

Superlexical vs. lexical prefixes

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Abstract

This paper is intended to justify the classification of all the Russian prefixes into lexical and superlexical. It gives semantic and syntactic criteria for distinguishing between the two groups, including: the idiosyncratic or spatial lexical meaning versus operator-like function; the (in)ability to measure over objects and events; the (in)ability to stack; the (in)ability of a host verb to form secondary imperfective; attaching to (a)telic stems; the (in)ability to change the argument structure of a host verb. Applying these criteria results in finer gradation within the group of superlexical prefixes. It is accounted for by their different syntactic positions with respect to *vP*. At the end of the paper I speculate about the effect this architecture can have on the prefixation of unaccusative and unergative verbs.

1. Borderlines

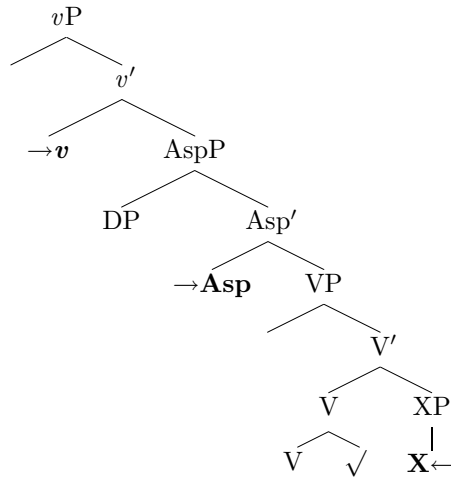
What is a Superlexical prefix to a simply lexical one? How can one differentiate between them? Some people (like Matushansky 2002) believe that they are not homophonous, but identical (like *po-*) and their interpretation just depends on the root or stem they attach to, in which case all superlexical prefixes have a lexical counterpart, or, in other words, the set of superlexical prefixes is a subset of the lexical. The criteria for distinguishing between them seem vague due to a high degree of allomorphy and homophony among them. What criteria could underlie the division? First, let's turn to terminology. What is so super about superlexical prefixes? Probably, their ability to attach on top of lexical ones and even each other (of which in Russian there are just a few combinations of two prefixes altogether, unlike in Bulgarian or Serbian), for example that in (1).

- (1) kry-tj — ot-kry-tj — ot-kry-va-tj —
cover-INF^P away-open-INF^P away-open-IMPF-INF^I
po-ot-kry-va-tj
DSTR-away-open-IMPF-INF^P
'cover'- 'open' - 'be opening' - 'open one after another'

But as will be seen, this is not their only super quality. They are probably real over-prefixes. They must reside in the top areas of the tree. I base this assumption on the theories by, say, Travis (2002) and Ramchand (2003), especially the latter. Travis proposes three places encoding telicity, indicated with arrows in (2):

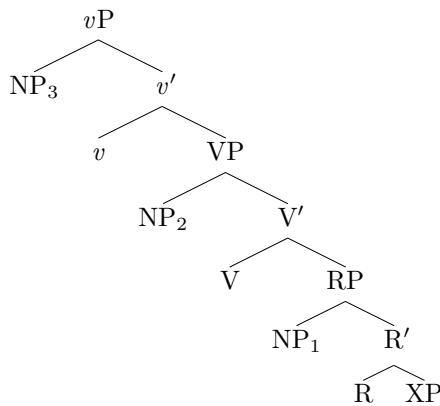
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(2)



The three places for encoding telicity have different characteristics. X can yield only a resultative interpretation; Asp resultative or inceptive; *v* resultative, inceptive or arbitrary endpoint. But as I will have a complicated story about (a)telicity, I cannot accept everything from Travis's structure. What is attractive here is the **three places**. Ramchand (2003) has a much more elaborated story, based on the decomposition of events:

(3)



- v*P = Asp_cP, causing projection
- NP₃ - subject of "cause"
- VP = Asp_pP, process projection
- NP₂ - subject of "process"
- RP = Asp_rP, result projection
- NP₁ - subject of "result"

Very preliminarily, I would like to see lexical prefixes generated in RP (thanks to Gillian Ramchand, personal communication) and incorporated

into the verbal stem by movement; superlexical prefixes above or below *vP* and probably attached to the prefixed or unprefixed stems by adjacency. In any case, they must originate above the site for secondary imperfectives, which is definitely over RP. The criteria for classifying all the prefixes, based on the mixture of traditional (Isačenko 1960) and present generativist and other (Babko-Malaya 1999, Filip 1999, Filip 2000, Filip and Carlson 2001) approaches, and proved by a long list of my examples checked with native speakers, are the following:

	Lexical prefixes	Superlexical prefixes
1	attach to telic stems, ^a if a verb is supplied with both (telic and atelic)	attach to atelic stems, if a verb is supplied with both (telic and atelic) with the exception of stacking ^b
2	allow the verb to form secondary imperfectives	do not allow the verb to form secondary imperfectives
3	cannot stack	can stack (but only some)
4	do not measure over objects (?)	(can) measure over objects

Table 1: Preliminary classification

^aby ‘telic’ I will mean ‘having *telos*’ or an inherent end-point or goal. This is important for distinguishing between directed motion verbs (which are telic in this system) and non-directed motion verbs (which are atelic).

^bThen one superlexical prefix can stack on top of another without preliminary secondary imperfectivization of the stem, as will be shown below.

2. Perfective vs. imperfective, telic vs. atelic roots

It is persuasively established in some works (especially Borik 2002) that perfective is not necessarily telic and vice versa, and imperfective is not necessarily atelic and vice versa:

2.1. Atelic but Perfective: *poiskatj* ‘look^P for a while’

- Telicity test:

- (4) Petja po-isk-a-l knigu polčasa/ *za
Peter DLMT-look.for-ASP-PST.M.SG^P book.ACC half.hour/ in
 polčasa.
 half.hour.
 ‘Peter PF-looked for a book for half an hour/*in half an hour’

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- Perfectivity tests:

Present Participle:

- (5) *poiščuščij
looking.for^P

Phasal Verbs:

- (6) *Petja načal poiskatj knigu.
Peter begin.PST.M.SG^P look.for.INF^P book.ACC
'*Peter started looking for a book.'

Simple Future interpretation:

- (7) Petja poiščet knigu.
Peter look.for.3SG^P book.ACC
'Peter will look for a book.'

Analytic future:

- (8) *Petja budet poiskatj knigu.
Peter is.3SG^P look.for.INF^P book.ACC

- (9) *pro-sidetj* 'sit^P for a certain time'

- Telicity test

- (10) Petja pro-sid-e-l v tjurjme pyatj let/*za pyatj
Peter PRDR-sit-ASP-PST.M.SG^P in prison five years/in five
let.
years.
'Peter was in prison for five years/*in five years.'

- Perfectivity tests:

Present Participle:

- (11) *prosidjaščij
sitting^P

Phasal verbs:

- (12) *Petja prodolž-a-l proside-tj v tjurjme.
Peter continue-ASP-PST.M.SG^P sit-INF^P in prison
'*Peter was still in prison.'

Simple Future interpretation:

- (13) Petja pro-sid-it v tjurjme pjatj let.
Peter PRDR-sit-PRS.3SG^P in prison five years
'Peter will stay in prison for five years.'

Analytic future:

- (14) *Petja budet pro-side-tj v tjurjme pjatj let.
Peter is.3SG^P PRDR-sit-INF^P in prison.LOC five years

The verbs in examples (4)–(14) are atelic but perfective, as can be seen from the tests for both phenomena: the ‘for an hour/in an hour’ test shows their atelic nature, whereas the rest are the tests for perfectivity.¹

2.2. Telic but imperfective: *pere-sekatj* ‘cross^I’

- Telicity test:

- (15) Petja uže pereseka-l etot kanal.
Peter already cross-PST^I this.ACC channel.ACC
 ‘Peter (has) already crossed this channel.’

- Perfectivity tests:

Present Participle:

- (16) pereskajuščij
crossing^I

Phasal verbs:

- (17) Petja nača-l pereseka-tj kanal.
Peter start-PST.M.SG^P cross-INF^I channel
 ‘Peter started crossing the channel.’

Simple Future interpretation:

- (18) Petja peresekaj-et etot kanal.
Peter cross-PRS.3SG^I this channel.ACC
 ‘Peter is crossing this channel.’

Analytic future:

- (19) Petja budet pereseka-tj etot kanal.
Peter is.3SG^P cross-INF^I this channel.ACC
 ‘Peter will be crossing this channel.’

The examples from (15) to (19) feature telic, but imperfective verbs. The former is shown by the English present perfect translation, the latter by the same tests for (im)perfectivity, as in (4) through (14).

¹Only imperfective verbs can form present participles and be complements of phasal verbs and the future auxiliary, and only perfective verbs get a future interpretation with present tense morphology.

2.3. Discussion

The distinction between (a)telicity and (im)perfectivity might be crucial for present purposes, for I think superlexical prefixes are more interested in atelicity. And it seems that in most cases the distinction is not there—most perfective verbs are also telic, for they do represent a closed event, viewed from outside, they do have the end-point or culmination (see Kratzer 2004), they are atomic (see Rothstein 2004) whereas most imperfective verbs are also atelic, for they represent an event in progress or iterated event, anyway viewed from within, they do not culminate and they are not atomic. There must be different levels of telicity, but these can be discussed in detail later.

For the sake of convenience, I will start from the lowest level, the level of the unprefixated verb. As is well known, in any language there are verbs with inherent (a)telicity characteristics, which are often subdivided into four classes: states, activities, accomplishments and achievements (Vendler 1967). Contrary to many traditionalist views I will take achievements in Russian to be perfective by default: they include more simple morphological forms than their imperfective counterparts (20a). Semelfactives are perfective as well, which is almost always encoded by the suffix *-nu* (20b):

- (20) a. pas-tj ‘fall down^P’ — pad-a-tj ‘fall down^I’
 b. pryg-nu-tj ‘jump^P (once)’ — pryg-a-tj ‘jump^I’

States will be traditionally imperfective, activities imperfective, but the latter turn into accomplishments after lexical prefixation. Thus telicity for them is strictly compositional and depends on [i] the type of a prefix that attaches to the unprefixated stem (21); plus [ii] internal arguments (22) (cf. Ritter and Rosen 1998, Rothstein 2004):

- (21) *rabotatj* ‘work^I’
- a. On raz-rabot-a-l plan po poimke
he out-work-ASP-PST.M.SG^P plan on catching.PREP
 vragov za pervyje polčasa/*pervyje
enemies.GEN in first.PL.ACC half.hour.SG.ACC/first
 polčasa prebyvanija v boljnice.
half.hour.ACC staying.GEN in hospital.LOC
 ‘He worked out a plan of catching his enemies in the first half an hour/*for the first half an hour of his staying at hospital.’
- b. On pro-rabot-a-l v boljnice polčasa/*za
he PRDR-work-ASP-PST.M.SG^P in hospital half.hour/in
 polčasa i ponjal, čto eto ne jego prizvanije.
half.hour and realized^P that this not his vocation.NOM
 ‘He worked at hospital for half an hour/*in half an hour and understood that it wasn’t his vocation.’

- (22) *varitj* ‘cook by boiling’¹
- a. Ona svarila kartošku za dva časa/*dva časa.
she boil.PST.F.SG^P potato.SG.ACC in two hours/two hours
 ‘She boiled the potatoes in two hours/*for two hours.’
- b. Ona svarila kartoški ??za dva časa/*dva časa.
she boil.PST.F.SG^P potatoes.GEN in two hours/two hours
 ‘She boiled some potatoes ??in two hours/*for two hours.’

Such changeable verbs are termed incremental by Filip (1999). I’ll stick to her definition. Incremental verbs are underspecified for telicity; they don’t have two different roots (stems) as is the case with some achievement verbs, for example, nor do they have only one atelic stem as is the case with states. This is important, because lexical and superlexical prefixes have no choice here and attach to the only available morphophonological form, whereas with the abovementioned achievements the existence of two such forms, telic and atelic, could be a good diagnostic tool for distinguishing between lexical and superlexical prefixes,² as in Table 2 (see next page).

Table 3 illustrates another interesting class, the class of motion verbs. They come in pairs, both members of which are imperfective: one is directed (or isolated, Vinogradov 1952), the other non-directed (repetitive, *ibid.*). One is thus telic (having a goal—that is, an endpoint), the other is atelic (having no inherent goal). Because the verbs with inherent goal might be considered telic, and, correspondingly, the verbs without such inherent information atelic, the lexical prefixes must attach to directed motion verbs, superlexical to non-directed ones.³

Thus, we still have the following criteria for classification of the two types of prefixes: [i] superlexicals attach to atelic stems and form no secondary imperfectives; [ii] the rest are free to behave in accordance with their current selectional needs.⁴ This can be put in simple structuralist

²The semantic contribution of the prefixes *za-*, *s-*, *ras-* in the righthand part of Table 2 is quite outstanding and resembles nothing of the kind superlexical prefixes do. My guess would be that lexical prefixes can also attach to atelic stems, which doesn’t automatically make superlexical ones select for telic stems for the balance. But it is not a very representative picture. There are only a couple more verbs that behave like *kidatj* in this respect—e.g., its synonym *brosatj* ‘throw’; or *plevatj* ‘spit’ (of semelfactive *pljunutj*) which takes only *za-* of the prefixes above and means the coverage of the surface.

³For probably interesting reasons the secondary imperfective forms of motion verbs do not use the imperfectivizing suffix *-(i)va*, instead taking advantage of an unprefixed atelic stem. On the other hand, it might well be a case of stem syncretism, because there are clearly different ways of forming secondary imperfectives with motion verbs: [i] stress shift in the verb ‘run’ (*za-bégatj* perfective of non-directed vs. *za-begátj* secondary imperfective of directed); [ii] a stress shift and a stem vowel change in the verb ‘swim’ (*za-plávatj* perfective of non-directed vs. *za-plyvátj* secondary imperfective of directed); [iii] a theme vowel change and stem consonant gradation in the verb ‘ride’ (*zajezditj*, ‘ride,’ perfective (non-directed) vs. *zajezzátj*, ‘visit,’ secondary imperfective of directed perfective *zajexatj*).

⁴Lexical prefixes are very versatile in many ways, for example they can change the argument structure of the verb, transitivize the latter or vice versa, make it take a Figure

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perfective (telic) stem	secondary imperfective	imperfective (atelic) stem	secondary imperfective
<i>kinutj</i> ‘cast (sem.)’		<i>kidatj</i> ‘cast’	
<i>do-kinutj</i> ‘cast up to sth’	<i>do-kidyvatj</i>	<i>do-kidatj-sja</i> ‘cast sth till unpleasant consequences start’	-
<i>za-kinutj</i> ‘cast sth on or into’	<i>za-kidyvatj</i>	<i>za-kidatj</i> ‘cover sth by throwing sth on it’	<i>za-kidyvatj</i>
<i>na-kinutj</i> ‘throw sth (clothes) on sth (the shoulders)’	<i>na-kidyvatj</i>	<i>na-kidatj</i> ‘throw a lot (or some quantity) of’	-
<i>pere-kinutj</i> ‘throw sth over’	<i>pere-kidyvatj</i>	<i>pere-kidatj</i> ‘throw some things one after another (somewhere)’	-
<i>po-kinutj</i> ‘leave’	<i>po-kidatj(!!)</i>	<i>po-kidatj</i> [i] ‘throw some things (leave) one after another; [ii] ‘throw sth for a while’	-
<i>ras-kinutj</i> ‘cast, spread (cards, e.g.)’	<i>ras-kidyvatj</i>	<i>ras-kidatj</i> ‘make a mess by throwing (leaving) things around’	<i>ras-kidyvatj</i>
<i>s-kinutj</i> ‘cast sth from sth’	<i>s-kidyvatj</i>	<i>s-kidatj</i> ‘throw things into a pile’	? <i>s-kidyvatj</i>

Table 2: Lexical and superlexical prefixes on semelfactive and iterative stems of the same verb

<i>letetj</i> ‘fly’ (directed)	secondary imperfective	<i>letatj</i> (non- directed)	secondary imperfective
<i>do-letetj</i> ‘reach sth by flying’	<i>do-letatj</i>	<i>do-letatj-sja</i> ‘reach unpleasant conse- quences by flying’	-
<i>za-letetj</i> ‘fly on or into’	<i>za-letatj</i>	<i>za-letatj</i> ‘start fly- ing’	-
<i>na-letetj</i> ‘fly onto’	<i>na-letatj</i>	<i>na-letatj</i> ‘fly some distance (5000 km)’	-
<i>ot-letetj</i> ‘fly aside’	<i>ot-letatj</i>	<i>ot-letatj</i> ‘reach the natural end of fly- ing’	-
<i>pere-letetj</i> ‘fly over’	<i>pere-letatj</i>	<i>pere-letatj</i> ‘fly ex- cessively’	-
<i>po-letetj</i> ‘set off flying’ ^a	-	<i>po-letatj</i> ‘fly for a while’	-
<i>pro-letetj</i> ‘fly past’	<i>pro-letatj</i>	<i>pro-letatj</i> ‘fly for some specified pe- riod of time’	-
<i>raz-letetj-sja</i> ‘fly into differ- ent directions’	<i>raz-letatj-sja</i>	<i>raz-letatj-sja</i> ‘fly around frantically up to an excessive point’	-
<i>s-letetj</i> ‘fly from sth’	<i>s-letatj</i>	<i>s-letatj</i> ‘fly to a place and back’	-

Table 3: lexical and superlexical prefixes on directed and non-directed stems of the same verbs

^a*po-* with directed motion verbs must not be lexical or superlexical, but a perfectivizing prefix with no special semantic/superlexical load (Vyara Istratkova, p.c.); I will not discuss this type in the current work.

or even functionalist terms: the former have no requirement for secondary imperfectivization; a superlexical prefix doesn't change the verb lexically, it changes some parts of its event or argument structure, so the closest relative expressing progressive or habitual description of the same event will be its unprefixing stem. Whereas with lexical prefixes, verbs get additional lexical information, and represent an event different from the one embedded in the unprefixing relative. They must have specific imperfective counterparts, so-called secondary imperfectives.

3. Stacking

Stacking does not create any clearer picture. Or does it? Have a look:

- (23) a. superlexical stacking: *stroitj* 'build^I' — *na-stroitj* 'build^P a lot' — *po-na-stroitj* 'build^P a lot everywhere'
- b. stacking on top of a perfectivizer:⁵ *pisatj* 'write^I' — *na-pisatj* 'write^P' — *po-na-pisatj* 'write^P a lot of (sth) in many places' (! it shows that either *na-* is not empty, or *po-* and *na-* are actually a complex prefix)
- c. stacking on top of a lexical prefix: *krytj* 'cover^I' — *za-krytj* 'close, shut^P' — *za-kryvatj* 'close, shut^I' — *po-za-kryvatj* 'close^P (shut) many objects one after another'

The examples in (23) show:

- superlexical prefixes do not necessarily require an imperfective form to attach to—in (23a) *po-* stacks on top of the perfective stem with the prefix *na-*;
- “empty” perfectivizers are a problem also with respect to stacking (the post-stacking example in (23b) yields a different interpretation of the prefix *na-*);
- only lexical prefixes force their hosts to first imperfectivize before accepting a superlexical.

To resolve the problem in (23) I should insist on superlexical prefixes attaching to atelic stems, which, as was shown in section 2, are not always imperfective. The task to be undertaken later is to prove consistently that superlexical prefixes do not form telic predicates, which is clearly seen either from examples (4)–(14) or from the impossibility of the application of a ‘for an hour/in an hour’ test to them:

or a Ground (Talmy's 1978 terminology, through works by Ramchand and Svenonius 2002 and Svenonius 2003) as its complements.

⁵As noted, I am not touching upon “empty” perfectivizers in this paper.

- (24) a. *Petja za-pe-l za minutu/minute.
Peter INCP-sing-PST.M.SG^P in minute/minute
 ‘Peter started singing *in a minute/*for a minute.’ Borik
 (2002:62; star added here)
- b. Olja na-brala gribov ??za čas/*čas.
Olga CMLT-pick.PST.F.SG^P mushrooms.GEN in hour/hour
 ‘Olga picked a lot of mushrooms ??in an hour/*for an hour.’

This impossibility of (24a) may be explained by the fact that inceptives are actually semelfactives, occupying an instant on the time line (see Levin 1999); in (24b) it is connected with the function of the superlexical prefixes, which Filip (1999; 2000) calls a measure function. One more interesting note is that superlexical prefixes most probably do not change the event structure of a verb: first of all they select for activities (cf. Table 2) and they either remain activities (with *po-*, *pro-*) or become semelfactives⁶ (with *za-*). Second of all, they might be more sensitive to the argument structure of a verb than its event structure (with *na-* and distributives), which then still remains unchanged. This interesting puzzle is worth deeper and more extensive research. So far my characterization lacks explanatory force, unfortunately. Another problem surfaces from the predictions about only the superlexicals’ ability to stack or their attaching only to atelic stems. Combined with the revelations from (23) and the data from (24) they finally confuse also this neat part of the general picture:

- (25) a. -statj — v-sta-tj — v-sta-va-tj —
stand in-stand-INF^P in-stand-IMPF-INF^I
 po-v-sta-va-tj
 DSTR-*in-stand-IMPF-INF^P*
 ‘stand up’
- b. Ljudi po-v-sta-va-li v izumlenii.
people DSTR-in-stand-IMPF-PAST.PL^P in amazement.LOC
 ‘Amazed, the people stood up one after another.’
- c. -statj — v-sta-tj — pri-v-sta-tj
stand in-stand-INF^P ATTN-in-stand-INF^P
 ‘stand up’, ‘stand up a bit’ (the latter)
- d. On pri-v-sta-l, čtoby popravitj kilt.
he ATTN-in-stand-PST.M.SG^P to smoothen.INF^P kilt.ACC
 ‘He stood up slightly to smoothen his kilt.’

Pri- stacks on top of a lexical prefix without preliminary imperfectivization of the verb. According to my judgement and the judgement of my regular consultant, Marina Diakonova, there is also an imperfective form of the verb *pri-v-statj*: *pri-v-sta-va-tj*:

⁶Which have a simple event template as well, according to Levin (1999), see also Rothstein (2004), Filip (2003) about the atelicity of semelfactives.

- (26) Oni prismatrivajutsja k malenkej dvižuščej
they closely.look.PRS.3PL^I to small.F.SG.DAT moving.DAT
 točke, privstajut, čtoby lučše bylo vidno.
point.DAT ATTN.stand.PRS.3PL^I for better be.SUBJ.N.SG seen
 ‘They are watching closely the small moving point, getting up
 slightly to be able to see better.’

4. PRI-stavki (‘pre-fixes’)

One can doubt here [i] that it is stacking; [ii] that the prefixes are lexical. In this connection one serious question arises: where is the boundary between a prefixed verb and a verb whose prefix has become unparseable, undetachable? Like in *prodatj* ‘sell’? Then *ras-prodatj* ‘sell around’ is not an example of stacking.

According to Ritter and Rosen (1998) there are weak and strong verbs. Weak verbs, like *run* in English, can be inserted in a variety of different contexts, whereas the semantic contents of a strong lexical verb imposes severe restrictions on its use. Thus, the verb *statj* in Russian is either non-existent separately from its prefixes, being a cranberry morpheme, a weak verb, or a light verb without any semantics whatsoever. The translation ‘become’ is not correct in this case—it is just homophonous with the verb *statj* ‘become,’ the imperfective form of the latter being *stanovitjsja*, unlike the secondary (?) imperfectives of *v-statj* ‘stand up’ or *pere-statj* ‘stop’, *v-stavatj* and *pere-stavatj* respectively. As long ago as 43 years Isačenko himself (1960) doubted that *v-* is a prefix in the verb *v-statj* ‘get up.’ Can *pri-vstatj* be considered an example of stacking?

There are more cranberry roots: *detj*, *-rjaditj*, *-pustitj*, *-vyknutj* and some others. The fact is that each of them takes a number of recognizable prefixes with the possibility of other prefixes’ stacking on top of them. Furthermore, there are examples like *pri-za-dumatj-sja* ‘get lost in one’s thoughts,’ *pod-za-rabotaj* ‘earn a little money,’ *pod-vy-pitj* ‘get a little drunk,’ *pod-na-bratj-sja* ‘get slightly full with alcohol.’ Even if the stems are fairly idiosyncratic, they have been derived with the help of quite productive prefixes attached to quite unbounded roots. Thus, *pri-* and *pod-* do stack? The prefix *pri-* as well as *pod-* and sometimes *po-* are so-called attenuative prefixes, in other words, prefixes measuring events (showing their slight intensity)—and they are synonymous. Filip (2000) offered the following formula for attenuative *po-*, i.e. that of a measure function:

$$(27) \quad [[po-]] = \lambda P \lambda x [P(x) \wedge m_c(x) \leq s_c],$$

where m_c is a measure function with the subscript c standing for its contextual dependency, x is an event of type P , and s_c is a contextually determined expectation. This formula would describe attenuative *pri-* and *pod-* equally well: thus, they are superlexical in this meaning. They are not very picky with respect to the telicity of the verb—if they attach to unprefixed stems,

	meaning of <i>pri-</i>	examples	secondary imperfective
a.	arriving (with motion verbs)	<i>pri-jexatj</i> 'arrive, come'	<i>pri-ježatj</i>
		<i>pri-letetj</i> 'arrive by flying'	<i>pri-letatj</i>
b.	attaching to (synonymous with the prep. <i>pri</i> 'by')	<i>pri-šitj</i> 'sew to'	<i>pri-šivatj</i>
		<i>pri-sojedinitj</i> 'connect to'	<i>pri-sojedinjatj</i>
c.	comitative	<i>pri-šěptyvatj</i> 'whisper while doing sth'	
d.	additional	<i>pri-ukrasitj</i> 'decorate additionally'	<i>pri-ukrašivatj</i>
		<i>pri-umnožitj</i> 'make even bigger in numbers'	<i>pri-umnožatj</i>
e.	synonymous with <i>za-</i> with 'killing' verbs	<i>pri-rezatj</i> 'kill by stabbing'	
		<i>pri-dušitj</i> 'kill by strangling'	
		<i>pri-bitj</i> 'kill by beating'	
f.	meaning - ?	<i>pri-skučitj</i> 'bore completely'	<i>pri-skučivatj</i>
		<i>pri-styditj</i> 'reprimand'	<i>pri-styžatj</i>

Table 4: *pri-*

they behave like lexical prefixes, that is, they can select for telic or atelic roots. And when they stack on lexical prefixes, they do not require secondary imperfective stems.

Browsing a number of Russian language dictionaries I found enough examples with the prefixes *pri-* and *pod-* to isolate the range of their lexical meanings (Tables 4 and 5):

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	meaning of <i>pod-</i>	examples	secondary im- perfective
a.	up to (with motion verbs)	<i>pod-jexatj</i> 'ride up to'	<i>pod-jezžatj</i>
		<i>pod-letetj</i> 'fly up to'	<i>pod-letatj</i>
b.	addition	<i>pod-boltatj</i> 'mix more (flour)'	<i>pod-baltyvatj</i>
		<i>pod-datj</i> 'add more steam (in a banya)'	<i>pod-davatj</i>
c.	synonymous with the preposition <i>pod</i> meaning 'under'	<i>pod-goretj</i> 'burn on the lower surface'	<i>pod-goratj</i>
		<i>pod-kleitj</i> 'glue under'	<i>pod-kleivatj</i>
d.	launch (?)	<i>pod-žečj</i> 'set on fire'	<i>pod-žigatj</i>
e.	up	<i>pod-brositj</i> 'throw up (literally)'	<i>pod-brasyvatj</i>
		<i>pod-prygnutj</i> 'jump up'	<i>pod-prygivatj</i>
f.	secretly do sth	<i>pod-smotretj</i> 'look secretly (in a key hole)'	<i>pod-smatrivatj</i>
		<i>pod-ložitj</i> 'put sth secretly to sb'	<i>pod-kladivatj</i>
g.	comitative	<i>pod-petj</i> 'sing together with sb or sth'	<i>pod-pevatj</i>
h.	correct	<i>pod-rovnjatj</i> 'make more equal, straight'	<i>pod-ravnivatj</i>
		<i>pod-risovatj</i> 'correct a picture'	<i>pod-risovyvatj</i>
i.	?	<i>pod-deržatj</i> 'support'	<i>pod-derživatj</i>
		<i>pod-bitj</i> 'instigate'	<i>pod-bivatj</i>
		<i>pod-bodritj</i> 'cheer up'	<i>pod-badrivatj</i>

Table 5: *pod-*

It would be convenient if it were easy to distinguish between lexical and superlexical *pri-* and *pod-* just by their semantic contribution to the meaning of the whole predicate, but the actual situation is not so clear. Besides, there seems to be no explanation for the ability or inability of the same prefixes to let the verb form secondary imperfectives:

- (28) a. *pod-zabytj* ‘forget slightly’ — *pod-zabyvatj*
 b. *pod-vypitj* ‘get slightly drunk’ — *
 c. *pri-vratj* ‘lie slightly’ (‘tell a mild lie’) — *pri-viratj*
 d. *pri-boletj* ‘get slightly ill’ — *
- (29) a. *pri-tixnutj* ‘get (slightly? for a while?) quiet’ — *
 b. *pri-topnutj* ‘tap foot (slightly? together with sth?)’ — *
 c. *pod-bitj* (*glaz*) ‘damage (an eye) slightly by hitting below it’
 — *
 d. *pod-mjorznutj* ‘get slightly damaged by freezing’ — *pod-merzatj*

The problems are bountiful.

1. The structure. (28a), (28c) and (29d) can have secondary imperfective forms with the same meaning: *pod-zaby-va-tj* and *pri-vir-atj*. The rest cannot. Moreover, (28b) looks like an example of stacking—but that is not an explanation for the inability of the verb to further imperfectivize, for there are a number of instances of bare stems with *pod-* or *pri-* ((28d) is one) which cannot form secondary imperfectives, or a stacking example *pod-na-bratj-sja* with the secondary imperfective *pod-na-bir-a-tj-sja* ‘get slightly alcoholized.’
2. The meaning. The meaning is terribly vague in (29). I personally cannot say if the prefixes are lexical or superlexical there, judging by the meaning alone. They seem to combine both properties.
3. What is *pri-* in the words *pri-unytj* ‘get gloomy,’ *pri-za-dumatjsja* ‘get lost in thoughts’? There is no sense of “slightness” in these verbs but there are no secondary imperfective forms for them either. Besides, both are examples of stacking. I honestly don’t know.

If one leaves exceptions aside and counts the percentage of “correctly” behaving verbs, are generalizations still possible? To what extent are they general then? Out of 36 verbs from my list with the allegedly superlexical prefix *pod-*, 24 can form secondary imperfectives, one is always (secondary) imperfective (*pod-du-va-tj* ‘blow slightly (of a draft)’), and the rest are “well-behaved” in not permitting secondary imperfectives. Out of 43 *pri-* verbs, only 10 cannot be imperfective. The rest can.⁷ Why? I am

⁷Whereas lexical *pri-* and *pod-* are much more uniform in this respect (cf. Tables 3 and 4)—they have secondary imperfective forms. The verbs with the meaning ‘kill by’ are an exception for independent reasons. The prefixes might have a different status here.

afraid I have no logical explanation for that. Whatever is happening to the selectional properties of the attenuative prefixes and their structural possibilities, they are definitely different from other superlexicals, and the difference may really be positional.

5. Measuring over objects

One of the most interesting characteristics of prefixes, both lexical and superlexical, is their ability to reach into the argument structure of the verb (see footnote 4, for example). In this subsection I would like to address two issues: [i] measuring over objects by superlexical prefixes; [ii] selecting for a different (atypical of the argument structure of a verb) object by a prefix. The latter, still unchecked, might contribute to finer classification of all the prefixes into lexical and superlexical. The claim is that the latter are incapable of changing the arguments—they can only measure or distribute over them. Yet, their selectional properties work in such a way, that they can take either bare plurals or mass nouns. According to this claim, the best candidates for superlexical prefixes of transitive verbs are cumulative *na-* and distributive *po-*, *pere-*:

- (30) a. Moj djadja na-taska-l drov iz
my uncle CMLT-carry-PST.M.SG^P wood.PL.GEN from
 saraja.
barn.GEN
 ‘My uncle has fetched a lot of wood from the barn.’
- b. A dvojurodnj brat pere-taska-l
and cousin brother DSTR-carry-PST.M.SG^P
 drova obratno.
wood.PL.ACC back
 ‘But my cousin carried the wood back (in portions).’

Example (30a) concentrates on the quantity of wood, though the event described by the verb is multiple, thus the object seems to be measured; (30b) concentrates on the multiplicity of the event itself. In any case, the object is plural and it cannot be otherwise in (30b), though it can be a mass noun (like ‘water’) in (30a). Delimitative *po-* measures over events, rarely objects—it fairly seldom attaches to transitive verbs. In this group of “event measurers” I would also include perdurative *pro-*:

- (31) a. Moj djadja po-spa-l nemnogo i pošel na
my uncle DLMT-sleep-PST.M.SG^P little and went to
 rabotu.
work.ACC
 ‘My uncle took a short nap and went to work.’

- b. A moj dvojurodnyj brat pro-spa-l
and my cousin brother PRDR-*sleep*-PST.M.SG^P
 vse vyxodnyje.
all.PL.ACC weekend.PL.ACC
 ‘But my cousin slept through the whole weekend.’

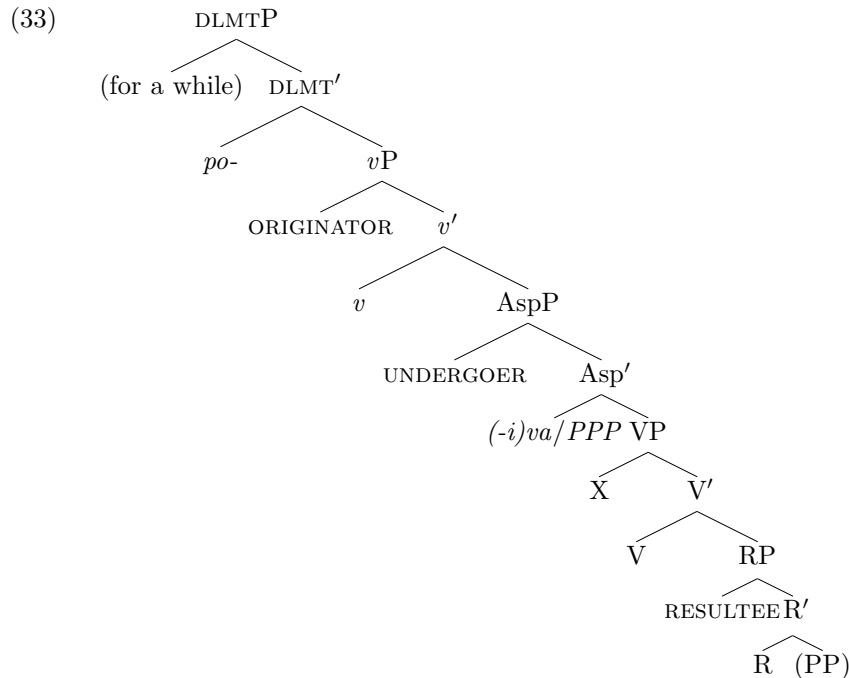
There is definitely a third group of prefixes measuring over subjects. It requires the reflexive clitic *-sja*, like in *na-jestj-sja* ‘eat to one’s heart content’ (called SATURATIVE by Isačenko 1960), or *do-begatj-sja* ‘reach unpleasant consequences by running.’ There are some more prefixes that attach to intransitive verbs (finitive *ot-* or inceptive *za-*) which are of no relevance here. They are more related to a specific subpart of a bigger event. The relevant point here is that prefixes measuring over objects do not select for different objects than those of the verb itself, unlike lexical prefixes:

- (32) a. Ona reza-la mjaso.
she cut-PST.F.SG^P *meat.SG.ACC*
 ‘She was cutting meat.’ (Affected Object?)
 b. Ona na-reza-la myasa.
she CMLT-cut-PST.F.SG^P *meat.SG.GEN*
 ‘She (has) cut a lot of meat.’ (same)
 c. *Ona vy-reza-la myaso.
she out-cut-PST.F.SG^P *meat.SG.ACC*
 *‘She cut out meat’.
 d. Ona vy-reza-la kosti iz myasa.
she out-cut-PST.F.SG^P *bones.ACC from meat.SG.GEN*
 ‘She cut out bones from the meat.’ (Figure?)

The data in (32) really relate lexical prefixes to Germanic resultative particles (see Ramchand 2003, Ramchand and Svenonius 2002, Svenonius 2003), whereas superlexical prefixes bear no resultativity—they must really be measure functions, or operators (see Filip 1999; 2000).

6. Hierarchy?

By the analysis offered above, superlexical prefixes originate—or at least end up—above the AspP domain. Keeping in mind just one problematic case, that of the attenuative prefixes, it is clear that there is no uniform distribution of all superlexicals. Probably those which relatively readily stack and never or almost never allow secondary imperfectives of their verbs (delimitative *po-*, inceptive *za-*), merge above *vP*, the rest below. The highly hypothetical hierarchy including all the possible nodes would then look like the following:



In (33) X in the Spec of VP stands either for UNDERGOER or RESULTEE, which sometimes coincide but sometimes depend on the number of structure projected, because (contrary to the diagram) if DLMTP is present, there cannot be RP and vice versa (I argue for this view elsewhere). Besides, the structure can be even more finely grained (Romanova 2004), but for the present purposes this is irrelevant. Returning to the trees in the beginning of the paper, it is not difficult to notice that (33) is a mixture of them, due to the presence of AspP in between VP and *v*P, whereas otherwise it would be identical to Ramchand's (2003) structure. It is a possible place for merge of the secondary imperfective suffix or purely perfectivizing prefixes. The former is justified by the fact that superlexical prefixes stack only onto secondary imperfective realizations of verbs with lexical prefixes. So Travis's (2002) proposal regarding the positions of telicity is not compatible with the views presented here. Ramchand (2004) even claims that the presence of RP is not a sufficient condition for telicizing the verbal predicate. Yet what happens is that in the present model prefixes can merge in RP, AspP or the *v*P area and by attaching they make the verbs perfective, which is not always telic (see the discussion in section 2). Telicity remains a mysterious issue: for example, it seems impossible to formally prove that directed motion verbs in Slavic *are* telic. But there are views (e.g. by Babko-Malaya 1999⁸ and Schoorlemmer 1995) that directed mo-

⁸Babko-Malaya bases her account on the well-known facts from Italian and Dutch (different auxiliaries with unaccusatives and unergatives).

tion verbs are unaccusative, non-directed motion verbs are unergative. If it is really so, it might be possible to show the distribution of superlexical prefixes at least with respect to *vP*.

6.1. The example of cumulative *na-* and motion verbs

I will analyze two embodiments of the verb ‘to run’ from the point of view of unergativity, though at first approximation I will get a confusing result. According to Schoorlemmer (2004), the distributive *po* PP is a test for unaccusativity:

- (34) V každom gorške roslo po cvetočku.
in each pot.LOC grew.N.SG^P DSTR flower.M.SG.DAT
 ‘In each pot grew a flower.’

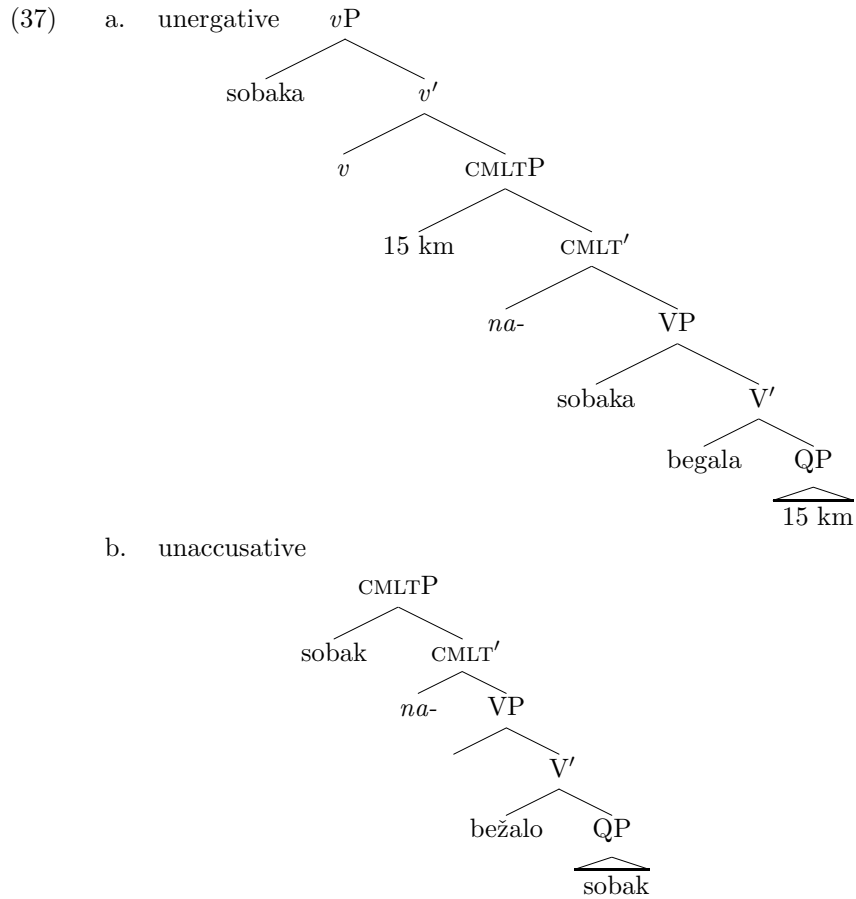
Although she claims that the same construction with non-directed ‘run’ is impossible, I (and my Russian consultants) find the sentence in (35) grammatical:

- (35) Na každoj ploščadke begalo po sobačke.
on each playground.LOC ran.around.N.SG DSTR dog.F.SG.DAT
 ‘There was a dog running on each playground.’

There is another test for unaccusativity/unergativity—with the prefix *na-* (cf. Borik 1995, Schoorlemmer 1995, Harves 2002): *na-* measures over objects only. Compare:

- (36) a. Sobak na-beža-l-o!
dogs.F.PL.GEN CMLT-run_{DIR}-PST-N.SG^P
 ‘What a lot of dogs have run here.’ non-directed
 b. *Sobak na-begalo!
 c. Eta sobaka na-bega-l-a 15 km.
this dog.F.SG.NOM CMLT-run_{NON.DIR}-PST-F.SG^P 15 km.
 ‘This dog has run 15 km.’

The prefix does not measure over the subject in (36b), which means it cannot be the underlying object of the verb ‘to run.’ Instead, in (36c) it transitivizes, taking another argument. Thus, I can consider the directional root *bežatj* unaccusative, non-directional *begatj* unergative. Then I cannot claim that a site for the measure prefix *na-* is above a *vP*, for unaccusatives lack this part of the structure and unergatives cannot transitivize, because they have this part of the structure and it is occupied by the INITIATOR (cf. Ramchand 2003), in opposition to what the verbs with the prefix *na-* demonstrate. The structure for (36a) then will approximately be as in (37).



The explanation of the agreement facts in (37) is directly connected with the explanation of what QP is. Pereltsvaig (2004) claims that the non-agreement arises from the status of the nominal projection: if it's a DP, agreement will occur, if it's a QP (as in our case), agreement is impossible (QP usually stands for "quantifier phrase"). Here I am pursuing the view that the nominal extended projection can have different structures (Borer to appear, Pereltsvaig 2004, Romanova and Diakonova 2003). Accusative nominals are either bare NPs or full DPs, plural and mass genitive objects are QPs. Thus, in (37) the presence or absence of *vP* seems irrelevant: CMLTP is projected below *vP* but above VP and also above AspP: in case of stacking, the verb would have to form a secondary imperfective before the attachment of the cumulative prefix *na-*. The situation would be different with inceptive *za-* or delimitative *po-*: they simply do not attach to the unaccusative variant of 'run.' If I postulate that they are projected above *vP*, this projection is crucial for the interpretation of a prefix:

- (38) a. Sobaka za-begala.
dog INCP-*run*.PST.F.SG^P
 ‘The dog started running.’
- b. Sobaka za-bežala (v samolět).
dog *behind-run*.PST.F.SG^P *in airplane*.ACC
 ‘The dog ran in (into the plane).’

za- in (38b) merges in RP, very low in the tree, it has no other option. Unfortunately, this explanation will not suffice for the behaviour of, say, lexical *na-* or *pri-* as opposed to their low-merging superlexical counterparts. But this line of research is beyond the scope of the present paper, which was supposed to show the reasons for classifying all the prefixes into different groups. While working on the problem, I arrived at the crucial conclusion that the picture is not a simple triptych: inside the superlexical part we observe the whole mosaic. That is the state of the art at this point.

7. Conclusion

So, even if superlexical prefixes seem to differ in some respects, there are still some features they share:

- all of them can stack to some extent;
- all of them measure over objects or events;
- none of them really change the argument structure of a verb (they can only modify it a little);
- and, what was not mentioned in the table, none of them bring about idiosyncrasy in the verbal meaning.

I didn't touch upon any of the mentioned problems in real detail. I have rather outlined the problems and their size. This is only the beginning.

SUPERLEXICAL VS. LEXICAL PREFIXES

Lexical prefixes	Superlexical prefixes like <i>po-</i> , <i>za-</i> , <i>pere-</i> , <i>pro-</i>	Superlexical prefix <i>na-</i>	Superlexical prefixes like <i>pri-</i> and <i>pod-</i>
if a verb is supplied with both (perfective and imperfective, or telic and atelic), attach to perfective or telic stems, <i>but also can attach to imperfective or atelic</i>	if a verb is supplied with both (perfective and imperfective, or telic and atelic), attach to imperfective or atelic stems	if a verb is supplied with both (perfective and imperfective, or telic and atelic), attaches to imperfective or atelic stems	if a verb is supplied with both (perfective and imperfective, or telic and atelic), attach to perfective or telic stems, <i>but also can attach to imperfective or atelic</i>
allow the verb to form secondary imperfectives	do not allow the verb to form secondary imperfectives	does not allow the verb to form secondary imperfectives, <i>but there are exceptions</i>	in a few cases allow the verb to form secondary imperfectives
cannot stack	can stack	can stack	can stack
do not measure over objects	(can) measure over <i>events</i> or objects	measures over objects	measure over <i>events</i>
<i>can change the argument structure of the verb</i>	<i>do not change the argument structure of the verb, but in special cases select for bare plurals or mass nouns</i>	<i>does not change the argument structure of the verb, but selects for bare plurals or mass nouns</i>	<i>do not change the argument structure of the verb</i>

Table 6: Table 1 revisited and revised

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