru} \). In contrast,
the lexical pro- ‘through’ creates a verb pro-gryzt’ readily accepting the
effected object ‘hole’: pro-gryzt’ dyru ‘gnaw a hole (in sth.)’.

Unlike true LPs, do- and pere- never affect the arguments structure
of a verbal root. Compare (8a-b) exemplifying a non-prefixed stem
mes- /m’ot-/ ‘sweep’ and the same stem combined with the LP s- ‘off’
in (9a-b) and with the completive do- in (10a-b):

(8) Non-prefixed stem
a. mesti list’ja
   sweepINF leaveACC:PL
   lit. ‘sweep (the) leaves’
   b. mesti dorożku
      sweepINF pathACC
      ‘sweep (the) leaves’

(9) Lexical prefix s-
   a. s-mesti list’ja (s dorożki)
      off-sweepINF leaveACC:PL off pathIGN
      ‘sweep (the) leaves (off the path)’
      off-sweepINF pathACC
   b. #s-mesti dorożku

   ‘sweep a/the path (off sth)’

(10) Prefix do-
   a. do-mesti list’ja
      cmpsweepINF leaveACC:PL
      ‘complete sweeping (the) leaves’
   b. do-mesti dorożku
      cmpsweepINF pathACC
      ‘complete sweeping a/the path’

Mesti ‘sweep’ is a verb of surface contact through motion. In its non-
derived form in (8a-b), mesti can take either a moving substance, (8a), or a
contacted surface, (8b), as a direct object. Attaching the LP s- in (9)
effectively eliminates the second possibility. In contrast, if the completive
do- merges with a stem, as in (10), the argument structure remains intact.

Pere- shows exactly the same behavior. Take pisat’ /p’isa-t’/ ‘write’
as an example, a creation verb which subcategorizes for an effected
object. DPs denoting things that do not come to existence as a result of
writing are at least awkward as the object of pisa- for most speakers, cf.
pisat’ pis ma ‘write (the) letters’ and pisat’ diski ‘record (the) CDs’. The
LP za- combining with pisa- induces a meaning change (‘write’ \rightarrow
‘record’) which reverses argument relations: ‘CDs’ in za-pisat’ diski
‘record the CDs’ is fine, ‘letters’ in za-pisat’ pis ma ‘record the letters’
is definitely odd. Crucially, pere-pisat’ with the repetitive pere-
patterns with pisat’ (OK pere-pisat’ pis mA ‘re-write the letters’), not with za-
pisat’ (pere-pisat’ diski ‘record the CDs again’).2

Therefore, both do- and pere- resemble SLPs, not LPs, in not
affecting the argument structure of a stem. To the extent that producing
effect on the argument structure is a characteristic property of LPs
(Svenonius 2004a, Ramchand 2004), do- and pere- should not be lexical.

2 The repetitive perepisat’ ‘write again, re-write’ is not to be confused with a
homonymous verb meaning ‘copy’, which is derived by the lexical prefix pere-.
3. The second argument: multiple prefixation

My second argument that separates ITMPs clearly not only from LPs, but also from SLPs, comes from multiple prefixation. We know that SLPs occur outside LPs, never inside, cf. *na-za-pisyvat' ('za-na-pisyvat') kuču diskov 'record a lot of CDs' and *po-za-pisyvat' ('za-po-pisyvat') diski 'record CDs for a while' where the SLPs na- and po- attach on top of the stem containing a lexical prefix za-.

Given this restriction, the first thing to note about do- and pere- is that if a stem contains both an LP and an ITMP, the latter is obligatorily outside the former. *Pere-za-pisyat' ‘record again’ and *do-za-pisyat' ‘complete recording’ contrast in this respect with ungrammatical *za-pere-pisyat’ and *za-do-pisyat’; the same contrast obtains with a wide variety of other stems, cf. *pere-na-vesit’ ‘hang again’ and *na-pere-vesit’, as well as *do-vy-gruzit’ ‘complete unloading’ and *vy-do-gruzit’.

In such examples do- and pere- look like instances of SLPs. However, if do- and pere- co-occur with genuine SLPs, their position is inside, as if they were LPs. Specifically, the delimitative po- attaches on top of ITMPs in examples like *po-pere-pisyat’ ‘re-write sth for a while’ (cf. *pere-po-pisyat’) and *po-do-pisyat’ ‘spend some time completing writing sth’ (cf. *do-po-pisyat’). The same is true of other SLPs, e.g. of the cumulative na-, cf. *na-pere-pisyat’ vs. *pere-na-pisyat’ ‘accumulate a quantity of sth as an outcome of re-writing’ and *na-do-pisyvat’ vs. *do-na-pisyat’ ‘accumulate a quantity of sth by completing writing it’.

These observations together suggest that do- and pere- merge above LPs but below SLPs. We can expect, therefore, that if three prefixes co-occur within the same stem, an SLP, an LP and do- or pere-, we will find them in no other order than “SLP—do-/pere—LP”. This expectation is borne out precisely, so triple prefixation is in fact one of the strongest pieces of evidence supporting intermediate status of do- and pere-. Various combinatorial options, only one of which is grammatical, are shown in (11):

(11) a. Vasja nemnogo po-pere-za-pisyval diski (i ušel domoj) V. for.a.while DELIM-RPTbehind-writeIPFV-PST:M CDACC:PL and went home
   'Vasja spent some time re-recording CDs, and went home.'

b. ... *po-za-pere-pisyval ...
c. ... *za-po-pere-pisyval ...
d. ... *pere-po-za-pisyval ...
e. ... *pere-za-po-pisyval ...
f. ... *za-pere-po-pisyval ...

Exactly the same distribution obtains with po-do-za-pisyvat’ ‘spend
some time completing recording CDs’ where ITMP do- occurs in place of pere-; for the sake of space corresponding examples are left out.

Apparently, a possible alternative to the suggestion that do- and pere- occupy a distinct structural position is to analyze cases like po/na-pere-pisyvat’ and po/na-do-pisyvat’ as stacking of superlexicals, treating do- and pere- as SLPs on a par with po- and na-. Indeed, if SLPs in Russian can stack freely, co-occurrence of do- and pere- with superlexicals like po- and na- does not necessarily mean that these two groups of prefixes are structurally distinct. The stacking analysis faces two fundamental complications, however.

First, the stacking analysis is bound to assume that the relevant part of structure looks along the lines of (12a), and that verbs like po-pere-pisyvat’ with the delimitative po- and repetitive pere- are represented as in (12b):

\[(12)\]

\[a. [\text{ExtP} \text{SLP} ... [\text{VP} ... [\text{VP} ... [\text{LP} ... ]]]] \]

\[b. [\text{ExtP po} ... [\text{ExtP pere} ... [\text{VP} ... [\text{V write} ... ]]]] \]

\[c. *[\text{ExtP pere} ... [\text{ExtP po} ... [\text{VP} ... [\text{V write} ... ]]]] \]

The problem with this analysis is that it cannot exclude on principled grounds the structure in (12c) where po- and pere- occur in the reverse order. If both prefixes are instances of SLPs, and SLPs stack freely, (12c) should not be any worse than (12b). However (12c) is not merely worse than (12b) — it is completely ungrammatical.

The second, and even more significant problem for the stacking analysis is that genuine SLPs in Russian (inceptive za-, delimitative po-, cumulative na-, distributive pere-, see Table 1) do not stack at all, contra Romanova 2004 and Svenonius 2004. Consider various possibilities in (13):

\[(13)\]

\[a. \text{igrat’} \quad \text{playINF} \quad 'play' \]

\[c. \text{po-igrat’} \quad \text{DELIM-INF} \quad 'play for a while' \]

\[e. *\text{za-po-igrat’} \quad \text{INCEP-DELIM-INF} \quad 'start playing' \]

\[f. *\text{za-pere-igrat’} \quad \text{INCEP-DISTR-INF} \quad 'play (all the sonatas one by one)' \]

\[g. *\text{po-za-igrat’} \quad \text{DELIM-INCEP-INF} \quad 'play for a while' \]

\[h. *\text{po-pere-igrat’} \quad \text{DELIM-INCEP-INF} \quad 'play (all the sonatas one by one)' \]

\[\]

\[I am grateful to the anonymous FASL reviewer for turning my attention to this issue.\]
Of 9 combinations of SLPs listed in (13e-m) none is acceptable. (Verbs in the left and right columns in (13e-m) differ as to the presence of the secondary imperfective -yva-/-ivaj-/. These examples show that imperfectivization does not improve these verbs, the only source of inappropriateness thus being the double prefixation.) Restrictions demonstrated in (13e-m) cannot be explained by the stacking analysis, unless one adopts stipulations restricting co-occurrence of SLPs in an arbitrary and non-motivated way.

Exactly the same line of reasoning rules out the possibility that multiple prefixation in Russian involves stacking of LPs, since LPs do not stack either. While both pod- ‘under’ and za- ‘behind’ can combine with the stem pisa- /pisa- ‘write’, yielding pod-pisat’ ‘sign’ and za-pisat’ ‘record’, it is definitely not the case that they can co-occur, no matter in which order, see (14a-b). Nor can they be used recursively, yielding pod-pod-V or za-za-V strings, as in (15a-b).

(14)  a. *pod-za-pisat’
    b. *za-pod-pisat’

(15)  a. *pod-pod-pisat’
    b. *za-za-pisat’

Therefore, given that neither SLPs nor LPs can stack, the fact that do- and pere- can co-occur with both types of prefixes, attaching below SLPs but above LPs, suggests that they occupy a distinct structural position along the lines of (6). On this analysis, a clear and consistent picture emerges:

(16)  a. SLPs and LPs do not stack
    b. ITMPs merge below SLPs and above LPs

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4 An apparent counterexample to (16a) is the distributive prefix po- that can frequently be found on top of the cumulative na- (e.g. po-na-brosat’ _distr-cumthrowINF_) and somewhat less frequently on top of the distributive pere- and inceptive za-, po-pere-streljat’
Given (16), all the facts observed in this section fall out immediately. Do- and pere- attach below SLPs and above LPs because this is where their structural position is located. And as soon as do- and pere- are separated from SLPs and LPs, these groups of prefixes form natural classes as to the non-availability of stacking. I conclude, therefore, that multiple prefixation provides a strong evidence for the analysis in (6) whereby do- and pere- are regarded as distinct morphemes located in between LPs and SLPs.

4. The third argument: stacking

In the preceding section I argued that the multiple prefixation whereby the completive do- or repetitive pere- co-occur with other prefixes cannot be regarded as an instance of stacking of either SLPs or LPs, because neither true superlexicals nor true lexicals can stack.

Crucially, do- and pere-, unlike both LPs and SLPs, are recursive and can stack producing all the four logically possible combinations — double do-, double pere-, do- on top of pere-, and pere- on top of do-. Here come relevant examples:

   V. CMP-RPTWritePST:M paper ACC
   ‘Vasja completed re-writing a paper.’

   V. RPT-CMPWritePST:M paper ACC
   ‘Again, Vasja performed a final stage of writing a paper.’

c. Vasja do-do-pisal knigu.
   V. CMP-CMPWritePST:M book ACC
   ‘(Context: V. was finish the book yesterday. However, he fell asleep before he finished. Finally, today) Vasja completed finishing writing a book.’

‘stoot a lot (of victims) one by one’, po-za-dvigat’sja ‘start moving (about different moving objects at different locations and/or times)’. However, there are reasons to believe that here we are not dealing with a true stacking either. The distributive po- and other SLPs can never occur in reverse order, cf. *na-po-brat’, *pere-po-strejat’ and *za-po-dvigat’sja; po- is always the outermost prefix in a verbal stem. If po- is a plain SLP sitting in the same position as za-, na- and pere-, there should not be any principed restrictions of this type. (Note that at least in cases like po-pere-strejat’ the fact that attachment of pere- feeds attachment of po- but not vice versa cannot receive semantic explanation either, since both prefixes render the same — distributive — meaning.) These observations may suggest that there is one more projection located above ExtP and only available for the distributive po-. This suggestion is further supported by other observations that morphosyntactic characteristics of po- are sharply different from those of other SLPs, see footnote 6 below.
d. Vasja **pere-pere**-pisal stat’ju.

5 The anonymous FASL reviewer commented on (17c-d) that these sentences can only be acceptable as a kind of language game. While I agree completely with this judgment, the crucial fact about stacking is that corresponding examples with double LPs and SLPs are fatally bad and cannot repair even in a language game situation.

If *do*- and *pere*- form a separate class of intermediate prefixes, then all the three groups of prefixes in Russian, LPs, ITMPs, and SLPs are natural classes with respect to staking: ITMPs do stack, others do not, as (16a) sums up. Treating *do*- and *pere*- as either LPs or SLPs will inevitably blur a clear picture that emerges under this generalization. Certainly, much further work is necessary to determine why ITMPs contrast with other classes of prefixes with respect to stacking and whether this characteristic is traceable to some other properties of ITMPs. While not trying to accomplish this task here, I nevertheless believe that recognizing *do*- and *pere*- as a natural class is a necessary prerequisite for future analysis.

5. The fourth argument: aspectual selection

The fourth argument relies on the observation that SLPs and ITMPs differ as to the restrictions they impose on the material they attach to. As Svenonius (2004a:237) notes, SLPs normally combine with the basically imperfective form. However, the distribution of SLPs provide enough evidence for a stronger claim: SLPs always combine with the imperfective form. ITMPs, on the other hand, are not restricted in this way: they can take either perfective or imperfective stem.

Specifically, as evidence from cumulative *na*- , delimitative *po*- , and distributive *pere*- shows, SLPs can not attach to a perfective stem, be it simplex or derived, cf. *na-[da]*"-t’ ‘give a lot’, *po-[reši]*"-t’ ‘solve for a while’ ([OK*’kill’], *pere-[kinu]*"-t’ (vse kirpiči) ‘throw (all the bricks) one by one’ ([OK*’throw across’) where SLPs attach to simplex perfective stems and *na-[ot-kry]*"-t’ ‘open a lot’, *po-[ot-kry]*"-t’ ‘open for a while’, *pere-[ot-kry]*"-t’ (vse dveri) ‘open (all the doors) one by one’ in which SLPs are combined with a prefixed perfective stem *ot-kry*- /ot-kriv/.

In contrast, SLPs are readily available if the stem is imperfective, no matter simplex (e.g., *na-[bra]*"-t’ ‘take a lot’, *po-[čita]*"-t’ ‘read for a while’, *pere-[my]*"-t’ (vsju posudu) ‘wash (all the dishes) one by one’) or...
derived by secondary imperfectivization, as in na-[dava]I-t' ‘give a lot’, po-[resa]I-t’ ‘solve for a while’, pere-[kida]I-t’ ‘throw one by one’, na-[ot-kryva]I-t’ ‘open a lot’, po-[ot-kryva]I-t’ ‘open for a while’, pere-[ot-kryva]I-t’ (vse dveri) ‘open (all the doors) one by one’. In this way, perfective stems “require” imperfectivization before combining with SLPs; imperfectivization feeds SL-prefixation, but not vice versa. (See section 5 for further discussion of secondary imperfectivization.).

In contrast, ITMPs have no principled restrictions as to the perfectivity of stems they attach to: in (a) examples in (18)-(19) they combine with imperfective stems, while in (b-c) examples — with perfective stems.

(18) a. do-[pisa]I-t’
  CMPwriteINF
   ‘complete writing’
   b. do-[na-pisa]P-t’
   CMPon-writeINF
   ‘complete writing’
   c. do-[za-pisa]P-t’
   CMPbehind-writeINF
   ‘complete recording’

(19) a. pere-[pisa]I-t’
   RPTwriteINF
   ‘re-write’
   b. pere-[na-pisa]P-t’
   RPTon-writeINF
   ‘re-writ e’
   c. pere-[za-pisa]P-t’
   RPTbehind-writeINF
   ‘record again’

If completive do- and repetitive pere- are SLPs, it is difficult if at all possible to explain why some SLPs only take imperfective stems, while others can take both perfective and imperfective stems. If do- and pere- occupy a separate structural position, both SLPs and ITMPs form natural classes as to their selectional properties:

(20) a. SLPs always select for imperfective stems6,
    b. ITMPs impose no aspectual restrictions on their complements.

Evidently, a simple and elegant system of selectional constraints in (20) is a welcome consequence of the proposed analysis.

---

6 One prefix that violates this generalization is again the distributive po- which readily attach to perfective stems, as in (i) where it co-occurs with the LP na- and in (ii) with the cumulative SLP na- (cf. Romanova 2004: 264):

(i) a. [po-[na-[pisa]]]IP-t’
   DISTR-on-writeINF
   b. [po-[na-[brosa]]]IP-t’
   DISTR-CUMthrowINF

Recall, however, that aspectual selection is not the only characteristic that makes the distributive po- different from other SLPs. The distributive po- can attach on top of other SLPs, but other SLPs cannot attach on top of po-, nor on top of each other (see section 3 and footnote 3). Therefore, if the hypothesis that the distributive po- is a separate head located above other SLPs is correct, it explains not only the relative order of prefixes, but also exceptional behaviour of the distributive po- with respect to aspectual selection: if po- does not occupy the same position as true SLPs, it is not predicted to obey the same constraints. The class of SLPs, then, is kept maximally uniform and consistent.
6. The fifth argument: imperfectivization

The next argument has to do with the observation that ITMPs differ from SLPs as to the their position with respect to the secondary imperfective markers -yva- /-ivaj-/ , -va- /-vaj-/ , -a- /-aj-/. Normally, the secondary imperfective attaches below SLPs, as in the following example:

(21) a. [na-[[za-pis]$^p$-yva]]$^p$-t' diskov
   CD$_{GEN,PL}$behind-write$_{PFV,INF}$
   'record' a lot if CDs'
   CUMbehind-write$_{PFV,INF}$

In (21), the perfective stem za-pisa- ‘record’ first merges with -yva- and yields an imperfective stem za-pis-yva-, which in turn merges with the cumulative SLP na- creating a new perfective stem na-za-pis-yva-.

ITMPs exhibit radically different behavior. They obligatorily merge below -yva-, as examples in (22)-(24) illustrate:

(22) a. [do/pere-[pisa]$^p$-t'   b. [[do/pere-[pis]$^p$]-yva]-t'
   CMP/RPTwrite$_{INF}$CMP/RPTwrite$_{PFV,INF}$
   ‘complete writing’/re-write$^p$
   ‘complete writing’/re-write$^p$
   ‘complete writing’/re-write$^p$
   ‘complete writing’/re-write$^p$
   ‘complete writing’/re-write$^p$
   ‘complete giving’/re-record$^p$
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   ‘complete giving’/re-record$^p$
   ‘complete giving’/re-record$^p$
   ‘complete giving’/re-record$^p$
   ‘complete giving’/re-record$^p$
Consider also a minimal pair showing an SLP and an ITMP combined with the same stem. In (25a), the superlexical cumulative prefix na- is attached to the imperfectivized stem za-bi-va-, the resulting cumulative verb being perfective. In contrast, the intermediate prefix do- is attached to the non-imperfectivized stem za-bi-, the imperfective morpheme being merged later. The overall stem do-za-bi-va- is thus imperfective. Structure of (25a-b) is represented in (26a-b).

V. behind-hitPerfectPFV-PST:M nailGEN:PL in wallACC  
‘Vasja hammered a lot of nails into the wall.’

V. behind-hitPerfectPFV-PST:M nailACC:PL in wallACC  
‘V. was completing hammering nails into the wall.’

(26) a. \([\text{ExtP} n\text{a-} [\text{AspP} -va- [\text{ItmP} za-\text{hit} \text{nails into the wall}]]]\)  
b. \([\text{AspP} -va- [\text{ItmP} do- [\text{ItmP} za-\text{hit} \text{nails into the wall}]]]\)

Finally, given the above observations, we can expect that if a stem contains both an ITMP and SLP, the former will merge below, while the latter above -vya-. This expectation is borne out, as (27)-(28) demonstrate:

(27) Vasja [po-[pere-[za-pis]^{p}\text{-vya}]^{p}\text{-l}] disk-i.  
V. behind-writePerfectPFV-PST:M CDACC:PL  
‘Vasja spent some time re-recording CDs (and went home).’

(28) \([\text{ExtP} p\text{o-} [\text{AspP} -vya [\text{ItmP} p\text{ere-} [\text{ItmP} Vasja za-\text{write} \text{CDs}]]]]\)

There is every reason to conclude, therefore, that the position of do- and pere- with respect to the secondary imperfective -vya- provides an independent evidence for establishing the main claim of this paper: do- and pere- are structurally distinct from other types of prefixes.

7. The sixth argument: nominalization

In the literature, it has been argued extensively that SLPs do not form deverbal nouns (Babko-Malaya 1999, Svenonius 2004a, Pazelskaya, Tatevosov, to appear). Whereas nouns like ot-kry-ti-e and ot-kryva-ni-e ‘opening’ derived from lexically prefixed verbs ot-kry-t’ ‘openP’ and ot-kryva-t’ ‘open’ are readily available in Russian, corresponding nouns from superlexically prefixed verbs are systematically ungrammatical, cf.
the stems *na-ot-kryva-ni-e from na-ot-kryva-t’ ‘open a lot’ and *po-ot-kryva-ni-e from po-ot-kryva-t’ ‘open for a while’.

To the extent this generalization is correct, it does not hold for do- and pere-. Take the pair of stems na-zabiva- and do-zabiva- from (25) as an example again. It turns out that the latter can produce a deverbal noun in *nie /-nij-o/, but the former cannot:

(29) a. *na-za-biva-ni-e gvozdej b. do-za-biva-ni-e gvozdej

‘hammering a lot of nails’ ‘completing hammering nails’

(29a-b) suggest that a maximal constituent that allows for nominalization in Russian contains ItmP but excludes ExpP, as represented in (30a-b). This indicates again that the position for do- is below that of na-.

(30) a. *[np [n-nij-] [exp na- [asp -va- [phi pro za-hit nails]]]]

b. [np [n-nij-] [asp -va- [itm do- [phi pro za-hit nails]]]]

If a maximal projection that allows for nominalization in Russian is AspP (as independently argued in Pazelskaya, Tatevosov, to appear), SLPs that attach above AspP (e.g. na- in (29a)) are not expected to form deverbal nouns. For ITMPs, which, by hypothesis, merge below AspP (see section 6), deverbal nouns are predicted to be readily available. As (29)-(30) indicate, this prediction is borne out precisely.

Consider also a minimal pair from Svenonius 2004a: 240 in which two homonymous verbs pere-smotret’ differ as to the interpretation of the prefix pere-: the repetitve pere- yields the meaning ‘look again, re-consider’, whereas the distributive pere- creates a verb meaning ‘look at one by one’. If the repetitive pere- is an intermediate prefix, while the distributive pere- is an SLP, we can expect, again, that the former but not the latter is able to produce a nominalization. As (31a-b) show, this is indeed the case: the deverbal noun peresmotrenie cannot have the distributive interpretation in (31b).

(31) a. pere-smotre-ni-e

b. *pere-smotre-ni-e

‘looking again, re-considering’ ‘looking at one by one’

Assuming that a nominalization can maximally contain AspP, and the distributive pere- is outside AspP, while the repetitive pere- is inside, accounts for (31a-b) in a principled way.

It should be pointed out, finally, that deverbal nouns in *nie are not
the only type of nominalization that separate ITMPs from other prefixes. Nominals in -k- pattern with nie-nominals as to the distribution of SLPs and ITMPs. (32a-b) exemplify this type of nominals derived from the delimitative verb po-risovat’ ‘draw for a while’ and repetitive pere-risovat’ ‘draw again’:

\[
(32) \begin{align*}
\text{a. } & \text{po-risov-k-a kartinki} && \text{b. } \text{pere-risov-k-a kartinki} \\
& \text{DELIMdrawNMN-NOM pictureGEN} && \text{RPTdrawNMN-NOM pictureGEN} \\
& \text{‘drawing a picture for a while’} && \text{‘drawing a picture again’}
\end{align*}
\]

(32a-b) show that the repetitive but not the delimitative verb can form a deverbal noun in -k-. (32) patterns clearly with (29), and this fact suggests that we are not dealing with a mysterious idiosyncrasy of one type of deverbal noun, but with a fully systematic constraint characterizing the whole class of nominalizations, on the one hand, and the whole class of prefixed verbal stems, on the other. Therefore, if nouns in -nie and -k- in are formed in a similar way (as in (30) and (33)), their distribution provides us with an independent support for identifying ITMPs as a separate class of prefixes.

8. Intermediate prefixes vs. vP

The evidence presented above suggests that ITMPs merge below SLPs and the secondary imperfective -yva:

\[
(34) \ [\text{ExtP SLPs } [\text{AspP -yva- } [\text{ImpP ITMPs } [\text{VP ... LPs } ]]]]]]
\]

One question not addressed so far is how ITMPs are located with respect to v. I suggest that a promising strategy of finding an answer is to look at scopal characteristics of ITMPs. The main observation here is that pere- and do- are ambiguous between repetitive and restitutive readings in much the same way as adverbs like ‘again’ (von Stechow 1996, Tenny 2000, among many others). Thus, Vasja pere-pisal pis’mo ‘Vasja re-wrote a/the letter’ and Vasja do-pisal pis’mo ‘Vasja completed writing a/the letter’ are compatible with scenarios in (35) and (36) respectively:

\[
(35) \ \text{Scenario 1 (repetitive): Vasja had written a letter, but was unhappy with what he wrote and decided to re-write it.}
\]

\[
(36) \ \text{Scenario 2 (restitutive): Petja had written a letter, but Vasja was unhappy with what he wrote and decided to re-write it.}
\]
Scenario 1 («repetitive»): It was Vasja who started writing a letter earlier.

Scenario 2 («restitutive»): It was another person who started writing a letter earlier.

Assuming, with von Stechow 1996, that the repetitive vs. restitutive distinction reflects the position of the scope-taking element with respect to $v$, the restitutive reading obtains if *pere-* and *do-* merge before the agent is introduced, that is, before $vP$ is projected. On the restitutive reading, *pere-* and *do-* only take scope over $VP$, indicating that it is the change of state of the patient that happens again or is completed:

(37)  [ ... [$vP Vasja [Imp *pere-/do- [VP write letter]]]]

On the repetitive reading represented in (38) *pere-* and *do-* merge above $vP$ hence take scope over the whole event including the agent’s activity:

(38)  [ Imp *pere-/do- [$vP Vasja [VP write letter]]]

Apart from identifying a position of intermediate prefixes with respect to $vP$, scopal facts provide additional evidence that *do-* and *pere-* form a natural class: it is easy to show that other classes of prefixes do not produce repetitive/restitutive ambiguity.

9. Summary and conclusion

It has been commonly recognized that verbal prefixes in Slavic languages fall into two types, lexical and superlexical. In this paper, I have argued for a more articulated hierarchical structure, whereby there is a separate projection for intermediate prefixes, distinct from both LPs and SLPs. I examined the distribution of prefixes *do-* and *pere-* and presented six pieces of evidence (meaning, multiple prefixation, stacking aspactual selection, secondary imperfectivization, nominalization,) supporting their intermediate status. This evidence is summarized in Table 2.

Finally, scopal possibilities available for intermediate prefixes show that they can originate either above or below $vP$.

Besides, I have shown that the proposed analysis has a few welcome consequences for our understanding of SLPs. If ITMPs are kept distinct from SLPs, much clearer picture emerges as to what are genuine properties of superlexicals: they always select for imperfective stems, always require imperfectivization to combine with prefixed perfective stems, and consistently disallow nominalization and stacking.
References


Table 1. Inventories of SLPs

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<tbody>
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<td>Za</td>
<td>inceptive</td>
<td>za-pet’ ‘start singing’</td>
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<tr>
<td>Ot</td>
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<td>ot-rabotat’ ‘finish working’</td>
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<td>+</td>
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<tr>
<td>Pod</td>
<td>attenuative</td>
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Table 2. ITMPs vis-à-vis LPs and SLPs

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<td>Multiple prefixation</td>
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<td>Aspectual selection</td>
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