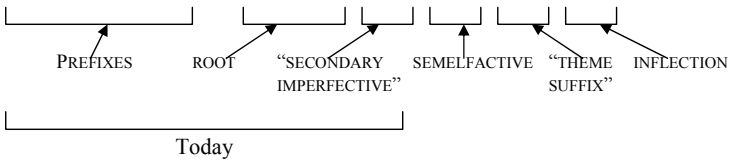
Notes on the hierarchical structure of Russian verb

Sergei Tatevosov
Lomonosov Moscow State University
tatevosov@gmail.com

1. Elements of the verb stem

(1)			nes-			t'i	'carry',	IPFV
			da-			t'	'give',	PFV
			ris-		ova-	t'	'draw',	IPFV
		na-	ris-		ova-	t'	'draw',	PFV
		za-	pis-		a-	t'	'record',	PFV
		za-	pis-	yv-	a-	t'	'record',	IPFV
	pere-	za-	pis-	yv-	a-	t'	're-record',	IPFV
na-	pere-	za-	pis-	yv-	a-	t'	're-record a lot of things',	PFV
		vy	tolk-		(a)nu-	t'	'push out',	PFV



- **What is a possible Russian verb?**

- **A challenge**: multiple prefixation

(2) **Multiple prefixation:** Serbian
Na-po-is-pre-po-znavao se lica u svom životu.
CMLT-DSTR-CMPL-PRE-PO-knew RFX faces.GEN in his.DAT life.DAT
'He has recognized a lot of faces in his life.' (Milićević 2004: 281)

(3) **Multiple prefixation:** Russian
Vasja **po-na-do-pere-za**-pis-yva-l diskov.
V. DISTR-CUM-COMPL-REP-ZA-write-YVA-PST.3SG DVD-GEN.PL DVD-GEN.PL
'Vasja accumulated a quantity of DVDs, which he finished recording again, this having happened at distinct times or locations'

(4) Step 0. The stem
pis^{IPFV} 'write'

Step 1. Prefixation of *za-* (change in the lexical meaning)
[**za**-pis^{IPFV}]^{PFV} 'record'

Step 2. Prefixation of *pere-* ('again', ≈ *re-*)
[**pere**-[za-[pis]^{IPFV}]^{PFV}]^{PFV} 'record again'

Step 3. Pefixation of *do-* ('complete/finish doing smth')
[**do**-[pere-[za-[pis]^{IPFV}]^{PFV}]^{PFV}]^{PFV} 'finish recording again'

Step 4. "Secondary imperfectivization"
[[do-[pere-[za-[pis]^{IPFV}]^{PFV}]^{PFV}]^{PFV} **-yva**]^{IPFV} 'finish recording again'

Step 5. Prefixation of *na-* ('accumulate a certain quantity of')
[**na**-[[do-[pere-[za-[pis]^{IPFV}]^{PFV}]^{PFV}]^{PFV} -yva]^{IPFV}]^{PFV}
'accumulate a quantity of sth by finishing recording it again'

Step 6. Prefixation of *po-* ('distributive': the event involves distinct participants, times or locations)
[**po**-[na-[[do-[pere-[za-[pis]^{IPFV}]^{PFV}]^{PFV}]^{PFV} -yva]^{IPFV}]^{PFV}]^{PFV}
'accumulate a quantity of sth by finishing recording it again, this happening at distinct times or locations'

2. Lexical and superlexical prefixes

(5) **List of Russian prefixes**
v(o), v(o)z(o), vy, de(z)-, dis-, do-, za-, iz(o)-, nad(o)-, nedo-, niz(o)-, o-, ob(o)-, ot(o)-, pere-, po-, pod(o)-, pre-, pred(o)-, pri-, pro-, raz(o)-, re-, s(o), u-.

- Prefixes fall into two types, **lexical prefixes** (LPs) and **superlexical prefixes** (SLPs), a.k.a internal and external prefixes.
  - Russian: Babko-Malaya 1999, Ramchand 2004, Romanova 2004, 2006, Svenonius 2004, 2008; DiScuillo, Slabakova 2005, Žaucer 2009.
  - Serbo-Croatian: Progovać 2002, Milićević 2004, Arsenijević 2006, 2007, 2012
  - Bulgarian: Istratkova 2004, DiScuillo, Slabakova 2005, Slabakova 2005.
  - Slovenian: Žaucer 2009, 2011, 2012

Table 1. SLPs in Russian

Prefix	Meaning	Example	Babko-Malaya 1999	Svenonius 2004	Ramchand 2004	Romanova 2006	Tolskaya 2007
Za-	inceptive	*za-pet'* 'start singing'	+	+	+	+	+
Po-	delimitative	*po-guljat* 'walk for a while'	+	+	+	+	+
Na-	cumulative	*na-brat'* 'take a lot'	—	+	+	+	-
Pere-	distributive	*pere-lovit'* 'catch one by one'	—	+	—	+	-
Pere-	excessive duration	*pere-begat'* 'run too much'	—	—	—	—	+
Ot-	terminative	*ot-rabotat'* 'finish working'	—	+	—	+	+
Pro-	perdurative	*pro-sidet'* 'sit for a long time'	+	—	—	—	+
Iz-	completive	*iz-ranit'* 'wound all over'	—	+	—	—	+
Do-	terminative	*do-pisat'* 'complete writing'	—	—	+	—	+
Po-	distributive	*po-brosat'* 'throw one by one'	—	—	—	+	—
Pri-	attenuative	*pri-otkryt'* 'open slightly'	—	—	—	+	—
Pod-	attenuative	*pod-zabyt'* 'forget slightly'	—	—	—	+	—

- LPs and SLPs differ as to
  - their contribution to the meaning of the stem
  - their contribution to the argument structure
  - their lexical restrictions
  - their position within the stem

- SLPs have systematic meanings, LPs have idiosyncratic meanings (Babko-Malaya 1999 and the vast majority of further literature)
- SLPs have temporal or quantizing meanings, LPs tend to have spatial or resultative meanings (Svenonius 2004)
- Verbs with SLPs do not always pass a telicity test, verbs with LPs always do (Babko-Malaya 1999; Romanova 2004)
- SLPs cannot affect the argument structure (Romanova 2004, 2006); never add an argument to the root verb, never change the participant relations of an original object (Ramchand 2004), do not license unselected objects (Babko-Malaya 1999, Svenonius 2004, Romanova 2006). LPs have the opposite properties.

- SLPs do not make the object obligatory, LPs do (Babko-Malaya 1999, Svenonius 2004).
- LPs cannot attach to the non-directed motion verbs (Svenonius 2004a,b; Romanova 2004, 2006)
- Prefix ordering: SLPs are outside LPs

(6)

	SLP outside LP	**LP outside SLP**
a.	**na**-*za*-bi-va-t’ CUM-ZA-hit-YVA-INF ‘hammered a lot of (e.g., nails)’	**za*-**na**-bi-va-t’
b.	**po**-*o*-pis-yvat’ DELIM-O-write-YVA-INF ‘describe for a while’	**o*-**po**-pis-yva-t’
c.	**za**-*o*-gljad-yva-t’-sja INCEP-ZA-look-YVA-INF-REFL ‘start looking around’	**o*-**za**-gljad-yva-t’-sja
d.	**po**-*vy*-bras-yva-t’ DISTR-VY-throw-YVA-INF ‘throw out one by one’	**vy*-**po**-bras-yva-t’
e.	**do**-*so*-bra-t’ COMPL-S-take-INF ‘finish collecting’	**so*-**do**-bra-t’
f.	**pere**-*za*-pusti-t’ REP-ZA-let-INF ‘re-start’	**za*-**pere**-pusti-t’

See **Appendix 2** for a survey of theoretical approaches to prefixation.

3. Puzzles

(7) (Almost) general agreement:
[… SLP … [$_{VP}$ … LP …]]

- (7) opens a way of accounting for systematic differences between the two classes in terms of meaning, argument structure, lexical restrictions, and, most effectively, for their relative ordering within the stem.

(8) **Multiple prefixation:** Russian (=(3))

a. Vasja **na-do-pere-*za***-pis-yva-l diskov.
V. CUM-COMPL-REP-ZA-write-YVA-PST.3SG DVD-GEN.PL DVD-GEN.PL
‘Vasja accumulated a quantity of DVDs, which he finished recording again’
b. ... ***na-do-*za*-pere**-pis-yva-l ...
c. ... ***na- *za*-do- pere**-pis-yva-l ...
d. ... ****za*-na-do- pere**-pis-yva-l ...

- But...

(9) **No SLP-LP ordering violations**

a. ... ^{OK}**na- pere- do- *za*-**pis-yva-l ...
‘Vasja accumulated a quantity of DVDs by repeating the final stage of recording them’
b. ... ***pere- na- do- *za*-**pis-yva-l ...
c. ... ***do- na- pere- *za*-**pis-yva-l ...
d. ... ***do- pere- na- *za*-**pis-yva-l ...

- (9a) is grammatical, as is (8a), with the scope of *do-* and *pere-* reversed, as expected:
  - (8a): finish > again > record:
    ‘He had recorded DVDs before, and he finished [doing that again]’
  - (9a): again > finish > record:
    ‘He had finished recording DVDs before, and now he did that again.

- Why are (9b-d) ungrammatical? No answer so far.

(10) **The secondary imperfective**: *-(y)(v)a(j)-*

a.	[da]^{PFV} -t’	‘give’	[da-**va**]^{IPFV} -t’
b.	[reši]^{PFV} -t’	‘solve, decide’	[reš-**á**]^{IPFV}-t’
c.	[pro-čita]^{PFV} -t’	‘read’	[[pro-čit]-**yva**]^{IPFV} -t’
d.	[za-bole]^{PFV} -t’	‘get sick’	[[za-bole]-**va**]^{IPFV} -t’

- Matushansky 2009: all the three allomorphs correspond to the same underlying /ʊ/ (“third yer”)
- Pfv verbs containing lexical prefixes, as well a non-derived prf verbs undergo secondary imperfectivization systematically, exceptions are limited to individual lexical items.

(11) **Secondary imprefectivization; stems with LPs**

za-pisa-t’	‘record’	**za**-pis-***yva***-t’
za-bi-t’	‘hammer’	**za**-bi-***va***-t’
ot-kry-t’	‘open’	**ot**-kry-***va***-t’
pro-čita-t’	‘read’	**pro**-čit-***yva***-t’
***na**-pisa-t’	‘write’	**na**-pis-***yva***-t’

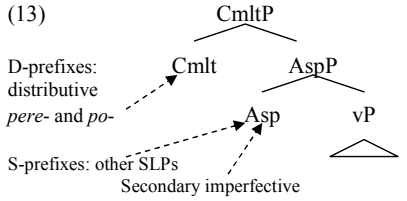
- Svenonius 2004: 229: “Superlexical prefixes... do not allow the formation of secondary imperfectives” …
- Romanova 2004: 261: “Superlexicals attach to atelic stems and form no secondary imperfectives”

(12) **Secondary imprefectivization; stems with SLPs; not predicted**

[**na**-[vari]^{IPFV}]^{PFV} -t’ ‘cook a quantity of sth.’	[[**na**-[vari]^{IPFV}]^{PFV} -***va***]^{IPFV} -t’
[**po**-[pisa]^{IPFV}]^{PFV} -t’ ‘write for a while’	[[**po**-[pis]^{IPFV}]^{PFV} -***yva***]^{PFV} -t’
[**pere**-[kida]^{IPFV}]^{PFV} -t’ ‘throw one by one’	[[**pere**-[kid]^{IPFV}]^{PFV} -***yva***]^{IPFV} -t’
[**do**-[za-[pisa]^{IPFV}]^{PFV}] ^{PFV} -t’ ‘finish recording’	[[**do**-[za-[pis]^{IPFV}]^{PFV}]^{PFV} -***yva***]^{IPFV} -t’
[**pod**-[za-[by]^{IPFV}]^{PFV}] ^{PFV} -t’ ‘forget slightly’	[[**pod**-[za-[by]^{IPFV}]^{PFV}]^{PFV} -***va***]^{IPFV} -t’

- Ramchand 2004: two distinct positions for SLPs

(13)



- S-prefixes sit in Asp: *po-* and *za-* (and possibly a few others)
- D-prefixes sit in the Cmlt head that takes Asp as its complement: distributive *pere-* and *po-*

- "Any superlexical that actually sits in Asp is going to be incompatible with the secondary imperfective, since they are … competing for the same slot. On the other hand, if the superlexical in question is one of the high D-prefixes which actually is generated in a more external cumulative head, then we would expect such a prefix to be compatible with the secondary imperfective sitting in Asp. Under these circumstances, we predict that the scopal order of the affixes would be as shown below, with D-Prefix > Secondary Imperfective > L-Prefix, and the resulting form being perfective."

- Two types of interaction beyween SLPs and the secondary imperfective are predicted:
  - no secondary imperfectivization for S-prefixes
  - SLP outside the secondary imperfective for D-prefixes

- Both predictions are not quite accurate.

(14) **Secondary imperfective from *za-* and *po*-verbs; not predicted**

[**za**-[bole]^{IPFV}]^{PFV}-t' 'get sick'	[[**za**-[bole]^{IPFV} -***va***]^{PFV}]^{IPFV} -t'
[**za**-[pe]^{IPFV}]^{PFV}-t' 'start singing	[[**za**-[pe]^{IPFV} -***va***]^{PFV}]^{IPFV} -t
[**po**-[pisa]^{IPFV}]^{PFV} -t' 'write for a while'	[[**po**-[pis]^{IPFV}]^{PFV} -***yva***]^{PFV} -t'
[**po**-[lež]^{IPFV}]^{PFV} -t' 'lie for a while'	[[**po**-[lež]^{IPFV}]^{PFV} -***iva***]^{PFV} -t'

(15) a. **Secondary imperfective inside the distributinve prefix; predicted**
[**pere**-[[ot-kry]^{PFV}-***va***]^{IPFV}]$^{\mathbf{PFV}}$-t' 'open one by one, PFV'
b. **Secondary imperfective outside the distributinve prefix; not predicted**
[[**pere**-[kid]^{IPFV}]^{PFV} -***yva***]$^{\mathbf{IPFV}}$ -t' 'throw one by one, IPFV'

3.1. Aspectual selection

- Svenonius 2004: 237: "Superlexical prefixes normally combine with the basically imperfective form"

(16) **Aspectual selection: no SLPs on top of PFV stems; predicted**

a. [**na**-[brosi]$^{\mathbf{PFV}}$]^{PFV} -t' — NA-throw-INF — 'toss on'
[**na**-[[bros]^{PFV} -***a***]$^{\mathbf{IPFV}}$]^{PFV} -t' — CUM-throw-YVA-INF — 'toss a lot of'

b. *[**na**-[da]$^{\mathbf{PFV}}$]^{PFV} -t' — CUM-give-INF — 'take a lot of'
[**na**-[[da]^{PFV} -***va***]$^{\mathbf{IPFV}}$]^{PFV} -t' — CUM-give-YVA-INF

c. [**pere**-[kinu]$^{\mathbf{PFV}}$]^{PFV} -t' — PERE-throw-INF — 'throw across'
[**pere**-[[kida]$^{\mathbf{IPFV}}$]^{PFV} -t' — CUM-throw.IPFV-INF — 'throw one by one'

d. *[**pere**-[ot-kry]$^{\mathbf{PFV}}$]$^{\mathbf{PFV}}$-t' — DISTR-from-cover-INF
[**pere**-[[ot-kry]^{PFV} -va]$^{\mathbf{IPFV}}$]^{PFV} -t' (vse dver-i) — DISTR-from-cover-YVA-INF — 'open (all the doors) one by one'

c. *[**po**-[vy-da]^{PFV}]^{PFV} -t' — DELIM-VY-give-INF
[**po**-[[vy-da]^{PFV} -*va*]$^{\mathbf{IPFV}}$]^{PFV} -t' — DELIM-out-give-YVA-INF
'give out for a while'

d. *[**po**-[za-bi]^{PFV}]^{PFV} -t' — DELIM-ZA-hit-INF
[**po**-[[za-bi]^{PFV} -*va*]$^{\mathbf{IPFV}}$]^{PFV} -t' — DELIM-in-hut-YVA-INF
'hammer for a while'

(17) **SLPs on top of PFV stems; not predicted**

a. [**do**-[vy-da]$^{\mathbf{PFV}}$]^{PFV} -t'
CMPL-VY-give-INF
'complete giving out'

b. [**pere**-[za-bi]$^{\mathbf{PFV}}$]^{PFV} -t'
REPET-ZA-hit-INF
'hammer again'

c. [**pod**-[ras-taja]$^{\mathbf{PFV}}$]^{PFV} -t'
ATT-RAZ-melt-INF
'melt slightly'

3.2. Deverbal nominals

- SLPs do not form deverbal nouns (Babko-Malaya 1999, Svenonius 2004)
- Svenonius 2004: 240: "Given the strong correlation assumed here between syntactic structure and morphological structure, another prediction made by the basic organization of prefixes in different parts of the syntactic tree is that the higher ones may be outside the scope of derivational morphological processes such as nominalization, even as the lower ones are caught under it… Superlexical prefixes are not ordinarily included in nominalizations, though repetetive *pere-* can be."

(18) *Nie*-nominals

a. **LPs in deverbal nominals; predicted**
[**ot**-kry]^{PFV} -***tij***-e dver-ej — out-cover-NMN-NOM door-GEN.PL
[[**ot**-kry]-va]^{IPFV}-***nij***-e dver-ej — out-cover-YVA-NMN-NOM door-GEN.PL
'opening of the doors'

b. **no SLPs in deverbal nominals; predicted**
*[**na**-[*ot*-kry]]-***tij***-e dver-ej — CUM-out-cover-NMN-NOM door-GEN.PL
*[[**na**-[*ot*-kry]]-va]-***nij***-e dver-ej — CUM-out-cover-YVA-NMN-NOM door-GEN.PL
'opening of a lot of doors'

*[**po**-[*ot*-kry]]-***tij***-e dver-ej — DELIM-out-cover-NMN-NOM door-GEN.PL
*[[**po**-[*ot*-kry]]-va]-***nij***-e dver-ej — DELIM-out-cover-YVA-NMN-NOM door-GEN.PL
'opening of the doors for a while'

c. **SLPs in deverbal nominals; not predicted**
[[**na**-bir]-a]-***nij***-e gribov — CUM-take-YVA-NMN-NOM mushroom-GEN.PL
'taking a lot of mushrooms'

[[**pere**-my]-va]-***nij***-e posud-y — DISTR-wash-YVA-NMN-NOM dishes-GEN
'washing of the dishes again'

[**pere**-[ras-smotre]]-***nij***-e dela — REPET-RAZ-look-NMN-NOM case-GEN
'reconsideration of a case'

[[**do-**[za-bi]]-va]-***nij***-e gvozd-ej
CMPL-into-hit-YVA-NMN-NOM.SG nail-GEN.PL
'completion of hammering nails'

4. Aspectual selection and positional restriction

4.1. Overview

- Prefixes normally subsumed under the label "superlexicals" fall, in effect, into three distinct groups with radically different distribution. The only thing they have in common is the very fact that they merge outside VP. (Tatevosov 2009, 2013a)

- Prefixes that show a selectional restriction, or **SR-prefixes**
- Prefixes that show a positional restriction, or **PR-prefixes**
- Prefixes that show a reversed positional restriction, or **left peripheral prefixes** (not in this talk, see Tatevosov 2013b)

(19) **Selectional restriction**
The complement of a prefix cannot be grammatically perfective
*[$_{FP}$ SR-prefix [… …]^{PFV}]

(20) **SR-prefixes:**
cumulative *na-*
delimitative *po-*
inceptive *za-*
distributive *pere-*
perdurative *pro-*
terminative *ot-*
…

(21) **Positional restriction**
A prefix cannot be located outside the projection of the secondary imperfective morpheme *-yva-*
*[$_{FP}$ PR-prefix … [$_{iva}$P *-iva-* …]]

(22) **PR-prefixes:**
completive *do-*
repetitive *pere-*
attenuative *pod-*
attenuative *pri-*

- Being subject to restrictions in (19) and (21), SR-prefixes and PR-prefixes otherwise merge freely, provided that the outcome is interpretable.

4.2. Motivating restrictions

- **SR-prefixes** can merge with
  - simplex imperfective stems
  - secondary imperfective stems
- **SR-prefixes** cannot merge with perfective stems
  - either simplex
  - or derived by prefixation

(23) **SR-prefixes + simplex IPFV stems: ok**
na-[bra]$^{\mathbf{IPFV}}$-t' 'collect a quantity of sth.'
po-[side]$^{\mathbf{IPFV}}$-t' 'sit for a while'
za-[pe]$^{\mathbf{IPFV}}$-t' 'start singing'
pere-[kida]$^{\mathbf{IPFV}}$-t' 'throw one by one'

(24) **SR-prefixes + secondary IPFV stems: ok**
na-[[ot-kry]^{PFV} -va]$^{\mathbf{IPFV}}$-t' 'open a quantity of sth.'
po-[[ot-kry]^{PFV} -va]$^{\mathbf{IPFV}}$-t' 'spend some time trying to open sth.'
za-[[ot-kry]^{PFV} -va]$^{\mathbf{IPFV}}$-t' 'start opening'
pere-[[ot-kry]^{PFV}-va]$^{\mathbf{IPFV}}$-t' 'open one by one'

(25) **SR-prefixes + simplex PFV stems: not ok**
***na**-[da]$^{\mathbf{PFV}}$-t' (^{OK}**na**-[[da]^{PFV}-va]$^{\mathbf{IPFV}}$-t')
'give a quantity of sth. '
#**po**-[reši]$^{\mathbf{PFV}}$-t' (^{OK}**po**-[[reš]^{PFV}-a]$^{\mathbf{IPFV}}$-t')
'solve for a while'
***za**-[oščuti]$^{\mathbf{PFV}}$-t' (^{OK}**za**-[[oščušč]^{PFV}-a]$^{\mathbf{IPFV}}$-t')
'start feeling'
#**pere**-[brosi]$^{\mathbf{PFV}}$-t' (^{OK}**pere**-[[bros]^{PFV}-a]$^{\mathbf{IPFV}}$-t')
'throw one by one'

(26) **SR-prefixes + prefixed PFV stems: not ok**
***na**-[ot-kry]$^{\mathbf{PFV}}$-t'
'open a quantity of sth.'
***po**-[ot-kry]$^{\mathbf{PFV}}$-t'
'spend sime time trying to open sth.'
***za**-[ot-kry]$^{\mathbf{PFV}}$ -t'
'start opening'
#**pere**-[ot-kry]$^{\mathbf{PFV}}$-t'
'open one by one'

- (23)-(26): evidence that SR-prefixes observe the selectional restriction in (19)

  - **PR-prefixes** cannot merge above the secondary imperfective
  - If a PR-prefix co-occurs with *-yva-*, the overall stem is obligatorily imperfective, hence imperfectivization by *-yva-* must happen after prefixation

(27) **Possible derivation:** [-yva- [… PR-prefix …]]
[[[**do**-[za-bi]^{PFV}]^{PFV}-**va**]$^{\mathbf{IPFV}}$-t'
'complete$^{\mathbf{IPFV}}$ hammering'
[[[**pere**-[za-pis]^{PFV}]^{PFV} **-yva**]$^{\mathbf{IPFV}}$ -t'
'record$^{\mathbf{IPFV}}$ again'
[[**pod**-[na-kapl]^{PFV}]^{PFV} **-iva**]$^{\mathbf{IPFV}}$ -t']
'save up$^{\mathbf{IPFV}}$ slightly'

(28) **Impossible derivation:** [PR-prefix […-yva- …]]
*[**do**-[[za-bi] ^{PFV} **-va**] ^{IPFV}] $^{\mathbf{PFV}}$ -t'
'complete$^{\mathbf{PFV}}$ hammering'
*[**pere**-[[za-pis] ^{PFV} **-yva**] ^{IPFV}] $^{\mathbf{PFV}}$ -t'
'record$^{\mathbf{PFV}}$ again'

*[**pod**-[[na-kapl] ^{PFV} **-iva**] ^{IPFV}] $^{\mathbf{PFV}}$ -t'
'save up$^{\mathbf{PFV}}$ slightly'

(29) **[*yva* [*pere* [za …]]]: OK**
^{OK} [pisa]^{IPFV} →
^{OK} [[**za**-pisa]^{IPFV}]$^{\mathbf{PFV}}$ →
^{OK} [**pere**-[za-[pisa]^{IPFV}]^{PFV}]$^{\mathbf{PFV}}$ →
^{OK} [[pere-[za-[pis]^{IPFV}]^{PFV}]^{PFV}**-yva**] ^{IPFV}

(30) **[*pere* [*yva* [za …]]]: NOT OK**
^{OK}[pisa]^{IPFV} →
^{OK} [[**za**-pisa]^{IPFV}]$^{\mathbf{PFV}}$ →
^{OK} [[za-[pis]^{IPFV}]^{PFV}**-yva**]^{IPFV} *→
$^{NOT\ OK}$ [[**pere**-[za-[pis]^{IPFV}]^{PFV}-yva]^{IPFV}]^{PFV}

- (27)-(30): evidence that PR-prefixes observe the positional restriction in (21)

  - **SR-prefixes:** no positional restriction
    - SR-prefixes can merge both above and below the secondary imperfective

(31) **SR-prefixes above *-yva-*: ok**
na-[[ot-kry]^{PFV} -va]$^{\mathbf{IPFV}}$-t'
'open a quantity of sth.'
po-[[ot-kry]^{PFV} -va]$^{\mathbf{IPFV}}$-t'
'spend some time trying to open sth.'
za-[[ot-kry]^{PFV} -va]$^{\mathbf{IPFV}}$-t'
'start opening'
pere-[[ot-kry]^{PFV}-va]$^{\mathbf{IPFV}}$-t'
'open one by one'

(32) **SR-prefixes below *-yva-*: ok**
[[**na**-[dar]^{IPFV}]^{PFV} **-iva**]$^{\mathbf{IPFV}}$ -t'
'give^{IPFV} a lot of presents'
[[**po**-[kal]^{IPFV}]^{PFV} **-yva**]$^{\mathbf{IPFV}}$ -t'
'prickle^{IPFV} from time to time'
[[**za**-[pe]^{IPFV}]^{PFV} **-va**]$^{\mathbf{IPFV}}$ -t'
'start^{IPFV} singing'
[[**pere**-[my]^{IPFV}]^{PFV} **-va**]$^{\mathbf{IPFV}}$ -t'
'wash^{IPFV} one by one'

  - **PR-prefixes:** no selectional restriction
    - PR-prefixes can merge with both perfective and imperfective stems

(33) **PR-prefixes + (simplex/prefixed) PFV stems: ok**

do-[da]$^{\mathbf{PFV}}$-t'	**do**-[ob-sudi]$^{\mathbf{PFV}}$-t'
'complete giving'	'complete discussing'
pere-[reši]$^{\mathbf{PFV}}$-t'	**pere**-[iz-bra]$^{\mathbf{PFV}}$-t'
'decide again'	're-elect'
pod-[obide]$^{\mathbf{PFV}}$-t'	**pod**-[za-rabota]$^{\mathbf{PFV}}$-t'
'offend slightly'	'gain little money'

(34) **PR-prefixes + IPFV stems: ok**
do-[pisa]$^{\mathbf{IPFV}}$-t'
'complete writing'
pere-[čita]$^{\mathbf{IPFV}}$-t'
'read again'
pod-[ras]$^{\mathbf{IPFV}}$-ti
'grow a little'

- Among the prefixes that merge outside VP, two natural classes are identified:
  - **SR-prefixes:** cumulative *na-*; inceptive *za-*; delimitative *po-*; distributive *pere-*
  - **PR-prefixes:** completive *do-*; repetitive *pere-*; attenuative *pod-*

- Any configuration where either SR-prefixes attach to PFV stem or PR-prefixes combine with a stem with *-yva-* inside it are predicted to be ungrammatical
- Other configurations are predicted to be grammatical

See Appendix 1 for example derivations

A note on dialectal variation. There is a dialect where the completive *do-* is not subject to the positional restriction. There is another dialect where the cumulative *na-* is not subject to the selectional restriction (Tatevosov 2013c). See Appendix 3 for other superlexical prefixation in Bulgarian and other Slavic languages.

4.3. Predictions for aspectual selection

Trivial; see examples in (16)-(17)

4.4. Predictions for secondary imperfectivization

- PR-prefixes are predicted to exhibit no principled restrictions on the secondry imperfectivization, since their positional restriction is trivially satisfied.

(35) **Problematic secondary imperfectivization is no more problematic**

=(12) [**do**-[za-[pisa]^{IPFV}]^{PFV}] ^{PFV} -t' 'finish recording'	[[**do**-[za-[pis]^{IPFV}]^{PFV}]^{PFV} **-*yva***]^{IPFV} -t'
[**pod**-[za-[by]^{IPFV}]^{PFV}] ^{PFV} -t' 'forget slightly'	[[**pod**-[za-[by]^{IPFV}]^{PFV}]^{PFV} **-*va***]^{IPFV} -t'

- ① SR-prefixes are predicted to allow for the secondary imperfectiviation iff they merge with the simplex imperfective stem.
- ② Otherwise, they must merge outside the secondary imperfective
- ① and ② are the only two ways of not violating the aspectual selectional restriction

(36) **Problematic secondary imperfectivization is no more problematic**

=(12) [**na**-[vari]^{IPFV}]^{PFV} -t' 'cook a quantity of sth.'	[[**na**-[vari]^{IPFV}]^{PFV} **-*va***]^{IPFV} -t'
[**po**-[pisa]^{IPFV}]^{PFV} -t' 'write for a while'	[[**po**-[pis]^{IPFV}]^{PFV} **-*yva***]^{PFV} -t'
[**pere**-[kida]^{IPFV}]^{PFV} -t' 'throw one by one'	[[**pere**-[kid]^{IPFV}]^{PFV} **-*yva***]^{IPFV} -t'

(37) **Problematic secondary imperfectivization is no more problematic**

(=14) [**za**-[bole]^{IPFV}]^{PFV}-t' 'get sick'	[[**za**-[bole]^{IPFV} **-*va***]^{PFV}]^{IPFV} -t'
[**za**-[pe]^{IPFV}]^{PFV}-t' 'start singing	[[**za**-[pe]^{IPFV} **-*va***]^{PFV}]^{IPFV} -t
[**po**-[pisa]^{IPFV}]^{PFV} -t' 'write for a while'	[[**po**-[pis]^{IPFV}]^{PFV} **-*yva***]^{PFV} -t'
[**po**-[lež]^{IPFV}]^{PFV} -t' 'lie for a while'	[[**po**-[lež]^{IPFV}]^{PFV} **-*iva***]^{PFV} -t'

(38) a. **Secondary imperfective inside the distributinve prefix**
(=15) [**pere**-[[ot-kry]^{PFV}-***va***]^{IPFV}]$^{\mathbf{PFV}}$-t' 'open one by one, PFV'
b. **Secondary imperfective outside the distributinve prefix**
[[**pere**-[kid]^{IPFV}]^{PFV} -***yva***]$^{\mathbf{IPFV}}$ -t' 'throw one by one, IPFV'

- If a SR-prefix attaches on top of a PR-prefix, then, hierarchically, they cannot merge as adjacent heads (or in the specifier positions of adjacent heads): the secondary imperfective morpheme must merge in between.

(39) a. [SR-prefix [*yva* [PR-prefix […]]^{PFV}]$^{\mathbf{IPFV}}$]^{PFV}
b. *[SR-prefix [PR-prefix […]]$^{\mathbf{PFV}}$]^{PFV}

- The same happens if two SR-prefixes co-occur

(40) [SR-prefix [yva [PR-prefix […]]^{PFV}]^{IPFV}]]^{PFV}
[**na**-[[**do**-[pis]^{IPFV}]^{PFV} -**yva**]^{IPFV}]$^{\mathbf{PFV}}$ -t'
'accumulate a quantity of sth. as a result of completing writing it'
[**po**-[[**pere**-[za-pis]^{PFV}]^{PFV} -**yva**]^{IPFV}]$^{\mathbf{PFV}}$ -t'
'record again for a while'
[**po**-[[**pod**-[rabat]^{IPFV}]^{PFV} -**yva**]^{IPFV}]$^{\mathbf{PFV}}$ -t'
'spend some time trying to gain some money'

(41) *[SR-prefix [PR-prefix […]]^{PFV}]^{PFV}
*[**na**-[**do**-[pisa]^{IPFV}]$^{\mathbf{PFV}}$]^{PFV} -t'
'accumulate a quantity of sth. as a result of completing writing it'
*[**po**-[**pere**-[za-pisa]^{PFV}]$^{\mathbf{PFV}}$]^{PFV} -t'
'record again for a while'
*[**po**-[**pod**-[rabota]^{IPFV}]$^{\mathbf{PFV}}$]^{PFV} -t'
'spend some time trying to gain some money'

(42) a. Vasja **na-do-pere-*za*-**pis-yva-l diskov.
(=9) V. CUM-COMPL-REP-ZA-write-YVA-PST.3SG DVD-GEN.PL DVD-GEN.PL
'Vasja accumulated a quantity of DVDs, which he finished recording again'
b. ... ^{OK}**na- pere- do- *za*-**pis-yva-l ...
'Vasja accumulated a quantity of DVDs by repeating the final stage of recording them'
c. ... ***pere-**[**na- do- *za*-**pis-yva]^{IPFV}-l ...
d. ... ***do- na-** [**pere- *za*-**pis-yva]^{IPFV} -l ...
e. ... ***do- pere-** [**na- *za*-**pis-yva]^{IPFV} -l ...

- Given that (42a-b) are fine, what is wrong with (42c-e)?
- (42c-e) minimally involve a violation of positional restriction with respect to *pere-* in (42c), *do-* in (42d), and both *pere-* and *do-* in (42e)

4.5. Predictions for nominalization

- Generalization. Nije-nominals can embed no constituent larger than the projection of the secondary imperfective.
- Prediction. Material that merges below the secondary imperfective does not exhibit systematic constraints on nominalization. This means that a possible nije-nominal embeds stems with
  - PR-prefixes
  - SR-prefixes that merge with the simplex imperfective stems

(43) **SR-prefixes in deverbal nominals: ok if merge with the simplex imperfective**
=(18c) [[**na**-bir]-a]-***nij***-e gribov
CUM-take-YVA-NMN-NOM mushroom-GEN.PL
'taking a lot of mushrooms'

[[**pere**-my]-va]-***nij***-e posud-y
DISTR-wash-YVA-NMN-NOM dishes-GEN
'washing of the dishes again'

(44) **SR-prefixes in deverbal nominals; not ok otherwise**
=(18b) *[**na**-[*ot*-kry]]-***tij***-e dver-ej *[[**na**-[*ot*-kry]]-va]-***nij***-e dver-ej
CUM-out-cover-NMN-NOM door-GEN.PL CUM-out-cover-YVA-NMN-NOM door-GEN.PL
'opening of a lot of doors'

*[**po**-[*ot*-kry]]-***tij***-e dver-ej *[[**po**-[*ot*-kry]]-va]-***nij***-e dver-ej
DELIM-out-cover-NMN-NOM door-GEN.PL DELIM-out-cover-YVA-NMN-NOM door-GEN.PL
'opening of the doors for a while'

(45) **PR-prefixes in deverbal nominals: no systematic restrictions on nominlization**
=(18c) [**pere**-[ras-smotre]]-***nij***-e dela
REPET-RAZ-look-NMN-NOM case-GEN
'reconsideration of a case'

[[**do-**[za-bi]]-va]-***nij***-e gvozd-ej
CMPL-into-hit-YVA-NMN-NOM.SG nail-GEN.PL
'completion of hammering nails'

(46) a. Vasja [**na**-[[*za-bi*]^{PFV} -*va*]^{IPFV}]^{PFV} -l gvozd-ej v sten-u.
V. CUM-into-hit-YVA-PST nail-GEN.PL in wall-ACC
'Vasja hammered a lot of nails into the wall.'

b. Vasja [[**do-**[*za-bi*]^{PFV}]^{PFV} -*va*]^{IPFV} -l gvozd-i v sten-u.
V. CMPL-into-hit-YVA-PST nail-ACC.PL in wall-ACC
'(When I came,) V. was completing hammering^{I} nails into the wall.'

(47) a. *[$_{NP}$ [$_{N}$-nij-] [$_{SRprefP}$ **na-** [$_{yvaP}$ -*yva* [$_{vP}$ Vasja *za-bi* nails into the wall]]]]
b. [$_{NP}$ [$_{N}$-nij-] [$_{yvaP}$ -*yva* [$_{PRprefP}$ **do-** [$_{vP}$ Vasja *za-bi* nails into the wall]]]]

4.6. Summary: structure of verb stem in Russian

[… [… [$_{yvaP}$ -*yva*- [… [… [… [$_{VP}$ … [… LPs …]]]]]]]]

SR-prefixes: [__ XP$^{[-PFV]}$]

PR-prefixes: [__ XP$^{[\alpha PFV]}$]

Selected References

Arsenijević, Boban. 2006. *Inner aspect and telicity*. PhD thesis, Universiteit Leiden.
Arsenijević, Boban. 2007. A unified analysis of two classes of Slavic verb prefixes. In S. Blaho *et al.* (eds) *Console XIV Proceedings*. Leiden: Console. 21-36.

Babko-Malaya, Olga. 1999. Zero Morphology: a study of aspect, argument structure and case. Doctoral Dissertation, The State University of New Jersey, New Brunswick, New Jersey.
Babko-Malaya, Olga. 2003. Perfectivity and prefixation in Russian. *Journal of Slavic Linguistics* 11 no. 1: 5-36.
Di Sciullo, Anna-Maria, and Roumyana Slabakova. 2005. Quantification and aspect. In *Perspectives on aspect*, ed. Henk Verkuyl, Henri¨ette de Swart, and Angeliek van Hout, volume 32 of *Springer Series Studies in Theoretical Psycholinguistics*. Springer.
Fowler George. An Articulated Theory of Aspect and Prefixation in Russian. FASL3: 97-122.
Gribanova, V. (2008) Russian prefixes, prepositions and palatalization in Stratal OT. In *Proceedings of the 26th*
Marantz, Alec. 1997. No Escape from Syntax: Don't Try Morphological Analysis in the Privacy of Your Own Lexicon. *U. Penn Working Papers in Linguistics, Volume 4.2*.
Markman, Vita. 2007. Slavic semelfactives, secondary imperfectives, and the cartography of the aspectual phrase. Ms.
Matushansky, Ora. 2002. On formal identity of Russian prefixes and prepositions. *MIT Working Papers in Linguistics* 42: 217-253.
Matushansky, Ora. 2009. On the featural composition of the Russian back yer. In G. Zybatow, U. Junghanns, D. Lenertová and P. Biskup, eds., *Studies in Formal Slavic Phonology, Morphology, Syntax, Semantics and Information Structure. Proceedings of FDSL 7, Leipzig 2007*. Frankfurt: Peter Lang, pp. 397-410
Progovac, Ljiljana. 2002. Aspect phrases, perfective prefixes, and congruent prepositional phrases in Serbian. FASL 10: 201-221.
Ramchand, Gillian. 2004. Time and the event: The semantics of Russian prefixes. *Nordlyd. Special issue on Slavic prefixes* 32.2:323–361.
Romanova, Eugenia. 2004. Superlexical vs. lexical prefixes. *Nordlyd. Special issue on Slavic prefixes* 32.2:323–361.
Romanova, Eugenia. 2006. Constructing Perfectivity in Russian. Ph.D. dissertation. University of Tromso.
Spencer, Andrew & Marina Zaretskaya. 1998. Verb prefixation in Russian as lexical subordination. *Linguistics* 36: 1-39.
Svenonius, Peter. 2008. Russian prefixes are phrasal. In *Proceedings of Formal Descriptions of Slavic Languages* 5, eds. G. Zybatow, L. Szucsich, U. Junghanns, and R. Meyer, 526-537. Frankfurt am Main: Peter Lang.
Svenonius, Peter. 2004. Slavic prefixes inside and outside VP. *Nordlyd. Special issue on Slavic prefixes* 32.2:323–361. Www.ub.uit.no/munin/nordlyd.
Tolskaya, Inna. 2007. Unifying Prepositions and Prefixes in Russian: Conceptual structure versus syntax. *Nordlyd 34-2.* Space, Motion, and Result.
Jabłońska, Partrycja. 2007. Radical decomposition and argument structure. Ph.D. dissertation, University of Tromso.

Appendix 1: Example derivations starting from simplex imperfective stems

(48) ① 1st step ①
a. ST + **PR-prefix**
[**do-**[dela]^{IPFV}]^{PFV}-t'
'finish doing'
b. ST + **SR-prefix**
[**na-**[bra]^{IPFV}]^{PFV}-t'
'collect a quantity of sth.'

(49) ② 2nd step ②
a. [ST + PR-prefix] + **iva**
[[do-[dela]^{IPFV}]^{PFV}**-yva**]^{IPFV}-t'
'finish^{IPFV} doing'
b. [ST + SR-prefix] + **iva**
[[na-[bir]^{IPFV}]^{PFV}**-a**]^{IPFV}-t'
'collect^{IPFV} a quantity of sth'

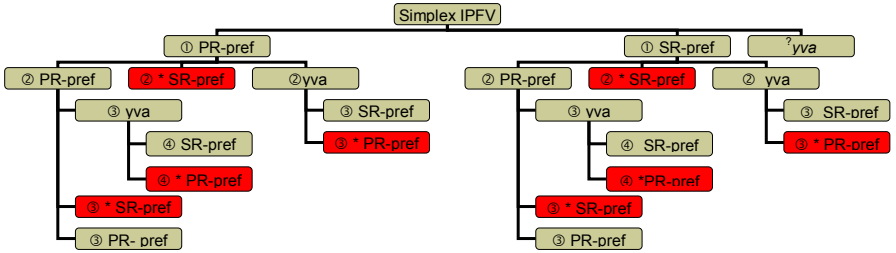
(50) ② 2nd step ②
a. [ST + PR-prefix] + **PR-prefix**
[**pere-**[do-[dela]^{IPFV}]^{PFV}]^{PFV}-t'
'finish again doing sth.'
b. [ST + SR-prefix] + **PR-prefix**
[**do-**[na-[bra]^{IPFV}]^{PFV}]^{PFV}-t'
'complete collecting a quantity of sth.'

(51) ③ 3rd step ③
a. [[ST + SR-prefix] + iva] + **SR-prefix**
[**po-** [na-[bir]^{IPFV}]^{PFV}-a]^{IPFV}]^{PFV}-t'
'spent some time collecting a quantity of sth.'
b. [[ST + PR-prefix] + iva] + **SR-prefix**
[**po-** [[do-[del]^{IPFV}]^{PFV}-yva]^{IPFV}]^{PFV}-t'
'spent some time finishing doing sth.'

(52) ③ 3rd step ③
a. [[ST + PR-prefix] + PR-prefix] + **iva**
[[pere-[do-[del]^{IPFV}]^{PFV}]^{PFV}**-yva**]^{IPFV}-t'
'finish^{IPFV} again doing sth.'
b. [[ST + SR-prefix] + PR-prefix] + **iva**
[[do-[na-[bir]^{IPFV}]^{PFV}]^{PFV}**-a**]^{IPFV}-t'
'complete^{IPFV} collecting a quantity of sth.'

(53) ③ 3rd step ③
a. [[ST + PR-prefix] + PR-prefix] + PR-prefix
[**pod-**[[pere-[do-[dela]^{IPFV}]^{PFV}]^{PFV}]^{PFV}-t'
'finish again doing sth. to some degree'
b. [[ST + SR-prefix] + PR-prefix] + PR-prefix
[**pod-**[[do-[na-[bra]^{IPFV}]^{PFV}]^{PFV}]^{PFV}-t'
'complete collecting a quantity of sth. to some degree'

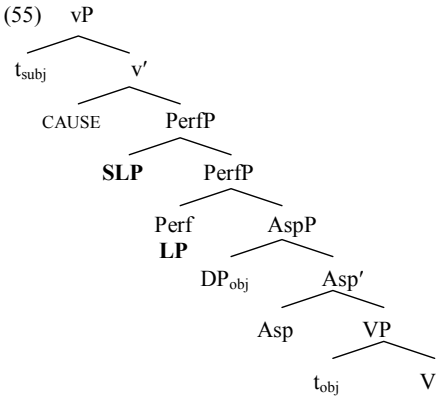
(54) ④ 4th step ④
[[[ST + PR-prefix] + PR-prefix] + iva] + **SR-prefix**
[**po-**[[pere-[do-[dela]^{IPFV}]^{PFV}]^{PFV}-yva]^{IPFV}]^{PFV}-t'
'spend some time finishing again doing sth.'
[[[ST + SR-prefix] + PR-prefix] + iva] + **SR-prefix**
[**po-**[[do-[na-[bir]^{IPFV}]^{PFV}]^{PFV}-a]^{IPFV}]^{PFV}-t'
'spend some time completing collecting a quantity of sth.'



Appendix 2: A few theoretical approaches to pefixation

1. Prefixes as pieces of functional structure: Slabakova 2005

(55)



- LPs ("internal prefixes"): heads of a functional projection Perf(ective)P
- SLPs ("external prefixes"): adjuncts to PerfP

- This exaplains: why SLPs are outside LPs;
  why a stem can contain a single LP, but more than one SLPs
  why LPs, unlike SLPs, obligatorily induce telicity

- This does not explain: why LPs, unlike SLPs tend to develop idiomatic meanings
  why LPs can have impact on the argument structure
  where different lexical restrictions of LPs and SLPs come from

2. Slavic prefixes vis-à-vis Germanic particles

- "The verb particle and separable prefix structures familiar from Germanic languages are by no means peculiar to them, but are fairly typical manifestations of the systems that UG makes available for the expression of directed motion and related notions. It should come as no surprise, then, that the Slavic languages also have developed a similar system." Svenonius 2004:2001

  - Prefixes/particles are both drawn from the prepositional inventory
  - Prefixes/particles both have the resultative meaning, broadly conceived
  - Prefixes/particles both have effects on the argument structure
  - Prefixes/particles show similar idiomatization patterns

(56)

	Particle	**Preposition**
a.	give up	up the tree
b.	drop out	out the window
c.	goof around	around the fountain

(57)

	Prefix	Preposition		Prefix	Preposition
a.	iz-bežat'	iz doma	c.	pri-bežat'	pri dome
	out.of-run	out.of house		by-run	by house
	'avoid'	'out of the house'		'come running'	'by the house'
b.	pod-bežat'	pod domom	d.	ot-bežat'	ot doma
	under-run	under house		away-run	away house
	'run up to'	'under the house'		'run off'	'from the house'

(58) **Indefinite object alternation**: English
a. John wrote (a letter).
b. John wrote up *(a letter).

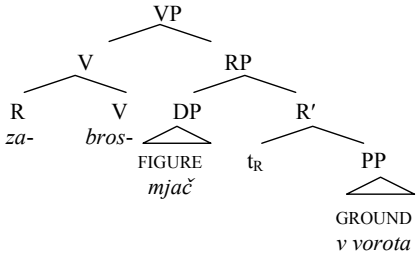
(59) **Indefinite object alternation:** Russian
a. Volodja pisa-l (pisjmo).
V. write-PST.M letter.ACC
'Volodja was writing a letter'
b. Dima na-pisa-l *(pisjmo).
D. NA-write-PST.M letter.ACC
'Dima wrote a letter'

- Svenonius 2004: Slavic lexical prefixes and Germanic particles have (almost) identical syntax: both essentially are small clause predicates
  - **Slavic**: LPs merge in the R(esult) projection; small clause = RP
  - **Germanic**: particples (optionally) move there from its original location in P; small clause = PP

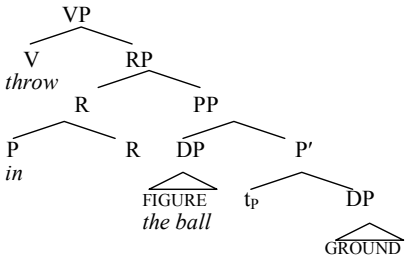
(60) Volodja zabrosil mjač (v vorota).
V. ZA-throw-PST.M ball.ACC into goal
'Volodja kicked the ball into the goal.'

(61) Dima threw (in) the ball (in).

(62)



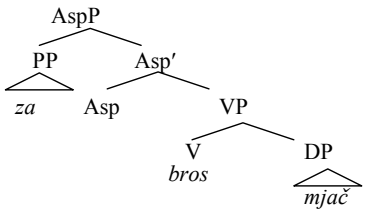
(63)



- SLPs are PPs adjoining a functional projection above VP

(64) Ricardo nervno za-brosa-l mjač.
Ricardo nervously INCEP-throw-PST ball.ACC
'Ricardo began to nervously throw the ball'

(65)



- This exaplains: why SLPs are outside LPs
  a stem can contain a single LP, but more than one SLPs
  why LPs, unlike SLPs, obligatorily induce telicity
  why LPs, unlike SLPs, tend to develop idiomatic meanings
  why at all LPs can have impact on the argument structure

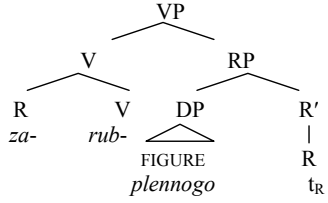
- **Telicity:** R introduces a result state. It is precisely the result state that makes a verbal predicate telic.

- **Idiomatization**: "If superlexical prefixes are introduced outside VP, as I suggest here, then the failure of idiomatic combinations to form is part of a phenomenon well-known since Marantz (1984), that idioms form naturally among VPinternal elements and less naturally across the VP boundary"

- **Non-selected objects:** they are arguments of the prefix (cf. Spencer & Zaretskaya 1998)

(66) **za**-rubit' {*derevja || *drova || OKplennogo}
ZA-chop-INF trees.ACC firewood.ACC captive.ACC
'slash {*the trees || *the firewood || OKthe captive}'

(67)

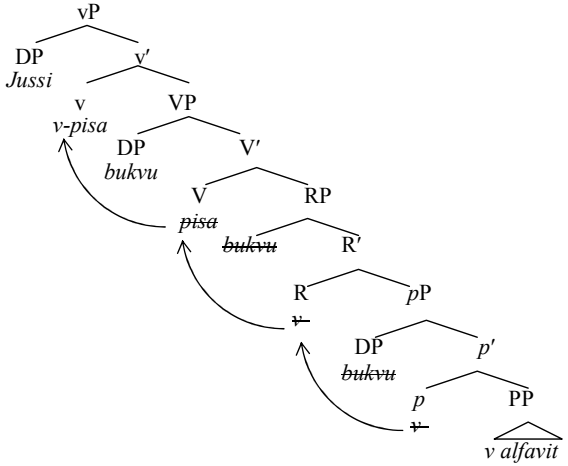


3. LPs as *p*'s

- Romanova 2006: LPs are literally prepositions. Specifically, they are *p*, or Path, heads in the split-P configuration.

(68) Jussi v-pisa-l bukvu v alfavit.
Jussi V-write-PST.M letter.ACC. into alphabet.ACC.
'Jussi inserted a letter into the alphabet.'

(69)



- Phonological evidence for treating prefixes and prepositions on a par: Matushansky 2002.
  - Prefixes and prepositions form a natural class in that they are subject to both word-internal (e.g., yer-lowering) and phrasal (e.g., high-switch) phonological rules.
  - One example (from Pesetsky 1979 and Matushansky 2002): prefixes and prepositions undergo **yer-lowering** in precisely the same way.

(70) **Yer-lowering**
pod lëd
under ice.ACC
'under ice' (directional)
podo l'd-om
under ice-INSTR
'under ice' (locative)

(71) [podъ [[lьd]-ъ]] → [podъ-[[l'od]_]] → pod lëd
[podъ [[lьd]-om]] → [podъ-[[l'_d]-om]]→ podo l'dom

(72) **Jer lowering**
pod-žog
POD-set.on.fire.PST.M
podo-žg-l-a
POD-set.on.fire-PST-F
'set on fire'

(73) [[[podъ-žъg]-l]-ъ] → [[[podo-žъg]-l]-ъ] → *podožog
[[[podo-žъg]-l]-a] → [[[podo-žъg]-l]-a] → podožgla

(74) [podъ-[[žъg-l]-ъ]] → [podъ-[[žog-l]]] → podžog
[podъ-[[žъg-l]-a]] → [podъ-[[žg-l]-a]] → podožgla

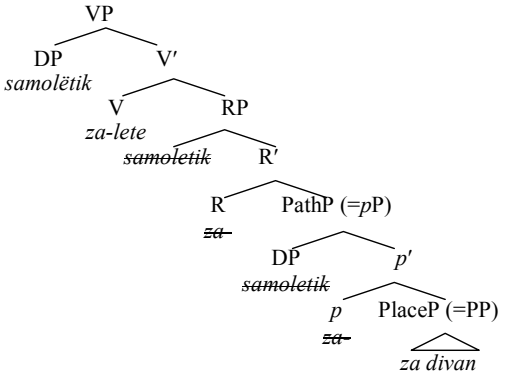
- **Directed vs. non-directed motion verbs**
- Romanova 2006: Non-directed motion verbs incorporate a path (=*p*), hence their peculiar semantics and inability to combine with LPs.

(75) a. **za**-lete-t'
ZA-fly.dir-INF
'fly behind sth'

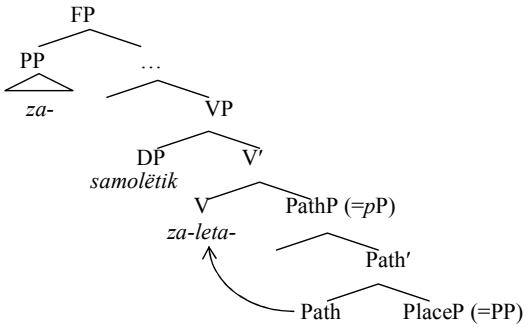
b. **za**-leta-t'
INCEP||*ZA-fly.nondir-INF
'start flying' || *'fly behind sth'

- Non-directed motion verbs incorporate silent Z-path making it impossible for overt paths to merge

(76)



(77)



4. The asymmetry

- Derivational asymmetry between LPs (heads) and SLPs (maximal projections) apparently predicts differences at the spellout. LPs are expected to pattern with other heads, e.g., with the other productive derivational morphemes in Russian, while SLPs -- with other phrasal categories, e.g., PPs.

- Similar derivational asymmetry: Babko-Malaya 1999.
  - LP adjoin at the V^0 level presyntactically
  - SLPs adjoin to functional heads in the syntax

(78) Ivan **s**-pe-l pesn-ju.
Ivan S-sing-PST.M song-ACC
'Ivan sang a song.'

(79) [$_{TP}$ PAST [$_{AspP}$ Ivan [$_{Asp'}$ ASP [$_{VP}$ the song [$_{V'}$ [$_{V}$ **s**-sing]]]]]]

(80) Ivan **za**-pe-l pesn-ju.
Ivan INCEP-sing-PST.M song-ACC
'Ivan started to sing a song.'

(81) [$_{TP}$ PAST [$_{AspP}$ Ivan [$_{Asp'}$ [$_{Asp}$ **za**-ASP] [$_{VP}$ the song [$_{V'}$ [$_{V}$ sing]]]]]]

- **Generalization 1**: prefixes do not participate in a wide variety of morphological and phonological processes other affixes do.
- **Genralization 2**. With respect to Generalization 1, SLPs do not exhibit any differences from LPs.

- **Palatalization** vs. **hi-switch** (Fowler 1996, Matuzhansky 2002)

(82) **Palatalization**
a. obid-e /obide/ → [obʲidʲe]
offense-SG.PREP
b. altist /alʲtʲ + ist/ → [alʲtʲist]
viola-NMN
'voilist'

(83) **Hi-switch**
a. ugol Ivan-a /ugol ivana/ → [ugɐlʸivanɐ] || *[ugɐlʲivanɐ]
corner I.-GEN
'Ivan's corner'
b. sad Irin-y /sad irinɨ/ → [satʸɨrʲinɨ] || *[satʲirʲinɨ]
garden I.-GEN
'Irina's garden'

(84) **Prefixes: hi-switch, not palatalization**
a. **LP**
ot-yska-t' /ot + iskatʲ/ → [ɐtʸiskatʲ] || *[ɐtʲiskatʲ]
OT-search-INF
'find'

b. **SLP**
pod-is-pravit' /pod + isprav^{j}it^{j}/ → [pɐdʸisprav^{j}it^{j}] || *[pɐdʲisprav^{j}it^{j}]
ATT-IZ-repair-INF
'repair slightly'

- **Vowel cluster resolution**

(85) **Word-internal morphology**
a. karate + ist → [kɐrɐtʲist] || *[kɐrɐteist]
karate NMN
'karateka'
b. kriča + i + t → [krʲičit] || *[krʲičait]
shout PRS 3SG
'is shouting'

(86) **LP**
za + uči- → [zɐuči] || *[zuči]
ZA study
'learn by heart'

(87) **SLP**
po + uči- → [pɐuči] || * [puči]
DELIM study
'study for a while'

- **Distribution of the stressed unvocalizaed yer** (Fowler 1994)
- If an underlyingly stressed yer is not vocalized, the stress moves to the left. Only if there is no syllable to the left, it moves to the right.

(88)

	'family, PL'		'day'	
NOM	sémj-i	/semʲj-i/	den'	/dʲɛnʲ-ь/
GEN	seméj-∅	/semʲj-ь/	dn'-á	/dʲɛnʲ-a/
DAT	sémj-am	/semʲj-am/	dn'-ú	/dʲɛnʲ-u/
INSTR	sémj-ami	/semʲj-ami/	dn'-ámi	/dʲɛnʲ-ami/
PREP	sémj-ax	/semʲj-ax/	dn'-áx	/dʲɛnʲ-ax/

- The vast majority of verb stems with (V)j "thematic element" have fixed stem stress (*čitáj-u* 'I am reading', *boléj-u* 'I feel sick', *dúj-u* 'I am blowing').

(89) pɐ́j-u → p ˊ j-u → pj-ú
drink-PRS.1SG
'I am drinking'

- Prefixation of an inherently stressless prefix apparently creates an environment where the stress can move to the left. Yet, the stress does not move, neither for LPs, nor for SLPs:

(90) a. **LP**
otь-pɐ́j-u → oto-pˊ j-u → oto-pj-ú || *otó-pj-u
OT-drink-PRS.1SG
'I will drink from sth'

b. **SLP**
po-pǰ-u → po-p´_ j-u → po-pj-ú || *pó-pj-u
DELIM-drink-PRS.1SG
'I will drink for a while'

- **Infinitival allomorphy** (Fowler 1994)
- Two allomorphs of the infinitive for unsuffixed obstruent stems
  - *ti*: the past-tense stress on the inflection
  - *t'*: otherwise

(91) a.

nes-tí	ves-tí	gres-tí
carry-INF	lead-INF	row-INF
nes-l-ó	ve-l-ó	greb-l-ó
carry-PST-N	lead- PST-N	row- PST-N
nes-l-í	vel-l-í	greb-l-í
carry- PST-PL	lead- PST-N	row- PST-PL

b.

pas-t'	ses-t'
fall- INF	sit.down- INF
pá-l-o	sé-l-o
fall- PST-N	sit.down- PST-N
pá-l-i	sé-l-i
fall- PST-PL	sit.down- PST-PL

- *Vý* is a lexical inherently stressed prefix

(92) Vý-prefixation forces the stress from the inflection onto the stem…

vý-nes-l-o	vý-ve-l-o	vý-greb-l-o
vý-nes-l-i	vý-vel-l-i	vý-greb-l-i

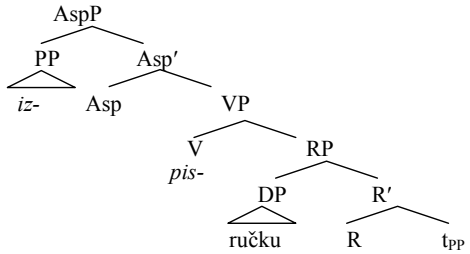
(93) …but the infinitive allomorph does not change:

vý-nes-ti	vý-ves-ti	vý-gres-ti

➢ Svenonius 2004, 2008: **both LPs and SLPs are phrasal**

(94) Ona is-pisa-l-a ručk-u.
she IZ-write-PST-F pen-ACC
'She has written her pen out of ink.'

(95)



"If prefixes are maximal (extended) projections, then it might follow on independent grounds that they define their own phonological cycles. But if they are heads in the extended

projection of V, then the special prosodic status appears to require an additional stipulation." (Svenonius 2008).

5. SLPs and results: Žaucer 2009

➢ **The problem:** there are SLPs that introduce results, just like LPs

(96)

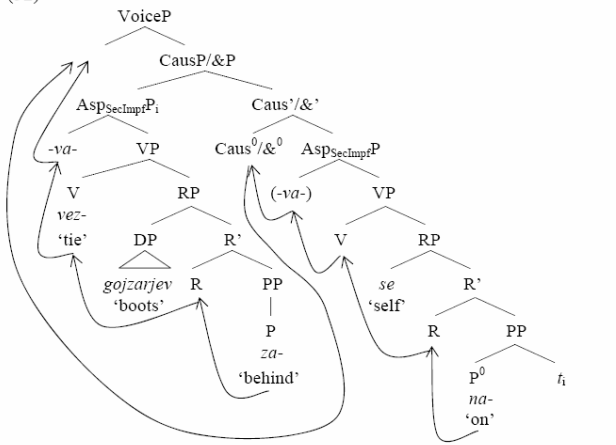
Hej,	Geldof,	a	se	še	nisi	**na**-*od*-povedoval	koncertov?
yo	Geldof	Q	self	still	not-are	CUM-OT-told	concerts.GEN.PL

'Yo, Geldof, haven't you had enough of calling off concerts yet?' (Žaucer 2009: 27)

➢ *Na* is resultative, as is *od-*
➢ There can only be one result per VP
➢ Hence, (60) involves two VPs, each with its own RP

(97) **na**-*za*-vezovati se gojzarjev
CUM-ZA-tie self boot.GEN.PL
'get one's fill of tying up boots'

(52)



Appendix 3. Other Slavic Languages:

- It seems to be the case that in other Slavic languages the same two restrictions -- positional restriction and aspectual selectional restriction -- are operative.
- Variation has to do with
  - lexical / superlexical status of individual prefixes
  - whether a prefix is subject to the aspectual selectional restriction, positional restriction, neither, or both.

- Milićević 2004 2004: three SC superlexicals

iz- 'completely', CMPL;
po- 'distributive', DSTR
na- 'cumulative', CMLT

(98) Very tentative generalization (only based on examples cited by Milićević 2004)
a. No aspectual selectional restructions
b. *Na-* > *iz-* > *va-*

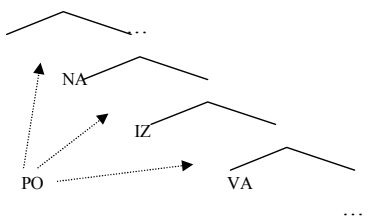
(99) ***Iz-* combined with IPFV stems**
a. **is-**[pre-tura-]^{IPFV} ti 'jumble up'
is-[pod-vlači-]^{IPFV} ti 'underline completely/all of'
b. **is-**[po-[[preporuči-]^{PFV}va]^{IPFV}]^{PFV} -ti 'recommend all of ... one by one'
is-[po-[zatvar-]^{IPFV}a]^{PFV} -ti 'close all of … one by one'

(31) ***Iz-* on top of *po-***
[iz- [po-[[iz-baci]-va]^{IPFV}]^{PFV}]^{PFV} -ti iz > po
CMPL-DSTR-OUT-throw-IMPF-INF
'throw completely all of ... out one by one'

(37) ***Na-* and *po-* on top of *iz-***
[**Na-**[po-[is-[[pre-po-zna]^{PFV} -va]^{IPFV}]^{PFV}]^{PFV}]^{PFV} -o se lica u svom životu. na > po > iz
CMLT-DSTR-CMPL-PRE-PO-knew RFX faces.GEN in his.DAT life.DAT
'He has recognized a lot of faces in his life.'

(39) ***Iz-* outside *na-* is not ok; other combinations are**
a. [pre-trča]^{PFV} -ti ulice (pl.acc) 'run across streets'
b. [[pre-trča]^{PFV} -va]^{IPFV} -ti
c. [**is-**[[pre-trča]^{PFV} va]^{IPFV}]^{PFV} ti
d. [**na-**[[pre-trča-]^{PFV}-va]^{IPFV}]^{PFV} -ti se
e. [**na-**[**is-**[[pre-trča-]^{PFV}-va]^{IPFV}]^{PFV}]^{PFV} -ti se na > iz
f. [**po-**[**is-**[[pre-trča-]^{PFV}-va]^{IPFV}]^{PFV}]^{PFV} -ti po > iz
g. [**na-**[**po-**[**is-**[[pre-trča-]^{PFV}-va]^{IPFV}]^{PFV}]^{PFV}]^{PFV} -ti se na > po > iz
h. [**po-**[**na-**[**is-**[[pre-trča-]^{PFV}-va]^{IPFV}]^{PFV}]^{PFV}]^{PFV} -ti (se) po > na > iz
i. *[**is-**[**po-**[**na-**[[pre-trča-]^{PFV}-va]^{IPFV}]^{PFV}]^{PFV}]^{PFV} -ti (se) *iz > po > na

(39)



- Multiple prefixation in Bulgarian: Istratkova 2004