

# SLAVIC SEMELFACTIVES, SECONDARY IMPERFECTIVES, AND THE CARTOGRAPHY OF THE ASPECTUAL PHRASE

## Abstract

The paper addresses the rarely discussed Russian aspectual suffixes *nu* (semelfactive) and *iv* (secondary imperfective). It is argued that both suffixes instantiate the same light *v*; whether it is realized as *nu* or *iv* depends on whether it has features [+instantaneous] or [+progressive/iterative] respectively. Together with the recent work on Slavic aspect, which treats aspectual prefixes as prepositions, the current proposal, which treats aspectual *suffixes* as light verbs, leads to the conclusion that the Slavic AspP, like the Rizzian CP, is a collocation of Ps and light *v*'s, but is not headed by a head 'Aspect'.

## 1. Introduction

Aspectual prefixes in Slavic have been extensively discussed in the literature (Isachenko 1960, Forsyth 1970, Fowler 1994, 1996, Borik 2002, Svenonius 2004a,b,c, Filip 2000, 2003, Ramchand 2003, 2004, Romanova 2004, Jablonska 2004, Milicevic 2004, Istratkova 2004, inter alia). In contrast, Slavic aspectual suffixes have received much less attention in the above cited rich literature on Slavic aspect. This paper addresses the nature of the perfective semelfactive (Smith 1991) suffix *nu*<sup>1</sup> and its relationship to the secondary imperfective suffix *iv*<sup>2</sup> illustrated in (1) and (2) for Russian.

RUSSIAN

(1) Dima talk-**nu**-l / stuk-**nu**-l Mish-u                      *Semelfactive*  
Dima push-**nu**-pst /hit-**nu**-pst Misha-acc  
Dima pushed (once)/ hit(once) Misha

(2) Misha pod-**iv**-al / pri-stuk-**iv**-al                      *Secondary imperfective*  
Misha perf-jump-imp-pst/ perf-knock-imp-pst  
Misha kept jumping / knocking

The view of aspectual suffixes to be argued for here is embedded within a larger theoretical framework exemplified by the proposals in Ramchand and Svenonius (2003), Fowler (1994), Ramchand (2003, 2004), Matushansky (2002), Ramanova (2004), Svenonius (2004a,b,c), Jablonska (2004), and Gehrke (2004), Gerkhe et. al. (2007) and many others that treats perfective prefixes in Slavic as members of the category 'P'. The paper contributes to the above body of work by investigating the nature of the Russian

---

<sup>1</sup> There is also an inchoative *nu* in Russian: *merznut*' = freeze; *v'anut*' = wither; *tonut*' = drown. These do not have a semelfactive, i.e. instantaneous interpretation as they can be modified with 'for a long time'. I will not address the inchoative *nu* here. See Jablonska (2004) for discussion on the inchoative *nu* in Polish.

<sup>2</sup> The secondary imperfective suffix, as the name suggests, makes a verb that has been perfectivized via an addition of a perfective prefix such as 'pod' in (2) imperfective again. The secondary imperfective suffix *iv* has another allomorph '-a', as in *po-v-stav-a-t*' = dist-perf-get-imp-inf = 'to get up one by one'. I will refer to the suffix as '-*iv*' because it is the more common allomorph.

aspectual suffixes and their place in the extended Slavic AspP.<sup>3</sup> Specifically, it is proposed that *nu* and *iv* are instances of aspectual light verbs, similar to those found in Urdu, Yiddish, Korean, and Chinese among numerous other languages. A rather surprising conclusion that will emerge from the proposal is that AspP in Slavic is reducible to the independently motivated Ps and v's that carry the [+/-perfective] feature. There is no head 'Asp' in Slavic.

I will begin the journey into the layered syntax of the Slavic AspP by reviewing a number of arguments that perfective prefixes in Slavic are Ps. Specifically, I will focus on two central claims: (a) that Slavic prefixes are akin to the Germanic particles in that both are prepositional elements and (b) that there is a hierarchical ordering of attachment for perfective prefixes in Slavic (Filip 2000, 2003, Babko-Malaya 1999, Romanova 2004, Svenonius 2004a,b,c). Importantly, though the bulk of the data regarding semelfactives and secondary imperfectives in this paper comes from Russian, the facts concerning the aspectual suffixes *nu/iv* are replicated almost identically in other Slavic languages such as Serbian, Polish, Bulgarian, and Czech (cf Jablonska 2004, Milicevic 2004, Souckova 2004). Hence, the central claim advanced here concerning the syntax of the Russian semelfactive and secondary imperfective suffixes is extendable to other Slavic languages.

The paper is organized as follows. In Section 2 I review the arguments in favor of treating aspectual prefixes as hierarchically ordered prepositions. In Section 3 I present the main data concerning the distribution of semelfactives and secondary imperfectives. Section 4 is the proposal where it is argued that Slavic aspectual suffixes are light verbs. In Section 5 I adduce further evidence for the proposal by comparing *nu/iv* to light verbs in other languages, as well as to other light verbs in Russian. Section 6 discusses morphologically underived perfective and imperfective verbs. Section 7 is the conclusion.

## 2. Background: Aspectual Prefixes as Prepositions

### 2.1 Aspectual prefixes and Germanic particles

Recently a large body of work has been produced, arguing for the existence of numerous parallels between the particles in the Germanic verb-particle construction (Svenonius 1994, 1996, 2003) shown in (3) and perfective prefixes in Slavic shown in (4). Namely, both are treated as members of the category P (Oliverius 1972, Fowler 1994, Matushansky 2002, Svenonius 2004a,b,c, Ramchand and Svenonius 2002, Gehrke 2004, Gehrke et. al. 2007 and many others). The perfective prefixes and verbal particles are marked in bold:

(3) a. pick the book **up**                      b. push the ball **out**                      c. carry the books **in**

RUSSIAN

(4) a. **pod**-njat' knigi                      b. **vy**-tolknut'      mjach                      c. **v**-nesti knigi  
       perf-lifted 1stPl books-pl            perf-pushed-inf ball                      perf-carry books

---

<sup>3</sup> I would like to stress that this paper is primarily about the *syntax* of the aspectual suffixes. Hence, numerous interesting issues regarding the semantics of aspect (both inner/situation and outer/viewpoint) are not discussed here. For detailed discussion of the semantics of aspect and the issues surrounding (im)perfectivity and (a)telicity, as well as their relationship to each other in Russian and other Slavic languages see Babko-Malaya (1999), Borik (2002), Filip (1999, 2003), Ramchand (2004).

to lift **up** the books

to pushed **out** the ball

to carry the books **in**

As the translations suggest, the particles in (4) correspond to the prefixes in (3). Now, with few exceptions, for each one of the above particles and for each one of the prefixes one can find a corresponding homophonous preposition. The parallels between prefixes and particles on the one hand and prepositions on the other can be observed in (5) for English and (6) for Russian:

- (5) a. give **up** ~ **up** the tree  
b. drop **out** ~ **out** the window  
c. carry **in** ~ **in** the room

- (6) a. **iz**-bezhat' ~ **iz** doma      b. **pod**-bezhat' ~ **pod** domom      c. **ot**-bezhat' ~ **ot** doma  
out.of-run ~ out.of hous      under-run ~ under house      away-run ~ from house  
avoid ~ out of the house      run up to ~ under the house      run away from ~ from  
the house

The above ideas are summed up as follows by Svenonius: “Germanic and Slavic use prepositional expressions of spatial relations as verbal augments in a strikingly similar way” (Svenonius 2004a, p.214). Further parallels between prefixes and particles are discussed in Spencer and Zaretskaya (1998), Dimitrova-Vulchanova (1999), Lindvall (2001), Vitkova (2004), Rojina (2004) inter alia. This finding is significant for a number of reasons. The most important one for us here is that it reduces what seems to be different categories -- aspectual prefixes and particles – to a single common core, the preposition. In the course of this paper I will attempt to do the same with respect to the aspectual suffixes and light verbs. Namely, I will argue that both are instances of event-modifying light v’s.

## 2.2 VP-external vs. VP-internal Prefixes in Slavic

Turning to the Slavic perfectives, it is now standardly accepted that there are two types of prefixes in Slavic: VP-internal and VP-external (Filip 2000, 2003, Babko-Malaya 2003, Svenonius 2004a,b,c, Romanova 2004 for Russian, Istratkova 2004 for Bulgarian, Souckova 2004 for Czech, Milicevic 2004 for Serbian, and Jablonska 2004 for Polish). The VP-internal (lexical or low) prefixes are akin to small clause predicates, while the VP-external (superlexical or high) prefixes are akin to adverbs (cf Svenonius 2004a,b,c, Ramchand 2004, Romanova 2004, Gehrke 2004). Below I summarize some characteristics that distinguish the two types of prefixes.

First, VP-internal prefixes are idiosyncratic, while the VP-external ones have rather stable meanings. VP external prefixes include among others ‘*za*’ = *inceptive*; ‘*pere*’ = *distributive*; ‘*po-*’ = *diminutive*; ‘*na*’ = *distributive*. There are many others (cf Svenonius 2004a). In some cases, VP-external and VP-internal prefixes may be homophonous. From now on, I will gloss the VP-external prefixes with their corresponding meanings and the VP-internal prefixes as ‘*perf*’ since they do not have a specific stable meaning.

(7) **VP-external inceptive ‘za-’**

a. za-begat’  
incep-run-inf  
start running

b. za-katat’  
incep-roll-inf  
start rolling

c. za-kurit’  
incep-smoke-inf  
start smoking

(8) **VP-internal ‘za-’**

a. za-iti  
perf-walk  
to walk-in

b. za-brat’  
perf-take-inf  
take away

c. za-pisat’  
perf-write-inf  
write down

Second, VP-internal prefixes are unique – one per verb (9) -- while VP-external prefixes may co-occur with each other and with the VP-internal prefixes (10) (Romanova 2004, Svenonius 2004a,b,c, Istratkova 2004 for Bulgarian, Jablonska 2004 for Polish):

|   |  |  |   |
|---|--|--|---|
| (9) a. vy-pisat’<br>perf-write-inf<br>write out | b. za-pisat’<br>perf-write-inf<br>write down | c. *vy-za-pisat’<br>perf-perf-write<br>write out | d. *za-vy-pisat’<br>perf-perf-write<br>write down |
|---|--|--|---|

|   |  |
|---|--|
| (10) a. <b>po-na-pis-iv-at’</b><br>dist-cuml-write-imp-inf<br>to write (something) many times | b. <b>po-vy-pis-iv-at’</b><br>dist-perf-write-imp-inf<br>to write out (something) many times |
|---|--|

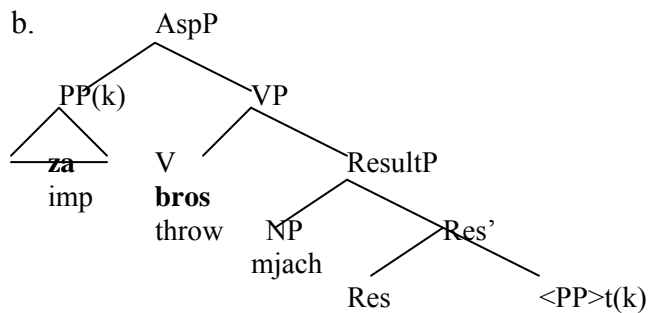
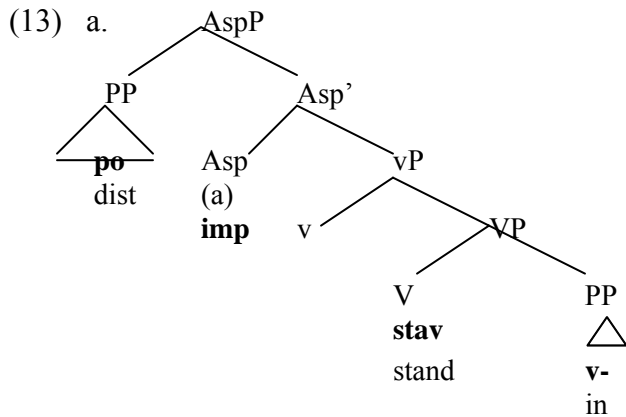
Finally, VP-external prefixes can combine only with the imperfective stems,<sup>4</sup> unlike VP-internal prefixes that can combine with both the imperfective and perfective ones (11):

|  |   |
|--|---|
| (11) a. za-brosat’<br>incep-throw(imp)<br>start throwing | b. za-brosit’<br>perf-throw(perf)<br>abandon/ *start throwing |
|--|---|

The hierarchical layering of the aspectual heads proposed in Svenonius (2004a, p.206, 239) for (12a,b) is represented in (13a,b).

|   |   |               |
|---|---|---------------|
| (12) a. po-v-stav-a-t’<br>Dist-Perf(in)-stand-Inf<br>to stand up one by one | za-bros-it’<br>intro-throw-inf<br>throw in the ball | mjach<br>ball |
|---|---|---------------|

<sup>4</sup> This statement is not true of absolutely all Slavic languages. For example, in Bulgarian VP-external prefixes may be added to perfective stems (Istratkova 2004), unlike what we see in Russian and Serbian (Milicevic 2004). Furthermore, Romanova (2004) argues that VP-external prefixes select for atelic rather than imperfective stems (see Borik 2002 for arguments that imperfectives are not always atelic and vice versa).



The correct ordering of the aspectual elements and the verbal stem is achieved by phrasal movement.<sup>5</sup> The above analysis explains the behavior of the aspectual prefixes, but what about the aspectual *suffixes* in Russian? Namely, how do the semelfactive perfective suffix *nu* shown in (1) and the secondary imperfective suffix *iv* shown in (2) fit into this picture? For example, does the secondary imperfective suffix occupy Asp as in Svenonius (2004b) derivation represented in (13a)? Or is it merged in some other position? Is the structure even more articulated than that presented in (13a,b)? The remainder of this paper will be concerned with answering these questions.

<sup>5</sup> Svenonius (2004a, p.242) adduces the following arguments in favor of a phrasal movement-style vs. head movement-style derivation of prefixed verbs in Slavic. First, in the case of VP-external prefixes, head movement would require right-adjunction of the VP to the VP-external prefix that originates outside of the VP (by definition). Second, prefixes are often larger than just one head, i.e. they are complex, as shown in (i),

- (i) Peter je s-pod-maknil stol (Slovenian, Zaucer 2002:37;  
 Peter is from-under-moved chair quoted in Svenonius 2004b: 242)  
 Peter jerked the chair away

On the head-movement approach it is unclear how a derivation with a complex prefix would proceed. Here, I will adopt Svenonius' position regarding phrasal movement. See Taraldsen (2000) for a phrasal movement approach to the formation of particle verbs in Germanic.

### 3. On some similarities between *nu* and *iv*.

The semelfactive suffix *nu* exhibits striking differences from other perfective operators and unexpected, previously unobserved similarities to the secondary imperfective suffix *iv*. I repeat the relevant data in (14) and (15) with some additional examples:

(14) a. Dima tolk-**nu**-l / stuk-**nu**-l Mish-u  
Dima push-*nu*-pst /hit-*nu*-pst Misha-acc  
Dima pushed (once)/ hit(once) Misha

b. Dima plju-**nu**-l v sup  
Dima spit-*nu*-pst in soup  
Dima spat in the soup

c. Dima pryg-**nu**-l v vodu  
Dima jump-*nu*-pst in water  
Dima jumped into the water

(15)a.Misha pod-pryg-**iv**-al / pri-stuk-**iv**-al  
Misha perf-jump-*imp*-pst/ perf-knock-*imp*-pst  
Misha kept jumping up / knocking

b. Misha pod-mig-**iv**-al Dime  
Misha perf-wink-*imp*-pst Dima-dat  
Misha was winking at Dima

c. Vanja vy-pis-**iv**-al slova iz knigi  
Vanja perf-write-*imp*-pst words from book-gen  
Vanja was writing words out of a book

At first *iv* and *nu* seem different: *nu* is perfective, while *iv* is imperfective, as seen from the following perfectivity tests (Borik 2002). First, *nu*-verbs unlike *iv*-verbs cannot get an ongoing present tense reading (16a vs. b):

(16) a. Oni pryg-**nu**-t  
They jump-*nu*-3rdPlPrs  
they \*(will) jump

b. Oni otpryg-**iv**-ajut  
They jump-*imp*-3rdPlPrs  
They are jumping

Second, they cannot be complements of *begin/ continue*:

(17)a. \*Dima nachal pryg-**nu**-t' b. Dima nachal podpryg-**iv**-at'  
Dima began jump-*nu*-inf Dima began jump-*imp*-inf  
Dima began to jump; Dima began to jump;

Finally, they cannot form present participles (18a vs. b)

(18) \*pryg-**nu**-jushchij mal'chik b. pod-pryg-**iv**-ajuschij mal'chik  
jump-*nu*-part boy perf-jump-*imp*-part boy

The jumping boy

the jumping boy

The same facts concerning the perfectivity of the semelfactive *nu*-verbs are true of Serbian, Polish, Czech, and Bulgarian (Milicevic 2004, Jablonska 2004, Souckova 2004, Istratkova 2004).

Yet, despite the differences in (im)perfectivity, *nu*, like *iv*, is highly regular and attaches to any semantically compatible stem, unlike the idiosyncratic VP-internal perfective prefixes (19):

- (19) a. Dima \***na**-brosil/ (ok) **vy**-brosil musor  
Dima perf-throw / out-threw garbage  
Dima threw out the garbage/  
b. Dima \***pro**-pisal / (ok) **na**-pisal knigu  
Dima perf-wrote perf-wrote book  
Dima wrote a book

Second, like *iv*, *nu* can appear with telicizing VP-internal perfective prefixes (20a,b) that cannot occur with each other (21a,b) (Svenonius 2004c, Filip 2003)

- (20) a. Dima *vy-talk-**nu**-l* Mish-u iz poezda  
Dima perf-push-*nu*-pst /Misha-acc from train  
Dima pushed Misha out of the train

- b. Dima *vy-talk-**iv**-al* Mish-u iz poezda  
Dima perf-push-*imp*-pst Misha from train  
Dima was pushing Misha out of the train

- (21) a. Dima \**pro-vy-talk-al* Mishu  
Dima perf-perf-push-pst /Misha-acc  
Dima pushed Misha out  
b. Dima \**na-pro-rezal* xleb  
Dima perf-perf-cut bread  
Dima cut up / cut through the bread

Third, and most importantly, though *iv* appears with other perfectivizers (22), it is crucially impossible with *nu* (23).

- (22) a. Dima *vy-pis-**iv**-al* chek  
Dima-perf-write-*imp*-pst check  
Dima wrote a check

- b. Dima *na-vy-pis-**iv**-al* chekov druz'jam.  
Dima cuml-perf-write-*imp*-pst checks-gen friends-dat  
Dima wrote a lot of checks to his friends

- (23) a. Dima (pod)-mig-(\***nu**)-**iv**-al Mish-e  
Dima perf-wink-*nu*-*imp*-past Misha-dat  
Dima kept winking at Misha

- b. Dima pod-pryg-(\***iv**)-**nu**-al  
Dima perf-jump-*nu*-*imp*-past  
Dima kept jumping

This incompatibility between the semelfactive and secondary imperfective suffixes is replicated in other Slavic languages, e.g. Polish (Jablonska 2004), Bulgarian (Mileva, pc).

The question is, why should this be? Semantically, a combination of a *nu* and *iv* is not problematic: (23a,b) could mean to repetitively or continuously wink/ jump.<sup>6</sup> It is also possible phonologically (24). This is seen from the following words that contain the combination of ‘nu’ and ‘iv’ when ‘iv’ is part of the root:

- (24) Dima **kiv-nu-l**  
Dima nod-nu-pst  
Dima nodded

Finally, *nu* is the only productive perfective suffix in Russian, which in isolation may seem accidental, but becomes significant taken with the above facts.

#### 4 The Proposal.

##### 4.1 *iv* and *nu* are realizations of a single light *v*

To explain the behavior of semelfactives and secondary imperfectives, I argue that *nu* /*iv* are two realizations of the same verb-selecting light *v* (Butt 2003, Adger 2003:34; Filip 2003, Levin 2000). Whether the *v* is realized as *nu* or *iv* depends on whether it has features [Instantaneous: perfective] or [Progressive/Iterative/ Habitual: imperfective]. Clearly, since *nu/iv* spell-out a single *v* head, they cannot occur together. In fact, this is quite similar to what happens with VP-internal prefixes: because VP-internal prefixes compete for syntactic position, they cannot appear together, despite the fact that they may carry vastly different meanings (cf 9 c, d)

Now, scopal interactions between *iv* and the VP-external perfective prefixes indicate that the two are hierarchically layered in a way where the VP-external perfective prefix is higher than *iv*, while the VP-internal perfective is lower than *iv*. Thus, adding *iv* to a verb with a low perfective prefix causes the verb to become imperfective. However, as noted in Svenonius (2004a), adding *iv* to a verb with a VP-external perfective prefix cannot result in a derived imperfective reading of this verb. Consider (25a,b, c):

- (25)a. Dima za-bros-al mjach (\**v* karzinu)  
Dima incep-throw-pst ball in basket  
Dima started to throw the ball (\*into the basket)

---

<sup>6</sup> Jablonska (2004) does argue that *nu* and *iv* are incompatible in Polish for semantic reasons. Essentially, her argument hinges on the fact that semelfactives are temporally minimal events that are incompatible with either the progressive (WITHIN) or the iterative (OUTSIDE) reading of the secondary imperfective. Now, what this argument does not explain is why other minimal events such as ‘fall’ that lack the semelfactive suffix, but are still temporally non-extended can occur with the secondary imperfective, e.g. *past*’ = *padat*’ = *vy-pad-a-t*’ = fall-perf – fall-imp – out-fall-**imp**-pst = ‘to be falling out’. I refer the reader to Jablonska (2004) for further discussion on the semantics of semelfactives and secondary imperfectives.

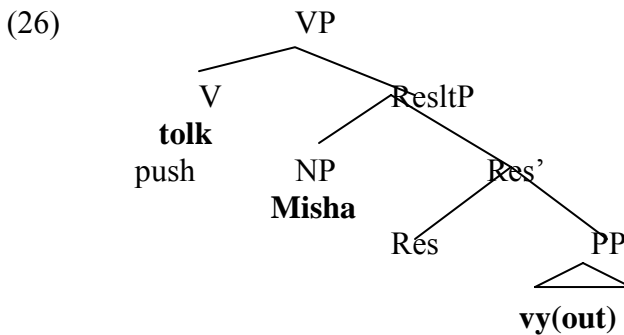
Svenonius (2004a), in a similar vein, argues that semelfactives may be incompatible with secondary imperfectives because they carry a feature [+perf]. However, this also does not explain why perfectives such as *vy-past*’ = perf-fall = ‘fall out’, which by hypothesis should also carry [+perf] feature, are possible with secondary imperfectivization. A syntactic account of the incompatibility between the perfective *nu* and the secondary imperfective *iv* seems to be better suited to explain the facts.

b. Dima za-brosil mjach \*(v karzinu)  
 Dima perf-throw ball in basket  
 Dima threw the ball in the basket

c. Dima za-bras-iv-al mjach \*(v karzinu)  
 Dima perf-throw-imp-pst ball in basket  
 Dima was throwing the ball into the basket  
 #Dima was starting to throw the ball into the basket

(25c) cannot mean that Dima was in the process of starting to throw the ball. It only has the idiomatic reading induced by the homophonous VP-internal prefix ‘za’ that means to be in the process of throwing the ball into something. Hence, *iv* has to be lower than the VP-external P and higher than the VP-internal one.<sup>7</sup> (See Ramchand 2004 for a somewhat different proposal). The same test cannot be applied to *nu* – VP-external prefixes cannot attach to perfective roots. But, we can use the co-occurrence restrictions on *iv* and *nu* to argue that *nu* is in the same position, i.e. sandwiched between the VP-external and VP-internal prefixes.

With this in mind, (26) is the initial structure of (20a,b), as well as for (1,2, 14, and 15), with the derivation in (27a,b,c,d):



The derivation proceeds as follows. First, the PP moves to spec VP, yielding the order [VP [PP(vy) [V(tolk)]...]] in (27a):

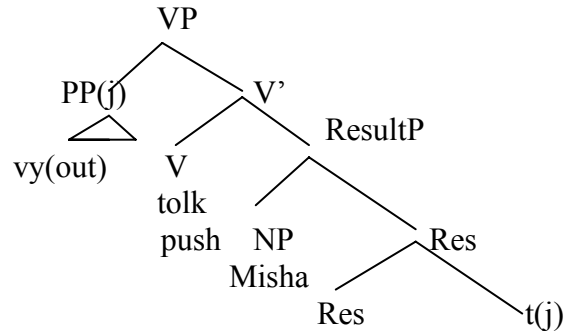
<sup>7</sup> That said, however, there are some VP-external prefixes that do allow for secondary imperfectivization, and hence may be lower than *iv*. These include the repetitive ‘pere’ and the completive ‘do’.

- |     |  |      |   |
|-----|--|------|---|
| (i) | pere-del-iv-at'<br>again-do-imp-inf<br>be in the process of re-doing | (ii) | do-del-iv-at'<br>finish-do-imp-inf<br>to be in the process of finishing to do X |
|-----|--|------|---|

Incidentally, these are the same prefixes that Tatevosov (2007) considers to be ‘intermediate’, i.e. higher than the lexical ones, but lower than the super-lexical ones. Arguably, these would attach to the VP and scope below the *v* realized by *iv*.

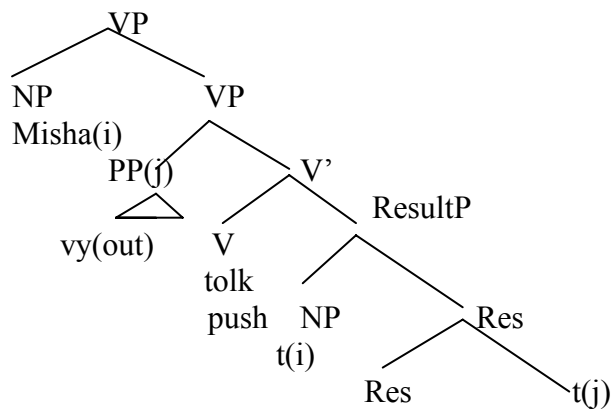
Also, there seems to be some micro-variation within the Slavic group with respect to which prefixes are higher than the secondary imperfective suffix and which are lower. Thus, Svenonius (2004b) notes that in Bulgarian the completive ‘iz’ is quite high (Vitkova 2004), while in Russian it is lower than *iv*. In Polish, the inceptive ‘za’ allows for the formation of secondary imperfectives, unlike Russian, which means that it is lower in Polish (Jablonska 2004) than it is in Russian.

(27) a.



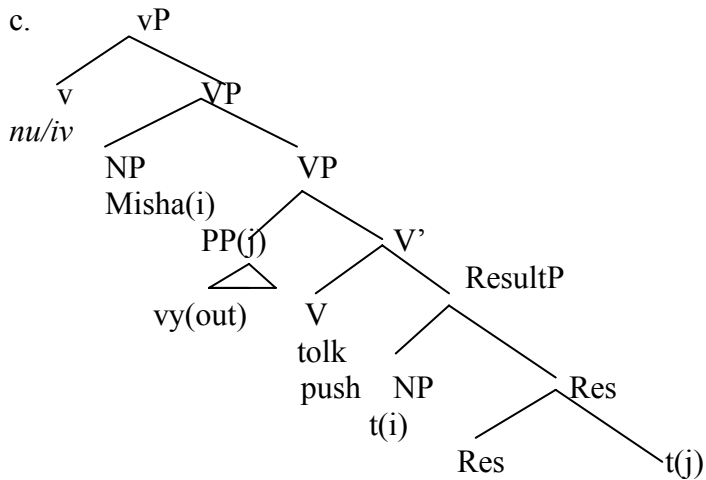
Second, the object is moved from spec ResultP to a second spec VP, yielding [VP NP(Misha) [VP [PP(vy) [V(tolk)]...]]] in (27b):

b.

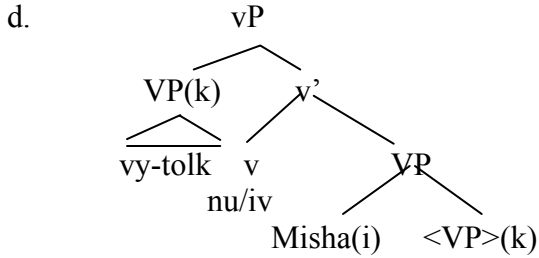


Third, *nu/iv* is merged, resulting in (27c):

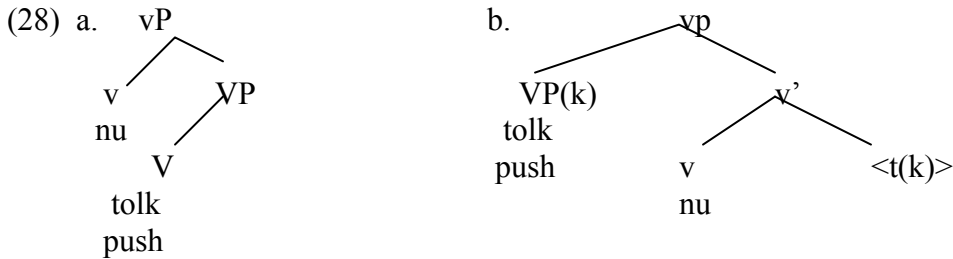
c.



Fourth, the VP headed by V 'tolk' moves to spec vP (a la Svenonius 2004a,b), stranding the object and yielding (27d):



The external argument (not shown) is introduced by *Voi(tr)* (Kratzer 1996) that is separate from the event-denoting light *v* (Pylkkanen 2002, Collins 2005). Arguments to this effect are adduced in the next section. Without the low PP, we get (28):



Several consequences follow from the above structure. First, since *nu/iv* are merged high, they are predicted to have no effect on the argument structure of the verb they attach to, in a crucial contrast to the VP-internal prefixes. Compare (29a vs. b). In (29b), the addition of the low perfective prefix forces the addition of the object, while there is no such requirement for the semelfactive or secondary imperfective suffixes (29a):

- (29)a. Dima pl'junul /pl'eval  
 Dima spit-nu-pst spat-imp-pst  
 Dima spat
- b. Dima vy-pl'unul \*(vino)  
 Dima perf-spit-nu-pst wine  
 Dima spat out \*(the wine)

In this respect, the behavior of the aspectual suffixes is similar to that of the VP-external prefixes, which also do not influence the argument structure of the verb (Svenonius 2004b, Ramchand 2004). Second, the above derivation treats prefixes as phrasal categories headed by the relevant P, while *nu/iv* are treated as heads. (I adopt the suggestion in Svenonius 2004b:243 that prefixes involve a null DP in the complement position). The different treatment of prefixes and suffixes is desirable, as it accords with the view in Pesetsky (1985) and Fowler (1994), also Svenonius (2004b) that the morphological mechanisms involved in the attachment of prefixes and suffixes are distinct. Under the current proposal, prefixes are phrasal categories and are moved to / generated in specs of the relevant heads. In contrast, suffixes are head-level categories and are not attached via phrasal movement. They serve as heads of phrases into whose specs PPs or phrases containing the PPs (such as the remnant VP in 27d) are moved.

#### 4.2 Light *v* ≠ Voice

Now it is time to justify the crucial assumption made above, namely, that the light *v* instantiated by *nu* or *iv* is not the same as Voice – the argument introducing head. This distinction is vital to the current proposal because the presence of *nu* or *iv* in no way depends on the presence of the external argument and vice versa. There are numerous unergative and transitive verbs that are neither semelfactive nor secondary imperfective. So, for the argument to go through, I have to show that the light *v* that affects the event-structure need not introduce an agent.

That event-introducing heads are not necessarily the same as argument-introducing heads has been argued extensively in Pytkkanen (2002: Ch 3). She argues on the basis of the adversity causative construction in Japanese (Oerhle and Nishio 1981, Miyagawa 1989, Harley 1995) shown in (30ii) that the head ‘Caus’ that introduces a causative event is distinct from the agent-introducing Voice (Kratzer 1996).. Pytkkanen (2002: Ch3) The construction (30) is ambiguous between a true causative interpretation (30i) and an adversity interpretation (30ii). On the latter, the nominative DP is not interpreted as a causer, but as an affected argument.

- (30) Taro-ga musuko-o sin-ase-ta (Pytkkanen 2002:81)  
 Taro-nom son-acc die-caus-past  
 (i) Taro caused his son to die  
 (ii) Taro’s son died on him (the adversity causative)

To explain the odd fact that (30 ii) has the causative morpheme, but lacks the causer argument, Pytkkanen (2002) proposes that the adversity causative construction involves a causing event, but no causer theta-role. The head ‘Caus’ responsible for the introduction of the causing event is not bundled with the agent/causer-introducing Voice in Japanese.<sup>8</sup> The absence of the agent / causer argument is further supported by the fact that the construction is incompatible with an agentive by-phrase, while an event-naming by-phrase is fine (31).

- (31) Taro-ga sensoo-ni-yotte /(\*Hanako-ni-yotte) musuko-o sin-ase-ta  
 Taro-nom war-BY / (Hanako-BY) son-acc die-caus-past  
 Taro’s son was caused to die on him by the war / by Hanako

Hence, it is possible to have an event-modifying head, such as Caus, without affecting argument structure.

Markman (2004) extends Pytkkanen’s proposal concerning Voice-bundling to Russian and shows that an event head such as Caus is also distinct from Voice in the language. The evidence comes from the adversity passive construction (Babby 1994, Levine and Freidin 2001) shown in (32) which also involves a causative event, but no agent. The construction in (32) cannot appear with an agentive by-phrase, but is possible with a non-agentive one. The presence of a causing event, on the other hand, is

---

<sup>8</sup> Pytkkanen (2002) proposes a Voice-bundling parameter which distinguishes the Japanese-type languages from the English-types ones, whereby the former can have a Caus head without Voice, while the latter require Caus and Voice to be realized as a single head. I refer the reader to her work for discussion and further arguments. For additional arguments in favor of distinguishing *v* from Voice see Collins (2005).

supported by the fact that the construction is incompatible with a modifier such as “on its own” (33).

- (32) Lodku uneslo (Markman 2004)  
 boat-acc carried-away-3rdSgNeut  
 The boat got carried away
- (33) Lodku uneslo vetrom / (\* mal’chikom) /(\* samo po sebe)  
 boat-acc carried-away-3rdSgNeut wind-instr/\* boy-instr / \* self by self  
 The boat got carried away by the wind/ by the boy / on its own

In what follows, I will adopt the position that not only Caus, but other event-introducing or event-modifying light v’s may be distinct from the argument-introducing heads such as Voice. So, having an light v in the derivation such as (26, 27) does not imply having an agent.

Now, if the light v instantiated by *nu/ iv* does not introduce an agent, what does it do? To this end, I will adopt a definition in Lin (2001) who defines light verbs as in (34):

- (34) Light verbs are predicates of aspects of eventualities. Syntactically they are verbs, with or without phonetic realization; semantically, they are predicates of aspects that compose eventualities (Lin 2001: 77).

To understand the term ‘aspects’ here, another quote from Lin (2001: 77) is helpful: “An eventuality has many different aspects. There is someone who does it, causes it, experiences it, gets affected by it, suffers it, etc. Also an eventuality .. can be carried out in some mode or manner.. an eventuality can be in progress, involve a change of state, or simply exist. All these aspects can contribute to the composition of an eventuality. They are all potential light verbs” (Lin 2001: 77).

Adopting Lin’s definition, we can say that *nu* and *iv* indicate the manner in which the event is carried out, instantenous vs. habitual / iterative /progressive respectively. Importantly, though I adopt Lin’s definition of light verbs, I do not adopt his claim that light verbs (at least those addressed here) always have thematic content. Rather, combining the ideas in Pylkkanen (2002) with those in Lin (2001) I take light verbs as primarily operating on events, and possibly, but not necessarily introducing arguments. A similar position is also advanced in Butt (2003) who takes light verbs in Urdu to be modifying events, without introducing their own theta-roles. I address her proposal in the next section, where *nu/ iv* are compared to light verbs in other languages.<sup>9</sup>

---

<sup>9</sup> A brief note on phasehood is in order here. While this paper does not concern itself with the questions of phases (Chomsky 2001), I will take Chomsky’s phase vP to correspond to our VoiceP, since it is where the agent argument is introduced. The term “light v” here is, thus, used in a different sense than in Chomsky (2001). That said, it may well be that constituents smaller than the Chomskyan vP (and our VoiceP) are phases as well (e.g. Legate 2003). In this case, non-agentive secondary imperfectives and semelfactives may be phase-size constituents. I leave this question entirely open here since nothing in the current account hinges on it. See Svenoninus (2004b) for discussion regarding phases and aspect in Slavic.

## 5. The light verbs *nu* / *iv* and other light verbs

If *nu* / *iv* are light verbs, then one may wonder whether they pattern with light verbs in other languages or with other light verbs in Russian. In this section, I will survey the properties of V-V light verb<sup>10</sup> constructions in Urdu, Yiddish, and Russian. I will show that despite the fact that when we hear the term ‘light verb construction’ we usually think of a construction involving free standing verbal elements (e.g. *give a push/ take a bath*), the syntactic and semantic behavior of the light verbs discussed in this section parallels that of *nu* / *iv*.<sup>11</sup> The fact that *nu* / *iv* are morphologically dependent does not threaten the claim that they are light verbs. For example, in Japanese the causative light verb *-sase* is also affixed to the main verb. Both the productive and the lexical *-sase*-causatives form a phonological word for the purposes of stress (Kitagawa 1986, 1994, Harley 2006). The morpheme ‘*-sase*’ is a bound morpheme and may not bear focus, stand alone to answer a ‘yes/no’ question, or be inflected for subject honorification (Harley 2006, based on Manning, Sag, and Iida 1999). Yet, ‘*-sase*’ has been consistently treated as a light verb in the recent literature (Harley 1995, 2006, building on the Distributed Morphology framework of Halle and Marantz 1993, Marantz 1997, Hale and Keyser 1993, 2002, cf Pylkkanen 2002).<sup>12</sup> Moreover, as was shown in Section 2, Slavic prefixes and Germanic particles can both be analyzed as prepositional elements, despite the fact particles and prepositions are free, while prefixes are clearly bound.

### 5.1 Urdu

Butt (2003:3) treats light verbs in Urdu as instances of small *v*, following Adger (2003: 134). She argues that they affect the aspectuality of the predicate by adding different

---

<sup>10</sup> I will concentrate only on those light verbs that take verbal complements and will set the nominal or adjective-taking light verbs aside. See Grimshaw and Mester 1988, Lin 2001, Harley 1995, 2006, inter alia for discussion of noun and adjective-taking types of light verbs.

The reason I choose Urdu, Yiddish, and Russian (as opposed to selecting some other set of languages) is that light verb constructions in these languages modify the aspectual structure of the event denoted by the main verb in a manner that is quite similar to what *nu/iv* do. Moreover, Urdu allows us to gain a diachronic insight into the development of the aspectual markers in the Indo-Aryan language group.

<sup>11</sup> Though I will be mostly comparing light verbs in Urdu, Yiddish, and Russian to the semelfactive *nu*, the secondary imperfective *iv* finds parallel in Korean light verbs (Choi 2003). Korean has atelic iterative light verbs *ssat* = ‘pile’ and *tay* = ‘supply’ in (i). The light *v* ‘*tay*’ in (i) is compatible with ‘for an hour’ but not ‘in an hour’ modification:

|   |   |
|---|---|
| (i) Chelswu-ka sakwa-lul hansikan-tongan />(*maney) | kkake <b>tay</b> -ess-ta (Choi 2003:11) |
| Chelswu-nom apple-acc one-hour-for / (in)           | peel <b>supply</b> -past-DC             |
| Chelswu peeled apples for hours                     |   |

For shortage of space I cannot address Korean here. The reader is referred to Choi (2003) and references therein.

<sup>12</sup> In this regard, the causative light verb *-sase* in Japanese (and the Russian *nu/iv*) do not match the criteria of Butt (2003) for light verbs, who argues that light verbs must form their own prosodic words and can be reduplicated. Nonetheless, ‘*-sase*’ clearly falls under Lin’s definition of light verbs: it adds causality and affectedness ‘aspects’ to the event.

semantic ‘flavors’ to the V. However, they are not independent predicators, (ibid). This definition is quite close to the one given in Lin (2001) who treats light verbs as predicates of aspects of eventualities. In particular, in Urdu, light verbs add benefactive or inceptive meanings to the verb, as shown in (35a,b) (Butt 2003, Ramchand 2003 Butt and Ramchand 2002).

- (35)a. Nadya-ne xat likh **di**-ya                      b. Nadya has **par**-i [Urdu, (Butt 2003:11)]  
 Nadya-erg letter write give-perfMSg    Nadya laugh fall-perf-F-Sg  
 Nadya wrote the letter (for someone)    Nadya burst out laughing

There are several similarities between the above light verbs in Urdu and *nu/iv* in Russian. First, stacking two light v’s of the same kind is not possible in Urdu (Butt and Ramchand 2002), much like what we see with *nu/iv*. Second, light verbs are subject to selectional restrictions (Butt 1995, 2003): not every light verb is compatible with every main verb. For example, the light verb ‘go’ in Urdu, which is unaccusative, is only compatible with unaccusatives, while ‘take’ is compatible with transitives and unergatives, but not with unaccusatives (Butt 2003: 11). In a similar vein, the Russian semelfactive *nu* cannot appear with stative or activity verbs, which cannot be made into instantaneous events: \**chit-nu-t*’ = read-nu-inf = ‘to read once’, *uzna-nu-t*’ = know-nu-inf = ‘to know once’. Finally, and most importantly, light verbs such as those above change the aspectual flavor of the main predicate by adding the meanings of completion, boundedness, or inception (Butt 1995, 2003) among other flavors (Hook 1974), but do not add their own argument. In this regard, light verbs differ from control / raising constructions – they are strictly monoclausal.

Interestingly, Butt (2003) notes, following Deo (2002), that the meanings of V-V light verb constructions are related to those of constructions with the so-called ‘preverbs’. Preverbs used to be pervasive in Sanskrit (Whitney 1889, Butt 2003: 16). Many preverbs in Sanskrit have directional meanings, e.g. ‘apa’ = ‘away’; ‘adhi’ = ‘above’; ‘nis’ = ‘out’, etc. The preverbs are lost in modern Indo-Aryan languages, a fact that could be attributed to the development of the productive V-V complexes (Deo 2002, Butt 2003). Two important points for the current discussion are: (a) preverbs are related phonologically and grammatically to perfective prefixes in Slavic: *para* = *pere* = through; *pra* = *pro* = forward/onward/ forth (Butt 2003) and (b) constructions with preverbs are highly close in meanings to constructions with light verbs and with particles in Germanic (Butt 2003). Deo (2002) further argues that the use of light verbs increased as the use of preverbs decreased and eventually disappeared from the Middle Indo - Aryan (Deo 2002, Butt 2003). The preverbs became re-analyzed as either verbal prefixes or part of the root.

Taken together, the facts offer further support for the claim that light verbs and perfective prefixes are two dimensions of the same ‘aspectual coin’: both are related to the common ancestor – the preverb -- that used to mark aspect in older Indo-European languages. As Butt (2003) writes following Ramchand (2003): “the commonality between light verbs and preverbs/ particles is that both involve a contribution to the event semantics of a monoclausal predication.... However, they do so in different ways. [Particles] are confined to the result portion [just like VP –internal prefixes]. Particles and preverbs are not verbs and therefore do not enter the syntax as a little v or V.” (Butt

2003: 24). This argument fits in nicely with what was said in the preceding sections concerning Russian prefixes, which are unified with particles and adpositions vs. the suffixes *nu/iv* which are treated as light verbs. From a historical perspective, it is not surprising that light verbs and prefixes both mark aspect in Slavic (though in different ways).

## 5.2 Yiddish

Further parallels between light verb constructions and constructions with the semelfactive *nu* come from Yiddish (Diesing 1998). The Yiddish light verbs ‘ton’ = do and ‘gebn’ = give alter the aspectuality of the predicate they attach to by giving it a ‘semelfactive’ interpretation.

- (36) a. Ikh vel a for ton  
           I will a travel do  
           I will travel a little
- b. Ikh vel a kush gebn  
               I will a kiss give  
               I will give a kiss

Diesing (1998) crucially argues that the Yiddish ‘ton/gebn’ light verbs take a verbal, and not a nominal complement. Despite initial appearances, ‘for’ and ‘kush’ are verbs, not nouns. They cannot be pluralized. Furthermore, there are stems that occur with the light verb construction, but cannot occur as nouns:

- (37) a. \*der efn            b. \*der gey  
           the open            the go

There are several interesting parallels between the ‘ton/ gebn’ light verb construction and the Slavic ‘*nu/iv*’ suffixes. First, the light v in both cases is productively added to the verbal stem and produces a predictable meaning change. Second, the light v lacks its own argument structure. Third, the combination of a+stem+LightV forms a unit in Yiddish (even though it does not form a single word, as *nu/iv* and the stem do in Russian). The light V complex in Yiddish cannot be broken apart by topicalization, adverbials, or scrambled NPs (Diesing 1998:129):

- (38) a. \* An efn       hot   zi       geton di       oygn  
           An open     has   she     done the     eyes  
           The has opened her eyes
- b. A       kum   arayn hot   Max gegeben  
               A       come in   has   Max given  
               Max came in
- (39) a. \* Zi   hot   an   efn   nekhtn       geton di       oygn  
           She has an open yesterday done the eyes  
           She opened her eyes yesterday
- b. \* Zi   hot an efn   di       oygn geton  
               She has an open the eyes done

She opened her eyes

Only the entire cluster containing a+stem+LV can be preceded by adverbials or scrambled NPs:

- (40) a. Zi hot nekhtn an efn geton di oygn  
She has yesterday an open done the eyes  
She opened her eyes suddenly yesterday
- b. Zi hot di oygn an efn geton  
She has the eyes an open done  
She opened her eyes suddenly

In fact, Diesing (1998) argues that the above clustering restrictions are due to the stem incorporating into ‘a’, which she treats as ‘Asp’. Then, the two undergo further incorporation into the light v ‘ton/gebn’. Thus, contrary to appearances, even though the light v is a morphologically free-standing word in Yiddish, it lacks the syntactic independence characteristic of its lexical counterparts.

Finally, ‘ton’ and ‘gebn’ cannot appear with non-eventive verbs (41). Those verbs “resist ‘minimization’” to use the words of Diesing (1998:127).

- (41) \*Er hot a visn geton dem entfer  
He has a know done the answer  
He quickly knew the answer

According to Diesing (1998), the event argument that needs to be present for a verb to be minimized is missing from stative verbs (Kratzer 1995). Hence (41) is impossible. The same pattern is observed in Russian semelfactives, as was mentioned briefly in Section 5.1. Consider the examples in (42):

- (42) a. \*On uznanul otvet  
he know-nu-pst answer  
He quickly knew the answer
- b. \*Misha ponja-nu-l otvet  
Misha understand-nu-pst answer  
Misha suddenly understood the answer

While the semelfactive *nu* is quite productive, it cannot induce a semelfactive meaning in inherently stative verbs such as those in (42).

### 5.3 Light Verbs in Russian?

Russian light verbs of the Urdu or Yiddish type do not seem to have gotten much (if any?) mention in either generative/ theoretic or the traditional/descriptive linguistic literature. Yet, much like Yiddish, Russian has a light verb ‘davai’ = ‘give’ that means

roughly ‘to start Verb-ing.’ Descriptively, the light verb ‘davai’ is used in the imperative 2<sup>nd</sup>Sg form regardless of the features of the subject and subcategorizes for an infinitival complement.<sup>13</sup> In a construction such as (43) ‘davai’ is obligatory and does not have the imperative meaning; rather means to suddenly starting running.

- (43) My prishli i Kuki \*(davai) begat’ tuda sjuda  
 We came-3rdPlpst and Cooka run-inf here there  
 We came in and Cookie started to run back and forth

What is even more interesting is that Russian has a semantically similar construction to that in (43), shown in (44). The construction involves a particle ‘nu’, homophonous to the semelfactive suffix, which appears to be a light verb:<sup>14</sup>

- (44) a. My prishli i Kuki \*(nu) begat’ tuda sjuda  
 We came-3rdPlpst and Cookie nu run-inf here there  
 We came in and Cookie started to run back and forth
- b. My / Dima i Tanya \*(nu) jest’ kanfety!  
 We/ Dima and Tanya nu eat candy  
 We/ Dima and Tanya start suddenly eating candy

While colloquial, above sentences are perfectly natural and well-formed. For example, (44b) can be easily uttered if Dima and Tanya are children who got their hands on lots of candy and are quickly eating it up.

Crucially, like ‘davai’, ‘nu’ is obligatory in the above constructions. Furthermore, like ‘davai’, the light verb ‘nu’ requires an infinitival complement (45). When used with an inflected verb it can only be interpreted as a homophonous particle ‘nu’ similar to the English ‘well’ or ‘so’.

- (45) Dima nu begaet tuda-sjuda  
 Dima nu run3rdSgPrs here-there  
 So, Dima keeps running back and forth  
 #Dima suddenly starts running back and forth

---

<sup>13</sup> In its guise as an imperative, ‘davai’ means ‘let’s’ and necessarily refers to the 2<sup>nd</sup> person singular informal hearer. Unlike the light verb ‘davai’, the imperative ‘davai’ can appear with an inflected verb: *Davai poidem gul’at’* = let’s go-perf walk-inf = ‘let’s go for a walk’. It is also possible with just the infinitive: *Davaj gul’at’* = let’s walk-inf = ‘let’s go for a walk’. The imperative ‘davai’ is quite different from its light v counterpart, as it always requires a reference to the hearer, unlike the light verb ‘davai’.

<sup>14</sup> I should note here that, unlike other verbs, ‘nu’ does not vary with person, number, gender and does not have an infinitival form. It is used in an idiomatic expression such as: *nu ego k chertu* = ‘nu him to devil’ = ‘let him go to hell/ he should go to hell’. In this idiom, the presence of ‘nu’ is crucially required, e.g. *\*ego k chertu* = him to devil. So, it appears that ‘nu’, despite not having an infinitival form or agreeing forms, is a kind of an ‘atrophied’ verb that has become a light verb in the language. Unfortunately, at the present moment I do not know of any literature (synchronic or diachronic in Russian or English) on this ‘nu’. Possibly owing to its colloquial use, it has been ignored in the linguistic literature. I will leave the precise nature of this ‘particle’/light v for future research.

In addition, the infinitival complement must be imperfective. The impossibility of perfective infinitives with ‘nu’ further supports its status as a light verb: such verbs as *begin*, *continue*, *finish*, and ‘davai’ also require imperfectives. The following contrast illustrates this:

(46) Dima nachal/ prodolzhit / davai / nu **begat’ i xvatat’** konfety  
 Dima began / continued / give / nu **run-inf-imp** and **grab-inf-imp** candy  
 Dima started/ continued/ suddenly started to run around and grab candy

(47) \*Dima nachal/ prodolzhit/ davai / nu **sxvatit’** konvety  
 Dima started / continued/ give / nu **grab-inf-perf** candy  
 Dima suddenly starts grabbing at the candy / looking out of the window

Furthermore, the free standing ‘nu’ and the semelfactive suffix *nu* have an important meaning component in common: they both cause the verb they combine with to get the meaning ‘do V quickly / suddenly’.<sup>15</sup> Hence, the light verb ‘nu’ is odd, if not impossible, when it appears with inherently stative verbs such as ‘sleep’, ‘dream’, and ‘sit’.

(48) a. #/\* Dima nu sidet’ v komnate  
 Dima nu sit-inf in room  
 Dima starts sitting in the room

b.#/\* Dima nu mechtat’ / nu chitat’ knigu  
 Dima nu dream-inf/ nu read-inf book  
 Dima starts suddenly dreaming / reading a book

The same is true of the semelfactive *nu*, as was shown in (42): verbs with inherently stative semantics resist it.

In sum, there appear to be interesting parallels between light verbs in Urdu, Yiddish, and Russian on the one hand and the suffixal light verbs on the other. These parallels are much like those that exist between prepositions and verbal particles/ prefixes. Hence, the move to unify aspectual suffixes with light verbs is motivated by essentially the same factors that motivate the unification of prepositions and prefixes. In the next section I turn to some of the implications of this proposal.

## 6. Implications: Where is Asp?

### 6.1 Verbalizers and underived verbs

Taking the toll of what was said so far, we get the following picture. According to prior work on Slavic aspect, it seems correct to treat both VP-external and VP-internal

---

<sup>15</sup> The meaning of the suffixal and the free-standing ‘nu’ is not identical, however. The latter does not imply that the action is carried out once, while the semelfactive one does. This is reminiscent of what we observe with the perfective prefixes and the corresponding prepositions, which have similar, though non-identical meanings that can be traced to some common semantic core. It is possible that the semelfactive *nu* is a grammaticized version of the light verb ‘nu’, which has undergone a semantic change.

aspectual prefixes as prepositions. According to what was said in the preceding pages concerning *nu/iv*, they appear to pattern with light verbs. Taken together the proposals concerning Slavic prefixes and suffixes raise the question: where is the head Asp? And, more importantly, do we really need Asp as a head? In this section, I will adduce evidence that it is, in fact, possible to entirely replace Asp with light v's and P's. Such a move would be desirable, first of all, for reasons of economy: what good is positing a head if its job can be done by other independently motivated heads? But, can we make this move for Slavic (in the very least)?

One may argue that the underived imperfective and perfective verbs such as illustrated in (49) do require the head Asp in order to determine their aspectual status:

- (49) a. Dima brosal m'ach / brosil m'ach  
 Dima threw<sup>Imp</sup> ball threw<sup>Perf</sup> ball  
 Dima threw the ball  
 b. Dima stupal po lesnitse / stupil vniz  
 Dima stepped<sup>Imp</sup> on stairs / stepped<sup>Perf</sup> down  
 Dima stepped down the stairs

However, it is not so: the aspect of the 'bare' perfectives and imperfectives comes from the verbalizer (Marantz 1997, 2001), also a light v, which determines the category of the root. The verbalizer is merged lower than the light v's *nu/iv* for reasons that will be shown below. I will refer to the verbalizer as v1 and to *nu/iv* v2 from now on. The verbalizers are usually realized as vowels<sup>16</sup> and differ depending on the class of the verb and in some cases, e.g. those in (49), on whether the verb is perfective or imperfective.

Thus, the underived perfectives and imperfectives in (49) involve the verbalizers 'a' for the imperfective and as 'i'<sup>17</sup> for the perfective, shown in (50). The verbalizer in (50) is merged with a category-free root (cf Marantz 1997, Halle and Marantz 1997/2001).<sup>18</sup>

<sup>16</sup> The term 'vowel' should be construed broadly. By this I mean that a theme 'vowel' may actually be a whole affix, like 'ova' in (i d) below. The more accurate term here would be 'theme affix', but I will stick with the standard terminology (Svenonius 2004 a) for the sake of consistency. The most common verbalizers are 'a', 'i', 'e' and 'ova'. They are illustrated in (i):

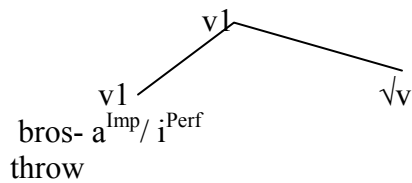
- (i) a. chitat' / pisat' / davat' / pugat' = read / write / give / scare  
 b. xodit' / xvalit' / vodit' / verit' = walk/praise/drive / trust  
 c. smotret' / sidet' / xudet' / bolet' = look / sit / lose weight/ be sick  
 d. balovat' / milovat' / tselovat' = to spoil / to be nice to / to kiss

Svenonius (2004a) and Jablonska (2004) treat the semelfactive *nu* as a 'theme vowel' as well. However, I will argue below that the semelfactive *nu* is v2, not v1. As for the secondary imperfective *iv*, Svenonius (2004a,b) treats it as appearing higher than the theme vowels.

<sup>17</sup> There actually seem to be at least 3 different homophonous verbalizers 'i'. One indicates a conjugation class of the verb as in (ib) in the foot-note 16 above. The second one indicates the perfective status of the unprefix verb, as in the alternations shown in (49), e.g. *brostit'* = throw-**perf** vs. *brostat'* = throw-imp. The third one is a causative verbalizer that is present in the causative-inchoative alternations such as *chernet' ~ chernit' = to become black ~ to make X black*. I will not address the causative 'i' here.

There are also numerous morpho-phonological issues related to verbalizers (theme vowels) such as allomorphy, vowel deletion, and consonant mutation. See Jakobson 1948, Halle 1963, Flier 1972 for details. Here I will concentrate on the position of theme vowels in the derivation and their interaction with

(50)



The semantic component then determines the perfective / imperfective status of the verb based on the verbalizer's perfectivity feature. I will address how exactly this may happen semantically in Section 6.3.

Interestingly, the presence of a low imperfective verbalizer *v1* may block the presence of a higher *v2* if both are imperfective. This is a basic economy consideration: if a single head can be used to indicate imperfectivity, say by carrying the [-perf] feature, why use both? Hence, derived imperfectives are odd without a perfective prefix (51), unless they contribute some additional meaning besides imperfectivity. (51) improves if it is interpreted as 'to look from time to time', a meaning unavailable to a simplex imperfective.<sup>19</sup>

- |   |  |
|---|--|
| (51)a. ? smatr <i>ivat</i> '<br>look-imp-inf<br>to look from time to time | b. xazh <i>ivat</i> '<br>walk-imp-inf<br>to walk from time to time |
|---|--|

---

the higher light *v*'s *nu/iv*. For other questions concerning verbalizers see Svenonius (2004a,b) and Jablonska (2004) for Polish.

<sup>18</sup> One may wonder why verbs aren't 'born' with their aspectual properties. Here I adopt the Distributed Morphology approach that nothing has a category prior to appearing under some category-determining functional structure (also Borer 2004. But see Baker 2003 for the opposite view). In addition to numerous arguments adduced in the works of Borer (2004) and the original Halle and Marantz (1993/1997) papers, one reason why perfective/imperfective aspect is determined by the verbalizer in the underived verbs is that in (49), for example, the root remains the same, while the verbalizer 'a' vs. 'i' causes the verb to be either imperfective or perfective.

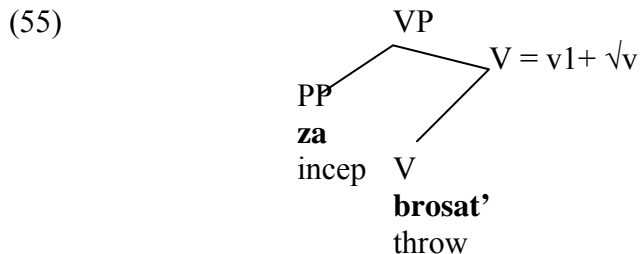
<sup>19</sup> I should note here that there are some prefixed perfective verbs in Russian (as well as in Polish and Serbian) that disallow secondary imperfectivization. These are usually verbs formed with 'purely perfectivizing' prefixes, i.e. those prefixes that do not add any specific meaning to the verb, but just make it perfective. For example, in Russian, the purely perfectivizing 'na-' in (i) disallows secondary imperfectivization. In contrast, when a VP-internal prefix 'za' is added to the root 'write', yielding the meaning 'write down', secondary imperfectivization becomes possible (ii).

|   |   |   |                                       |
|---|---|---|---------------------------------------|
| (i) na-pisat'<br>'perf-write'<br>to write | ~ *na-pis-iv-at'<br>perf-write-imp-inf<br>to be in the process of writing | (ii) za-pisat'<br>perf-write<br>to write down | ~ za-pis-iv-at'<br>perf-write-imp-inf |
|---|---|---|---------------------------------------|

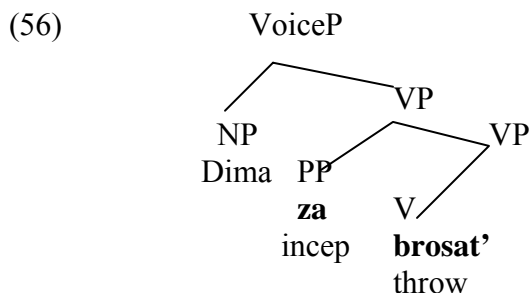
Arguing from a syntactic standpoint, I would say that the light *v iv*, like *nu* or other light verbs may impose its own selectional restrictions on its complements, thus failing to select stems derived via purely perfectivizing prefixes. A semantic explanation is offered in Jablonska (2004). Crucially, the reason why secondary imperfectives are blocked with the purely perfectivizing prefixes (whatever this reason may be) cannot be the same as the one blocking the combination of *iv* and *nu* (e.g. \**tolknu-iv-al* =was pushing cf 23). The semelfactive *nu*, unlike the purely perfectivizing 'na' in *na-pisal* in (i), adds a very stable and regular meaning in addition to perfectivizing the verb. Hence, the two 'blocking' phenomena are not of the same nature.



Putting together what was said so far, we can see that the head Asp is not needed to account for the perfective/imperfective distinction in the underived verbs. We also saw in Section 2 that Asp is not needed to host VP-internal prefixes: these are generated in the complement of ResultP (cf 13a) (Svenonius 2004a). But, maybe we still need Asp in order to host VP-external prefixes? The answer is ‘no’ again. VP-external perfective prefixes can be treated as PPs adjoined to the VP (55).<sup>21</sup>



With the addition of Voice, <sup>22</sup> we get (56):



A multiply prefixed construction that involves a VP-internal and a VP-external prefix such as (57) will be represented in (58):

- (57) po-vy-bras-iv-at'  
 distr-perf-thow-imp-inf  
 to throw away one by one.

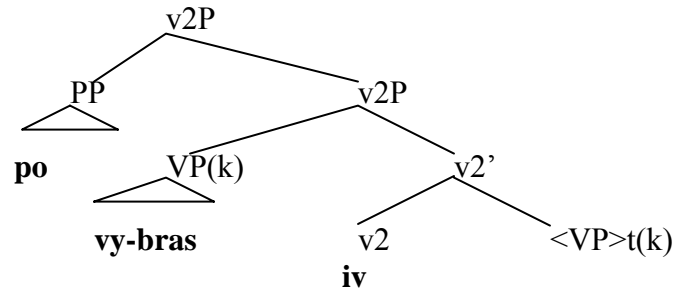
<sup>21</sup> I represent the root + v1 as ‘V’ in the derivations (55, 56, and 58) for the sake of representational simplicity.

<sup>22</sup> There is evidence that the VP external prefixes, though high, are not higher than VoiceP. The distributive ‘po’ (Filip 2003, Jablonska 2004, Souchkova 2004) and the cumulative ‘na’ can quantify over the subject, but the subject cannot be an agent, only a theme:

- (i) Sobak \*na-begalo! / na-bezhalo  
 Dogs-gen cuml-ran-3rdNeut / cum-ran-3rdSg(unaccusative)  
 A lot of dogs came

Directed motion verbs, which are unaccusative (Romanova 2004), are acceptable with the VP-external prefix ‘na-’, unlike the corresponding non-directed motion verbs which are unergative.

(58)



The adjunction view of VP-external prefixes is supported by their separability from the stem (59), unlike what we see with the VP-internal prefixes (60):

(59) pere ili nedo-delat' (rabotu)  
re- or under-do-inf work  
over or under do the work

(60) \*vy-ili za-pisat'  
out or down write-inf = write out or down  
out or down write

This view also accords with Svenonius' treatment of the VP-external perfective prefixes as adverbial. There may be several VP-external prefixes piled on top of one another as there may be several adverbs modifying a single VP.<sup>23</sup>

### 6.3 Capturing the semantically uniform notion of (im)perfectivity

Before closing the discussion I would like to come back to the question of (im)perfectivity for a moment. So, maybe we cannot motivate the need for a head Asp syntactically. But, given that native speakers uniformly judge semelfactives, underived perfectives, as well verbs with the VP-external and VP-internal prefixes as perfective, don't we need to have some Asp head that would encode this *semantic* notion? Despite the fact that (im)perfectivity may be semantically unified, it still does not require the presence of a head Asp. Let's see how we can do without it.

According to Borik (2002), perfectivity requires a strict non-overlap between the speech time and the reference time, while imperfectives admit an overlap. For Ramchand (2004), on the other hand, perfectivity is analogous to definiteness in the DP domain, i.e. perfectives require the presence of a definite event time, while imperfectives require an indefinite event time. I will not review the details of these semantic proposals, nor will I present arguments for or against either of them. Instead, I will point out that the meaning of (im)perfectivity (whatever theory you pick) can be expressed by a feature [+perf] whose presence may be forced by a number of factors, such as: the presence of a) lexical

---

<sup>23</sup> Crucially, the stacking of the VP-external prefixes is highly constrained by semantic and syntactic factors, the nature of which extend beyond the scope of the current discussion. For extensive discussion see Filip (2003), Romanova (2004) for Russian, Milicevic (2004) for Serbian, Istratkova (2004) for Bulgarian.

prefixes; b) superlexical prefixes; c) semelfactives; d) underived perfectives, or some combination of them. This is quite similar, in the spirit, to the proposal in Ramchand who argues that the projection of the perfective Asp is required by lexical and superlexical prefixes, albeit for different reasons. To make this discussion more concrete, consider, as an illustration, how Ramchand's proposal would be implemented here. Ramchand (2004) proposes the following semantics for (im)perfectivity:

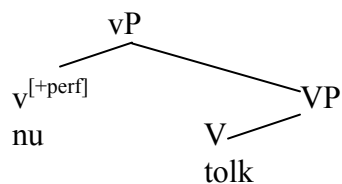
(61) Imperfective Asp = [[Asp]] =  $\lambda P\lambda t\exists e: [P(e) \ \& \ t \in \tau(e) ]$

The assertion time in the denotation of the imperfective Asp is indefinite (Ramchand 2004: 345). In contrast, a perfective Asp requires a definite assertion time:

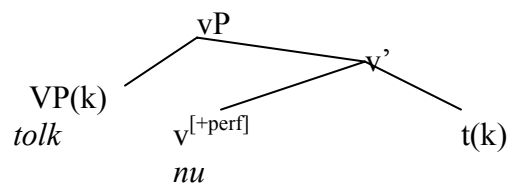
(62) Perfective Asp = [[Asp]] =  $\lambda P\lambda t [ \text{there is a single unique moment } t(\text{def}) \text{ in the event that is salient} ] \exists e: [P(e) \ \& \ t(\text{def}) \in \tau(e) ]$  (Ramchand 2004:345)

However, the same semantic interpretation of perfectivity can be expressed via a feature [+/-perf] that is borne, for example, by the light *v nu* in (63).

(63) a.

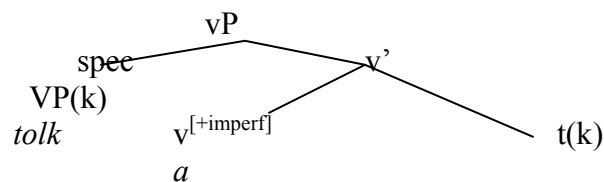


b.



The presence of [+perf] on the *v nu* will yield a perfective interpretation of the event, just as if a perfective head Asp were merged in the structure. Similarly, a feature [-perf] (or [+imperf] ) can appear on a verbalizer such as 'a' or on the secondary imperfective (64):

(64)



The presence of a separate head Asp is, thus, not necessary to encode the perfective/imperfective semantic distinction that may well be a semantically unified notion. This argument is quite similar to the one made in Chomsky (1995) concerning the elimination of AgrPs: in the Minimalist framework, a separate AgrS/ AgrO projection is not motivated; its job can be done by phi-features borne by T and v. Similarly, the job of Asp can be done by the [+/- perf] feature borne by various heads, such as Ps and light v's.

## 7. Conclusion.

In conclusion, I have argued that *nu-iv* despite some initial differences occupy the same head, *v*, and have the structure of light verbs. Embedded into the framework that treats prefixes as members of the category P, the analysis of *nu/iv* suggests that aspect in Slavic is generally reducible to Ps and *v*. There are high and low Ps (VP-external and VP-internal prefixes respectively) and there are high and low *v*'s (*nu/iv* and the verbalizers respectively). And there is no head Aspect. Importantly, we are not just renaming Asp as P or *v*. While treating prefixes as Ps allows us to unify them with Germanic particles, treating aspectual suffixes as *v*'s allows us to unify them with light verbs in languages such as Hindi and Yiddish. This is an interesting empirical result: if Ps and light *v*'s are two sides the same aspectual coin, then some languages may choose to have just the light *v*'s or just the Ps for aspect-marking and some may use both.

A number of theoretically desirable consequences emerge from the proposal as well. First, the proposal fits in well with the Distributed Morphology framework (Halle and Marantz 1993, 1997) in that it takes syntax to be manipulating morphemes: a syntactically complex structure containing *v*'s, Vs, and Ps can be realized as a single word, created via a syntactic, not a lexical derivation. Second, the proposed view of the AspP in Slavic is in line with the recent 'decompositional' proposals concerning the DP, IP, and CP (Cinque 1999 for the IP, Perelsvaig 2006 for DP, Rizzi 1997 for CP). Finally, an important consequence of the proposal is that though the perfective/ imperfective aspectual distinction is a real one, it is semantic in nature. It is due to the [+/-perfective] feature which may appear on *v*1, *v*2, VP-external or VP-internal prefixes, and not due to the [+/-perf] Aspect head. The syntactic correlate of (im)perfectivity is, thus, 'distributed' among different types of Ps and *v*'s. That there is no single syntactic head that would correspond to what appears to be a unified semantic notion (Borik 2002) should not be surprising: perfectivizing prefixes are located in hierarchically different positions, yet, VP-internal and VP-external prefixes make the predicate [+perfective].

Clearly, many questions concerning the syntax of the AspP remain unaddressed. This paper cannot answer them all. But, it does raise the tempting question: can we have no head Asp at all? Can a feature [+perf] be used instead to encode the semantics of Aspect, just like the phi-features are used to encode agreement in Minimalism? The current paper makes the first move towards answering these questions in the affirmative, by arguing that in some of the most aspectually rich languages – the Slavic languages -- the head Asp may not exist. Whether this answer can be extended universally depends on whether Aspect can be so reduced in other languages with robust aspectual distinctions.

## References

- BABKO-MALAYA, O. 1999. Zero Morphology: a Study of Aspect, Argument Structure, and Case. Doctoral Dissertation, Rutgers University.
- BABBY, L. 1994. A Theta-theoretic analysis of adversity impersonal in Russian. *FASL* 2: *The MIT Meeting*.
- BABKO-MALAYA, O. 2003. Perfectivity and prefixation in Russian. *Journal of Slavic Linguistics* 11 1: 5- 36.

- BAKER, M. 2003. *Verbs, Nouns, and Adjectives: Their Universal Grammar*. Cambridge University Press.
- BORER, H. 2004. *Structuring Sense: An Exo-Skeletal Trilogy*. Oxford University Press, New York.
- BORIK, O. 2002. Aspect and Reference Time. Doctoral Dissertation. Universitat Utrecht.
- BUTT, M. 1995. *The structure of complex predicates in Urdu*. Stanford, CA: CSLI Publications.
- BUTT, M. 2003. The light verb jungle. UMIST, Ms.
- BUTT, M. AND G. RAMCHAND. 2002. Complex aspectual structure in Urdu/Urdu. *The Syntax of Aspect*. ed. Nomi Ertishik-Shir and Tova Rappaport. Oxford: Oxford University Press.
- CHOI, S. 2003. Serial verbs and the empty category. Beerman, D. and L. Hellan eds. *Proceedings of the Workshop on Multi-Verb Constructions*. Norwegian University of Science and Technology, Trondheim.
- CHOMSKY, M. 1995. *The Minimalist Program*. MIT Press, Cambridge, Ma.
- CINQUE, G. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford Studies in Comparative Syntax.
- COLLINS, CHRIS. 2005. A Smuggling Approach to the English Passive. *Syntax* 8, 2: 81 – 120.
- DIESING, M. 1998. Light verbs and the syntax of aspect in Yiddish. *The Journal of Comparative Germanic Linguistics* 1: 119 – 156.
- DEO, A. 2002. A diachronic perspective on complex predicates in Indo-Aryan. Talk given at the *Workshop on Complex Predicates, Particles, and Subevents*. Konstanz.
- DIMITROVA-VULCHANOVA, M. 1999. *Verb semantics, diathesis, and aspect*. Lincoln Europa, Munchen.
- FILIP, H. 2000. The quantization puzzle. In *Events as Grammatical Objects*, ed. Carol Tenny and James Pustejovsky, pp. 39-96. CSLI, Stanford, Ca.
- FILIP, H. 2003. Prefixes and the delimitation of events. *Journal of Slavic Linguistics* 11 1: 55 – 101.
- FLIER, M. 1972. On the source of derived imperfectives in Russian. *The Slavic Word: Proceedings of the International Slavistic Colloquium at UCLA*. ed. Dean S. Worth, pp. 236 – 253. Mouton, the Hague.
- FORSYTH, J. 1970. *A Grammar of Aspect: Usage and Meaning in the Russian Verb*. Cambridge University Press, Cambridge.
- FOWLER, G. 1994. Verbal prefixes as functional heads. *Studies in Linguistic Sciences* 24: 171- 185.
- FOWLER, G. 1996. An articulated theory of aspect and prefixation in Slavic. *Annual Workshop on Formal Approaches to Slavic Linguistics: The College Park Meeting 1994*, ed. J. Toman, pp. 97 – 122. Michigan Slavic Publications, Ann Arbor, MI.
- GEHRKE, X. 2004. How temporal is telicity? Paper presented at the 26<sup>th</sup> annual meeting of the DGfS, Mainz.
- GEHRKE, B., A. ASBURY, AND V. HAGEDUES. 2007. One size fits all: prefixes, particles, cases and adpositions as members of the category P. Presented at *West Coast Conference on Linguistics (WECOL)*, Fresno, CA, October 27-29, 2006.
- GRIMSHAW, J. AND A. MESTER 1988. Light verbs and theta-marking. *Linguistic Inquiry* 19: 205 -232.

- HALE, K. AND S. KEYSER 2002. *Prolegomenon to a theory of argument structure*. No.39 in Linguistic Inquiry Monograph. MIT Press, Cambridge, Ma.
- HALLE, M. 1963. O Pravitax ruskogo sprjazhenija. *American Contributions to the Fifth International Congress of Slavists*, Sofia, 1963, vol.1, pp. 113- 132. Mouton, The Hague.
- HALLE, M. AND A. MARANTZ 1993. Distributed Morphology and the pieces of inflection. *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, ed. K. Hale and S. Keyser, pp. 111 – 176/ MIT Press, Cambridge, Ma.
- HARLEY, H. 1995. Subjects, events, and licensing. Ph. D. Thesis. MIT.
- HARLEY, H. 2006. On the causative construction. U. Arizona, Ms.
- HOOK, P. 1974. The compound verb in Hindi. Center for South and Southeast Asian Studies: The University of Michigan.
- ISACHENKO, A. 1960. Grammaticheskij stroj ruskogo jazyka. Morfologija. Chast' vtoraja. Vydatel'stvo Slovenskej Akademie vied, Bratislava.
- ISTRATKOVA, V. 2004. On multiple prefixation in Bulgarian. In *Nordlyd 32.2: Special issue on Slavic prefixes*. ed. P. Svenonius, pp.301-321. University of Tromsø, Tromsø. Available at [www.ub.uit.no/munin/nordlyd](http://www.ub.uit.no/munin/nordlyd).
- JABLONSKA, P. 2004. When the prefixes meet the suffixes. In *Nordlyd 32.2: Special issue on Slavic prefixes*. ed. P. Svenonius, pp.363-401. University of Tromsø, Tromsø. Available at [www.ub.uit.no/munin/nordlyd](http://www.ub.uit.no/munin/nordlyd).
- JAKOBSON, R. 1948. Russian conjugation. *Word* 4 3: 155 – 167.
- KITAGAWA, Y. 1986. Subjects in Japanese and English. Doctoral dissertation. UMASS, Amherst.
- KITAGAWA, Y. 1994. Subjects in Japanese and English. Outstanding Dissertations in Linguistics series. Garland: NY.
- KRATZER, A. 1995. Stage and Individual level predicates. G. Carlson and J. Pelletier (eds). *The Generic Book*. University of Chicago Press, Chicago, pp. 125 – 175.
- KRATZER, A. 1996. Severing the external argument from its verb. In *Phrase Structure and the Lexicon*, ed. Johann Rooryck and Laurie Zaring, pp. 109 – 137. Kluwer, Dordrecht.
- LEGATE, J. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34: 506 – 516.
- LAVINE, J. and R. FREIDIN. 2001. The subject of defective tense in Slavic. *Journal of Slavic Linguistics*.
- LIN, J. 2001. Light verb syntax and the theory of phrase structure. Ph. D. dissertation, University of California, Irvine.
- LINDVALL, A. 2001. Swedish particle verbs in comparison with Polish aspect marking. In *Proceedings of the 18<sup>th</sup> Scandinavian Conference of Linguistics*, ed. Arthur Holmer, Jan Sventesson, and A. Viberg. Department of Linguistics, Lund.
- MANNING, C., SAG, I., AND M.IIDA 1999. The lexical integrity of Japanese causatives. eds. Levine, R. and G. Green *Studies in Contemporary Phrase Structure*.
- MARANTZ, ALEC. 1997. No escape from syntax: don't try morphological analysis in the privacy of your own lexicon. In *Proceedings of the 21<sup>st</sup> Annual Penn Linguistics Colloquium*, ed. A. Demitriadis and L. Siegel, *University of Pennsylvania Working Papers in Linguistics*, pp. 201 – 225. University of Pennsylvania, Philadelphia.

- MARKMAN, V. 2004. Causatives without causers and Burzio's Generalization. Proceedings of NELS 34
- MATUSHANSKY, O. 2002. On formal identity of Russian prefixes and prepositions. In *Phonological Answers (and their corresponding questions)* vol. 42, pp. 217-253. MITWPL, Cambridge, Ma.
- MILICEVIC, N. 2004. The lexical and superlexical verbal prefix *iz-* and its role in the stacking of prefixes. In *Nordlyd 32.2: Special issue on Slavic prefixes*. ed. P. Svenonius, pp.279-300. University of Tromsø, Tromsø. Available at [www.ub.uit.no/munin/nordlyd](http://www.ub.uit.no/munin/nordlyd).
- MIYAGAWA, S. 1989. *Syntax and Semantics 22*: Structure and case marking in Japanese. Academic Press. New York.
- OERHLE, R. AND H. NISHIO 1981. Adversity. Farmer, Ann, K. and Chisato Kitagawa eds. *Coyote Papers, Proceedings of the Arizona Conference on Japanese Linguistics* Vol. 2. 163 – 187.
- OLIVERIUS, Z. 1972. A contribution to the semantic analysis of Russian affixal morphemes. In *The Slavic Word: Proceedings of the International Slavistic Colloquium at UCLA*. ed. D. Worth, pp.96—116.
- PERELTSVAIG, A. 2006. Small Nominals. *Natural Language and Linguistic Theory*. 24: 433-500.
- PESETSKY, D. 1985. Morphology and lexical form. *Linguistic Inquiry* 16: 193 – 246.
- PYLKKANEN, L. 2002. Introducing Arguments. Doctoral Dissertation. MIT, Cambridge, Ma.
- RAMCHAND, G. 2003. First phase syntax. Ms. Oxford University.
- RAMCHAND, G. 2004. Time and the event: The semantics of Russian prefixes. In *Nordlyd 32.2: Special issue on Slavic prefixes*, ed. Peter Svenonius, pp. 323-361. University of Tromsø, Tromsø.
- RAMCHAND, G. AND P. SVENONIUS 2002. The lexical syntax and lexical semantics of the verb-particle construction. In *Proceedings of WCCFL 21*, ed. Like Mikkelsen and Christopher Potts, pp. 387-400. Cascadilla Press, Somerville, Ma.
- RIZZI, L. 1997. The fine structure of the left periphery. In *Handbook of Generative Syntax*. ed. Liliana Haegeman, pp. 281 – 337.
- ROJINA, N. 2004. English particles, Russian prefixes, and prepositional phrases. Master's thesis. Universitat i Tromsø.
- ROMANOVA, E. 2004. Superlexical vs. lexical prefixes. In *Nordlyd 32.2: Special issue on Slavic prefixes*, ed. Peter Svenonius, pp. 323-361. University of Tromsø, Tromsø.
- ROTHSTEIN, S. 2004. Two puzzles for a theory of lexical aspect: semelfactives and degree achievements. Bar-Ilan University, Ms.
- SHVEDOVA, N et. al. 1980. РУССКАЯ ГРАММАТИКА. 1980. Ред. коллегия Н. Ю. Шведова, Н. Д. Арутюнова, А. В. Бондарко и др. АН СССР, Институт русского языка. Москва: Наука Грамматика современного русского литературного языка. Под ред. Н. Ю. Шведовой. М., 1970.
- SMITH, C. 1991/ 1997. *The Parameter of Aspect*, vol. 43 of *Studies in Linguistics and Philosophy*. Kluwer, Dordrecht.

- SOUCHKOVA, K. 2004. There is only one ‘po-’. In *Nordlyd 32.2: Special issue on Slavic prefixes*. ed. P. Svenonius, pp.403-419. University of Tromsø, Tromsø. Available at [www.ub.uit.no/munin/nordlyd](http://www.ub.uit.no/munin/nordlyd).
- SPENCER, A. AND M. ZARETSKAYA. 1998. Verb prefixation in Russian as lexical subordination. *Linguistics* 36: 1 – 39.
- SVENONIUS, P. 1994. Dependent nexus: subordinate predication structures in English and the Scandinavian languages. Ph.D. thesis, University of California, Santa Cruz.
- SVENONIUS, P. 1996. The verb-particle alternation in the Scandinavian languages. Ms. University of Tromsø.
- SVENONIUS, P. 2004a. Slavic prefixes inside and outside the VP. *Nordlyd 32.2: Special issue on Slavic prefixes*, ed. Peter Svenonius, pp. 205 – 253.
- SVENONIUS, P. 2004b. Slavic prefixes and morphology: an introduction to the Nordlyd volume. In *Nordlyd 32.2: Special issue on Slavic prefixes*. ed. P. Svenonius, pp.177-3204. University of Tromsø, Tromsø. Available at [www.ub.uit.no/munin/nordlyd](http://www.ub.uit.no/munin/nordlyd).
- SVENONIUS, P. 2004c. Russian prefixes are phrasal. Ms. University of Tromsø. In *Proceedings of FDSL 5*.
- TARALDSEN, T. 2000. V-movement and VP-movement in derivations leading VO-order. In *The Derivation of VO and OV*, ed. Peter Svenonius, pp. 97–122. John Benjamins, Amsterdam
- TATEVOSOV, S. 2007. Intermediate prefixes in Russian. Paper presented at the *Formal Approaches to Slavic Linguistics 16*, Stony Brook, NY. May 4 – 6, 2007.
- VITKOVA, P. 2004. The interaction of English particles, Bulgarian prefixes, and telicity. Master’s thesis. Universitat i Tromsø
- WHITNEY, W. 1889. Sanskrit grammar. Cambridge, MA: Harvard University Press. 9<sup>th</sup> issue, 2<sup>nd</sup> edition.