Slavic prefixes as State morphemes[*]
From State to change-of-state and perfectivity

Rok Žaucer <rok.zaucer@guest.arnes.si>
(University of Ottawa)

1. *Introduction*

This paper treats Slavic prefixes as morphemes introducing an event value of State, which allows preserving a direct link with the locational use of their homophonous prepositions. I claim that the directionality of spatially prefixed verbs, and the change-of-state of prefixed verbs in general, arises when the event value of the prefix is evaluated with respect to its opposition, which happens when a verbal stem and a State prefix are combined. It is thus claimed that prefixes on verbs of directed motion are not directional themselves. Moreover, I argue that the perfectivity of prefixed verbs with an imperfective base is a consequence of the presence of a prefix-introduced result state/change of state. In other words, I claim that the correlation between a prefix (derivation) and the verb's perfectivity (an inflectional category) is only indirect, and can be explained in terms of the prefix's introduction of a State, which is interpreted as a result state/change of state after event composition. Finally, I show that not all prefixes introduce a State, and that not all prefixed verbs are perfective.[1]

Section 2 presents the model as well as the data that motivate the view of prefixes as State morphemes. Section 3 disputes the claim that inceptive *za*-verbs do not represent result-state verbs. Sections 4 and 5 discuss two further sets of possible counterexamples, 'manner prefixes' and Source-prefixes, showing that these also yield to the analysis proposed. Finally, Section 6 argues that the attenuative ('pofective') *po*- is a crucially different prefix and that *po*-verbs are not perfective, thereby saving the generalization that a prefix's (result) State always triggers perfectivity.

2. *Event-structure value of prefixes & event structure of prefixed verbs*

I adopt an event structure model in the spirit of Pustejovsky (1991), with three basic event types—T(ransition), S(tate), P(rocess)—and rules of event composition. While S and P are simple event types, T is a combination of two (sub)events, say, S_1 and S_2, where one of these, e.g. S_1, is the logical opposition of the other one. A result state—such as that denoted by the

---

[1] I use the terms 'im-/perfective' (marked [I] and [P]) as is common in Slavic linguistics (cf. Brecht 1985, Filip 2003). For an alternative, see Bertinetto (2001). I use Pustejovsky's (1991) term 'change of state' instead of 'telicity'. My case language is Slovenian.

adjective *flat* in the resultative complex predicate *hammer the metal flat*—is seen as denoting a subevent of type S and *hammering* as denoting a subevent of type P. Combining the two subevents triggers event composition, in which the S composes with the other subevent and is, by an inference procedure, interpreted relative to its logical opposition, ¬S. This yields a complex predicate of type T, containing a change of state/transition from ¬S to S or from S to ¬S. In other words, it is due to event composition that the S subevent is interpreted as a result state.

In parallel to the English *run away* (cf. Pustejovsky 1991), I view the Slovenian prefixed verb *od-laufati* (lit. away-run) as combining an S event denoted by the prefix and a P event denoted by the verb root, (1). Putting the two together triggers event composition, i.e. the evaluation of S relative to ¬S and P. The output is a T, a change-of-state predicate.

(1)   a.   *run (P) + away (S)* → *run away (T)*
       b.   *od- (S) + laufati (P)* → *od-laufati (T)*

Note that locational prepositions can also be seen as denoting simple two-place relational predicates of type S. However, when they are not combined with another predicate, they will not be evaluated relative to their opposition and the other subevent, there will be no event composition and no new, change-of-state/T predicate.

In view of such an approach, one may wonder whether the prefix in (1b) could not have an event-structure value of either P or T, especially since Slavic prefixes are often seen as 'directional' (e.g. Muha 1993, Merše 1995, Žele 2001, Filip 2003). If the prefix were P, prefixed-verb predicates would not be delimited, contrary to standard views (e.g. Brecht 1985), since the composition of P and P does not yield a T/change of state (Hout 2000). But if the prefix lexically denoted a T (as in Hout 2000:415), event composition would still yield a change of state, since lexical Ts include a S subevent. Nevertheless, I will argue that the event structure of prefixes is S, not T.

Consider the meanings of homophonous preposition–prefix pairs. Since prepositions often have both a locational and a directional use (e.g. *v* 'in, into') and since some prefixed verbs (e.g. *v-teči* 'run in') denote directed-motion events, it is often said that (some) such prefixes are directional (cf. above). This may imply that the directionality of directed-motion verbs stems from the prefix's directional semantics.

Copular predicates can be used to test whether a preposition has a stative/locational use. For example, *Črt je iz forme* 'Črt is out of shape' (lit. Č. AUX out-of shape) shows that besides its more frequent directional use, *iz* 'out-of' also has a locational use. In fact, although this is not always obvious at first sight, all Slovenian prepositions that have homophonous prefixes[2] pass the copular test and thus exhibit a locational use (Žaucer 2002). On the other hand, one preposition with a homophonous prefix, i.e. *pri* 'at', *only* has a locational but no directional use; in directional PPs, *pri* is replaced by *k* 'to', (2). And although *pri* only has a locational meaning, *pri*-prefixed verbs always have a directional interpretation, (3).

(2)   *Juš   je   šel   k   reki   /   *pri   reki*
       Juš   AUX   went   to   river   /   at   river
       'Juš went to the river'

---

[2] *Iz* 'out of', *na* 'on; onto', *nad* 'over', *o(b)* 'at, next to; to', *od* 'away from', *po* 'over, across, along', *pod* 'under', *pred* 'in front of', *prek* 'over, across', *pri* 'at', *raz* 'off of, apart', *s/z* 'with, off of', *v* 'in; into', *za* 'behind'.

(3)   *Črt   je   pri-nesel   sekiro.*
        Črt   AUX   AT-carried   axe
        'Črt brought an axe [to a discourse-specified location] / *carried an axe at [a discourse-specified location]'

Therefore, if we claim that the directionality of (3) stems from directional semantics of the prefix, we detach the prefix *pri-* from its homophonous preposition *pri*; *pri* would only have a locational meaning, *pri-* only a directional meaning. Such detachment is theoretically undesirable, especially since our event-composition model offers to treat *pri* and *pri-* a uniformly. Simply, the prefix *pri-* gets the meaning of its cognate preposition, i.e. the locational meaning 'at', while the 'directionality' of *pri*-prefixed verbs, as in (3), is only an inferential interpretation of the change of state that arises in event composition when the S subevent, BE[AT], is interpreted relative to its opposition, [¬BE[AT]], and the P subevent introduced by the verb stem. Moreover, *k* 'to', as in (2), is a rare monosyllabic preposition with no cognate prefix **k-*. Now, by claiming that Slavic prefixes are locational, while the verb's directionality is really just the event-composition's change of state, we have in fact predicted—correctly—the absence of a prefix **k-*: directional-only prepositions (in Slavic) will not have cognate prefixes.[3]

Therefore, I generalize that (perfectivity-associated) prefixes have locational semantics. They introduce a S, and event composition yields a change of state. In the absence of imperfective inflection (*-va-* or its allomorphs), this change of state triggers perfectivity. Prefix-triggered perfectivity is thus *always* a result of a change of state. But the fact that all prepositions with cognate prefixes have a locational use only means that they all *can* introduce a S (leading to a change of state), not that they all *always do*. That is, all such prefixes can and do occur on perfective-turned verbs, but some also attach to verbs that, after prefixation, remain imperfective, in which case they do not introduce a S (cf. Section 6).[4]

Note that I do not claim that *all* perfectivity results from a change of state. Perfectivity can also be encoded in the inflectional suffix *-ni-*. The crucial difference between the two mechanisms reveals itself with respect to unselected objects. It is by now standard to see these as licensed by the result state introduced by an adjective or particle in English (Rappaport Hovav & Levin 2001) or by a prefix in Slavic (S&Z 1998a). In view of *misliti (*načrt)* 'think (*the plan)', the unselected object in *pre-misliti načrt* 'think the plan over' is thus seen as evidence of a prefix-introduced result state. Now, direct/inflectional perfectivity-encoding does not license unselected objects, *hrk-ni-ti*[P] *(*se)* (lit. hawk self) 'hawk', while indirect encoding via State-prefixes does, *od-hrk-ni-ti*[P] *se* (lit. off-hawk self) '(relieve oneself by) hawk(ing)'. Therefore, we cannot simply consider prefixes as grammaticalized, inflectional perfectivity morphemes (cf. Filip 2000). They only trigger perfectivity via their introducing a State.

Two closely related proposals are Spencer & Zaretskaya [S&Z] (1998a) and Strigin & Demjjanow (2001). S&Z show that prefixes on verbs which license unselected objects introduce a result state, but they exclude prefixes such as the inceptive *za-*. Strigin & Demjjanow claim that

---

[3] Directional prefixes may exist in other languages, but they will presumably not derive change-of-state verbs. In Slavic, this possibility may have disappeared due to the widely generalized use of State-prefixes for encoding perfectivity (cf. Bertinetto & Delfitto 2000). Such perfectivity-encoding, though, is only a by-product of the prefix's basic function, that of introducing a (result) state (see below).

[4] Therefore, verbs such as *v-teči*[P] 'run into', *na-risati*[P] 'draw up', *po-rušiti*[P] 'demolish, bring down', *s-kuhati*[P] 'cook', *na-polniti*[P] 'fill up', *do-trpeti*[P] 'finish suffering', *za-špilati*[P] 'start playing', *pri-striči*[P] 'cut shorter', *na-peči*[P] 'bake a lot of x', *na-laufati*[P] *se* 'run one's fill', *od-sekati*[P] 'chop off', *na-mazati*[P] 'daub onto', whose unprefixed counterparts are all imperfective, all contain a prefix-introduced result state, which triggers perfectivity.

all prefixes contribute a state, which is either terminated or initiated (or both), as their underspecified meaning. I assume with both of these proposals (also Brecht 1985) that the change of state of prefixed verbs is entailed, i.e. triggers perfectivity, unless the imperfective *-va-* is present, in which case it is only implied. Note that such a view forces a distinction between the concept of change-of-state and quantization.[5],[6] As to the claims about the prefix-introduced result state, however, I will argue that S&Z's position is overrestrictive and that of Strigin & Demjjanow is overgeneralizing.

3. *Inceptive prefix* za-

This section looks at the inceptive prefix *za-* on verbs such as *za-laufati*[P] 'start running' (the spatial meaning of its cognate preposition is 'behind'). *Za-* is typically considered a phasal 'mode of action' prefix (e.g. S&Z 1998a, Muha 1993, Brecht 1985). S&Z thus exclude it from result prefixes, saying that the inceptive *za-* is a case of "adjunct-type modification of the basic event type" (op.cit.:25). Since inceptive *za-*prefixation triggers perfectivity on imperfective stems (e.g. *laufati*[I] 'run' vs. *za-laufati*[P] 'start to run'), *za-* could be problematic for the claim that prefix-triggered perfectivity stems from the presence of a result state.

   Although S&Z give no Lexical Conceptual Structure for inceptive *za-*verbs, they provide the LCS for *za-*'s 'logical opposite', i.e. the terminative phasal *do-*, such as in the Russian *do-čitat*[P] *stat'ju* 'finish reading the article', (4a). Extrapolating from (4a), we can assume that a S&Z-style LCS for *za-špilati*[P] 'start playing' would be as in (4b).

(4)   a.   [FINISH(x) [READ(x,y)]]   (S&Z 1998a:25)
      b.   [START(x) [PLAY(x)]]

If this LCS is correct, we could expect perfective *za-*verbs to behave in parallel to the combination of the aspectual perfective verb *začeti*[P] 'begin/start' and an infinitival complement. The same holds for Verkuyl (1999), who sees *za-* as a VP-embedding aspectualizer like *start/begin*. However, this prediction is not borne out regarding compatibility with the restitutive adverb *nazaj* 'back', (5), and with result-state adverbials, (6)-(7).[7] And since restitutive adverbs and result-state adverbials are licensed when the meaning of the constituent they combine with includes a result state (Piñón 1999), (5) and (6) show that inceptive *za-*verbs must contain a result state in their denotation. The prefix introduces a State, interpreted as a result state due to event composition. Moreover, with the change of state, *za-*verbs get quantized, rejecting further quantizers such as durative adverbials. Their admitting result-state adverbials, then, which are also quantizers, clearly shows that *za-*verbs contain a stative subevent, which the result-adverbial quantizes. As to their morphosyntax (cf. Ramchand 2003), *za-*verbs would be unaccusatives, which explains the absence of unselected objects despite the presence of the result state.

---

[5] I assume familiarity with the notion of quantization. I consider a predicate non-quantized if it is both cumulative and divisive; otherwise it is quantized. See e.g. Filip (2000, 2003) and references therein.
[6] The change-of-state – quantization split is warranted also by the fact that a result state licenses unselected objects not only in quantized perfectives but also in non-quantized imperfective/progressive predicates (*Fido is digging up the bone*). See also Section 6.
[7] The gloss may be unclear, as the English result-state and durative adverbial look the same (*for 5 minutes*). In Slovenian, though, they are distinct, *5 minut* being the durative one and *za 5 minut* the result-state one. Cf. also French, *pendant / pour (5 minutes)*.

(5)   *Juš je   nazaj za-laufal*[P] / *začel*[P] *nazaj laufat*
       Juš AUX back ZA-ran   / began   back to-run
       'Juš broke back into a run'

(6)   *Črt   je   za-laufal*[P]   *za   deset minut*
       Črt   AUX ZA-ran   for   ten   minutes
       'Črt broke into a run for ten minutes (a ten-minute run)'

(7)   **Črt je   začel*[P] *laufat za   deset minut*
       Črt   AUX started to-run for   ten   minutes

4. *Filip's (2003) "manner prefixes"*

Filip (2003) states that prefixes such as in (8b) add a manner component 'unintentionally, inadvertently, by mistake'. Given that the unprefixed base is imperfective, (8a), while the prefixed version is perfective, (8b), this could be a case where perfectivity comes with a prefix but does not stem from a result state. Therefore, (8b) could be a problem for our proposal. However, (8a) and (8b) also differ as to the unselected object *se* 'self', impossible in (8a) and obligatory in (8b). Drawing on S&Z (1998a:22-23), I submit that the prefix introduces a result state, which licenses the reflexive, and the adverbial modification is a pragmatic inference. The state of being *za-* ('behind x') is metaphorized as something unpleasant, e.g. trouble, and since one typically does not get oneself into trouble on purpose, there is an inference that the 'talking' was done 'inadvertently, by mistake' (cf. the English *talk oneself into a corner*, where *corner* is metaphorized as trouble and a similar inference of inadvertence obtains). Of course, the metaphor whereby being 'behind x' means being in trouble can be lexicalized, in individual *za-* verbs or in *za-* itself, and so can the inferential 'inadvertence'. But this does not mean that the prefix does not, quite regularly, introduce a result state, which triggers perfectivity.

(8)   a.   *govoriti*[I] *(*se)*   b.   *za-govoriti*[P] **(se)*
             talk   refl   behind-talk   refl
             'talk'   'get oneself in trouble by talking'

5. *Filip's (2003) Source-prefixes*

Based on the general ban on double quantization and their compatibility with a quantizing expression such as '10 meters', Filip (2003) argues that some Source-prefixes, (9), unlike Goal-prefixes, (10), are directional and do not quantize the input verb. Such verbs, then, could contain no change of state; but since the Source-prefix in (9) still turns the imperfective *laufati*[I] 'run' perfective, *od*-verbs—if indeed without a result state—refute our analysis. However, the ban on '10 meters' that Filip notes for Goal-prefix verbs, (10), does not stem from the prefix, as it also holds for their unprefixed variants, (11). In fact, the contrast in (9)-(10) even holds in copular predicates with the same PPs, (12), which are stative and clearly without a change of state. So, the contrast with respect to '10 meters' in (9)-(10) may say little about the quantization or change-of-state properties of *pri-laufati*[P] (at-run) and *od-laufati*[P] (away-run). Indeed, if (9), without '10 meters', is non-quantized, why does it reject durative adverbials?

5

(9) *Od-laufal*[P] *je* *(10 metrov)* *od hiše*
     away-ran AUX 10 meters from house
     'He ran (10 meters) away from the house'

(10) *Pri-laufal*[P] *je* *(*10 metrov)* *k hiši*
      at-ran AUX 10 meters to house
      'He ran (*10 meters) to the house'

(11) *Laufal*[I] *je* *(*10 metrov) k hiši*
      ran AUX 10 meters to house
      'He ran (*10 meters) to the house'

(12) *biti*[I] *(10 m) od hiše* / *biti*[I] *(*10 m) pri hiši*
      be 10 m from house be 10 m at house
      'be (10 m) away from the house' / 'be (*10 m) at the house'

In fact, *od-laufati*[P]—just as its English equivalent *run away*—*does* contain a change of state and *is* quantized. Consider VP-coordination with *laufati*[I] 'run': a natural reading for (13) is that of a single (long-lasting) running event. 'Running', then, is cumulative, 'running' plus 'running' is still 'running'. In contrast, VP-coordination with *od-laufati*[P] 'run away', (14), cannot refer to a single event of running (far) away but only to two events of running away. In other words, 'run away' plus 'run away' can only equal 'run away twice' and not simply 'run (far) away', so *od-laufati*[P] 'run away' is non-cumulative and thus quantized. Moreover, *od-* licenses unselected objects, (15), showing that it indeed introduces a result state. *Od-* is thus not directional, it introduces a state, which in turn triggers perfectivity.

(13) *Juš* *je* *laufal*[I] *in* *laufal*[I]
      Juš AUX ran and ran
      'Juš ran and ran (= ran a lot, ran far)'

(14) *Juš* *je* *od-laufal*[P] *in* *od-laufal*[P]
      Juš AUX away-ran and away-ran
      'Juš ran away and ran away (= ran away twice)'

(15) a. *misliti*[I] *(*težave)* b. *od-misliti*[P] *težave*
          think problems away-think problems
          'think (*problems)' 'think problems away'

So, if *od-laufati*[P] 'run away' is quantized, what does '10 meters' quantize in (9)? I claim that it modifies the predicate 'away', by picking out a point somewhere in the extension of 'away-ness'.

Depending on the syntactic position, non-verbal predicates may or may not affect the quantization of verbal predicates. For example, unlike *legs*, the nominal predicate *2 legs* is quantized; *2 legs* and *2 legs* equals *4 legs*. *Having 2 legs*, though, is a non-quantized verbal predicate; it admits a quantizing adverbial, *have 2 legs for 10 years*, and *Jill having 2 legs* and *Jill having 2 legs* still equals *Jill having 2 legs*, not *Jill having 4 legs* or *having 2 legs twice*. Similarly, unlike *away*, *2 meters away* can be seen as a quantized adverbial predicate; *2m away* and *2m away* equals *4m away*. But *being 2 meters away* is a non-quantized verbal predicate; it

6

accepts a quantizing adverbial, *be 2m away for 2 hours*, and *Jill being 2m away* and *Jill being 2m away* still equals *Jill being 2m away*.

Thus, (9)'s admitting '10 meters' but not the durative adverbial 'for 10 hours' shows exactly that the quantized *od-laufati*[P] 'run away' contains a result state, whose non-verbal predicate *od-* 'away' the modifier '10 meters' quantizes.[8] Such *od-*verbs, therefore, do not support Filip's (2003) view that perfectives can be non-quantized. The change-of-state is entailed, which means that such perfectives are quantized. Accordingly, they do not admit durative adverbials, which would be illicit double quantization. Our change-of-state – perfectivity correspondence is thus preserved. Finally, the contrast in (12) reflects the fact that *at* really means 'right at'. While *a bit away* and *far away* are both fine, we can only specify *at* as *right at* but not as **a bit at*. *At (x)*, unlike *away (from x)*, is thus a quantized prepositional predicate, but *be at (x)* is a non-quantized verbal predicate that can be quantized into *be at x for 2 hours*.[9]

6. *Attenuative vague-measure* po- *('pofective'* po-*)*

If verbs like *po-sedeti* 'sit for a little while', based on the imperfective *sedeti*[I] 'sit', are perfective, as is standardly considered (Muha 1993:174, Herrity 2000:209, Brecht 1985:15, Fowler 1996:105-7, cf. Filip 2000), then my account predicts that *po-* contributes the meaning of 'for a little while' and a (result) state triggering perfectivity. But given its meaning of 'for a little while', what kind of state could *po-* denote? A state both initiated and terminated (cf. Strigin & Demjjanow 2001:63), i.e. a transition from absence of state to the state and back to its absence? This seems odd, and our model of event composition is actually unfit to derive this. However, Depraetere (1995) has advocated a distinction between 'boundedness', i.e. the presence of actual temporal boundaries as introduced by durative adverbials, and the presence of a change of state/ result state. On this view, (16) denotes a bounded event with no change of state, while (17) denotes a bounded event with a change of state.

(16)   *He ran from three to five*
(17)   *He ran into the room*

In contrast, Filip's (2000) quantization collapses this distinction and treats both durative adverbials and delimiting PPs/prefixes as quantizers; the distinction between (16)-(17) is thus wiped out. Drawing on Depraetere, I argue that *po-* is a degree adverb introducing no state, that *po-*verbs are not change-of-state predicates and that they are *not* perfective; they are bounded and imperfective.[10] Consider the adverbial tests in (18).

---

[8] In fact, one can say *run 10m away from home for 10 hours*, using a result-state adverbial to quantize the result state, which is a subevent of a quantized complex verbal predicate; at the same time, the non-verbal predicate *away from home* is quantized by *10 meters*.

[9] Filip (2003) says that (11) is fine in Czech. This is not true, unless it contains an (elided) degree adverb 'more'. But then we cancel the meaning of *pri* 'at' and *k* 'to' as 'right at/to', turning it into a protracted zone where various points count as 'at x'. One can then first be sort of at x and then move and be even more at x (closer to x) and still need not be right at x. With such a scalar 'at-ness', '10 meters' can quantize it. This construal seems hard with the English *at*, but it works with *pri* 'at', and if invoked, even copular examples such as 'x is more at the house than y' are fine. On this construal a complex *pri*-prefixed predicate will still be quantized only once, via the onset of the result state; the non-verbal predicate 'at x', though, will be quantized in its own right via the adverbial '10 meters'.

[10] See Fn. 1. In Bertinetto's (2001) model, *po-*verbs would be perfective verbs without a change of state. In fact, Filip (2000) seems to straddle the traditional Slavic concept of im-/perfectivity and a Bertinetto-like account; she

(18) *Juš je   po-sedel par   minut / *v par minutah / *za par   minut*
      Juš AUX PO-sat   a-few minutes / in a-few minutes / for a-few minutes
      'Juš sat for a while, for a few minutes'

The impossibility of the time-span adverbial suggests that the *po*-predicate is not perfective, since such adverbials generally pattern with perfectives, and the impossibility of the result-state adverbial suggests that the predicate contains no result state. In contrast, the acceptability of the durative adverbial suggests that the *po*-predicate is imperfective, since such adverbials in general pattern with imperfectives. Now, Filip (2000:52-3) still concludes that—adverbial tests aside—*po*-verbs behave like perfectives, and should thus not be seen as fitting in neither the perfective nor the imperfective class, but rather as genuine perfectives. However, Filip only compares perfectives to bare imperfectives. And if we add the category of bounded imperfectives, as in *laufati[l] od dveh do petih / tri ure* 'run from two to five / for three hours', *po*-verbs as in (18) indeed turn out to pattern with bounded imperfectives, as shown in Table 1.[11]

Table 1: *Filip's (2000:53) additional im-/perfectivity tests, bounded imperfectives and* po- *added*

	perf.	*impf.*	*bounded impf.*	*'po-'*
OK with point adverbials (*right now*)	-	+	-	-
future time reference in present tense	+	?	?	?
OK with phasal verbs (*start*)	-	+	-	-

At the same time, *po*-verbs and change-of-state prefixed perfectives exhibit a further difference which warrants their distinct treatments. Smith (1999) shows that explicit temporal boundaries need not coincide with the beginning or termination of the event. Durative adverbials only specify the minimum duration, and while the latter is typically interpreted as the exact duration, this is just a pragmatic inference; therefore, a sentence such as *Mary worked for two hours* can be felicitously continued with ... *and she went on working for a while* (Smith 1999:484), i.e. there can be direct continuation of the event without there having been any interruption. In the same way, (19), with an imperfective 'sit' and a durative adverbial, allows an uninterrupted continuation of the event, showing that the predicate, though bounded, contains no right-edge change of state (similarly, with regard to the left edge, the 'sitting' could have started before three without being interrupted at three).

(19) *Juš je   **sedel[l] od   3h do 4h**, in pol je   še   kar naprej sedel[l]*
      Juš AUX sat   from 3   to 4   and then AUX still PTCL further sat
      'Juš sat from three to four, and then he just went on sitting'

Applying this to *po*-verbs, (20) shows a sentence compatible with the scenario where the sitting had started before the left-edge temporal boundary of the *po*-predicate and continued into the sitting denoted by the *po*-predicate without any interruption. Similarly, (21) shows a sentence compatible with a scenario where the *po*-predicate's bounded event of sitting continues without interruption beyond its temporal boundary. However, since the change-of-state of prefixed perfectives is entailed, the *po*-sitting events of (20)-(21) should be incompatible with readings

---

subsumes boundedness and change-of-state under quantization, thus capturing perfectivity with quantization, but at the same time she treats some verbs as lexical imperfectives (e.g. p. 81). And in Filip (2003) she explicitly steers clear of a Bertinetto-like model, separating quantization and perfectivity.

[11] Filip (2000), working on Russian, uses a fourth test, which I omit since it does not apply to Slovenian.

without any interruption if *po*-verbs were really perfective. Our *po*-predicates are thus bounded imperfectives, with (20) demonstrating an absence of a left-edge change of state and (21) an absence of a right-edge change of state.

(20) *Sedel*[I] *je,   moral bi   vstati,   ampak je   raje   še kar   malo* **po-sedel**
      sat   AUX must would rise-INF but   AUX instead still PTCL little PO-sat
      'He was sitting, he should've gotten up but instead he just sat a bit longer'

(21) **Po-sedel** *je   par minut,   do štirih, in pol je   še kar   naprej sedel*[I]
      PO-sat   AUX few minutes till four   and then AUX still PTCL further sat
      'He sat for a few minutes, till four, and then he just went on sitting'

As a control test, compare this with phasal-prefixed perfectives. The (terminative) *do*-predicate in (22) contains a right-edge change of state, preventing a continuation reading, and the (inceptive) *za*-predicate in (23) contains a left-edge change of state, preventing a reading with an earlier phase of singing continuing into the singing denoted by the *za*-verb.

(22) **Juš je* **do-trpel**[P] *in pol je še   naprej trpel*[I]
      Juš   AUX DO-suffered and then AUX still further suffered
      'Juš finished suffering and then he went on suffering'

(23) **Juš je   pel*[I] *in pol je   za-pel*[P]
      Juš   AUX sang and then AUX ZA-sang
      'Juš sang and then he started to sing'

In fact, Piñón (1994) applies a similar reasoning to *po-*, concluding that Polish *po*-verbs denote situations that do not culminate, treating *po*-verbs as bounded imperfectives, and paralleling *po-* to durative adverbials. But while Piñón (1994:354) gives a pair of examples to show that *po*-verbs, rather curiously, do not allow for an uninterrupted continuation, the Slovenian examples in (20)-(21) show that this is incorrect and that *po*-verbs do in fact pass this test for bounded imperfectives. So I conclude that *po*-verbs are not perfectives but bounded imperfectives whose denotation contains no change of state (with Piñón 1994, also Bertinetto & Delfitto 2000:220, but contra Filip 2000). This also predicts, correctly, that such *po*-verbs will not admit unselected objects (e.g. **po-misliti načrt* 'think the plan for a while' vs. *pre-misliti načrt* 'think the plan over').[12] Our proposed strict correlation between perfectivity of prefixed verbs and the presence of a result state is thus saved. As a degree adverb, *po-* has no event-structure value, and so when a verb combines with *po-*, there is no event composition, no change of state, and no perfectivity. Finally, this analysis suggests that compatibility with durative adverbials is a true and sufficient diagnostic for imperfectives.

---

[12] In support for this view, Andrew Spencer notes that *po*-verbs do not form 'secondary imperfectives' with a progressive/non-iterative meaning (*po-sedati*[I] *'sit for a while', ✓'repeatedly sit for a while, sit around'). This is expected if *po*-verbs are imperfective.

Rok Žaucer

6.1 *Precise meaning of* po-

As a first approximation, *po-* can be seen as a derivational equivalent of the durative adverbial 'for a little while'; an optional durative adverbial with *po-*verbs (cf. (18)) further specifies the derivational adverb. Piñón (1994) states that—combined with the general ban on double quantization—this explains why *po-*, a quantizing modifier, only attaches to activities, which are non-quantized. However, *po-* is better viewed more broadly, as a pure degree adverb meaning 'a little', so as not to dissociate perfective verbs such as *po-skočiti*[P] '✓jump a little, *jump for a little while', derived from the perfective and thus quantized base *skočiti*[P] 'jump', where *po-* seems to add the same meaning, only to a different ingredient of the base verb (cf. Filip 2003 for Czech examples). On the narrower account, as in Piñón (1994), *po-skočiti*[P] should either be ruled out as illicit double quantization, or the *po-* on such verbs should be left unrelated to Piñón's *po-*, despite the fact that both add an attenuative meaning. Instead, we can view the two *po-*'s as realizing the same adverb, with the difference in the interpretation depending on the properties of the input verb. This also captures verbs such as the Czech *po-od-skočit*[P] 'jump a little bit away', based on *od-skočit*[P] 'jump away', where *po-* modifies only the *od-*introduced predicate 'away' rather than the whole prefixed verb *od-skočit*[P] 'to jump away' but again has the same meaning of 'a little'.[13]

7. *Conclusion*

Based on the meanings of prefix-cognate prepositions, I argued that the event structure of prefixes is one of State, and that the directionality and—more generally—change of state of prefixed verbs arises through event composition. As a result of the change of state, State-prefixed verbs with an imperfective base turn perfective. The proposal preserves the link between the seemingly directional prefix *pri-*, found on directed-motion verbs, and its cognate locational-only preposition *pri* 'at'. Anticipating possible objections, I showed that with inceptive *za-*verbs as well as with "manner-prefixed" and Source-prefixed verbs, the presence of the prefix indeed means the presence of a result state. In contrast, I argued that *po-*verbs such as *po-sedeti* 'sit for a while' are not perfectives but rather bounded imperfectives with no change of state. I was thus able to save the generalization that the perfectivity of prefixed verbs with an imperfective base always correlates with the presence of a result state/change of state.[14]

   Though Slavic prefixes often seem inextricably linked to perfectivity, an inflectional category, my analysis preserves the status of prefixes as truly derivational morphemes (cf. Bertinetto & Delfitto 2000:214) by invoking their locational prepositional semantics and

---

[13] Since *po-* on Filip's *po-od-skočit*[P] 'to jump a small distance away' modifies only the prefix *od-* rather than the whole prefixed verb (cf. Section 5), such examples cannot be used—contra Filip (2003)—to support her claim that perfectives can be non-quantized. *Od-skočit*[P] 'jump away' is quantized via the result state, while *od-*'s predicate 'away' is quantized via *po-* to mean 'a bit away'. See also S&Z (1998b).

[14] One can think of other possible problems for my analysis, such as some attenuative *pri-*verbs, for which I refer the reader to S&Z (1998b). S&Z show that this *pri-* licenses unselected objects, as in the Russian *pri-sypat*[P] *jamu* (lit. PRI-pour hole) 'pour a hole partly full', revealing a result state and preserving our change-of-state – perfectivity correlation (cf. Strigin & Demjjanow (2001: 64)). Another case are Filip's (2003) 'modal prefixes'. For reasons of space, I have to leave a discussion of these for another time.

relegating the perfectivity of State-prefixed verbs to a mere consequence of the change of state. Though treated separately, the pofective *po-* also remains truly derivational, being seen essentially as an affixal adverb.

References

Bertinetto, Pier Marco. 2001. "On a Frequent Misunderstanding in the Temporal-Aspectual Domain". *Semantic Interfaces* ed. by Carlo Cecchetto et al., 177-210. Stanford: CSLI.

---------- & Denis Delfitto. 2000. "Aspect vs. Actionality: Why they should be kept apart." *Tense and aspect in the languages of Europe* ed. by Östen Dahl, 189-225. Berlin, New York: Mouton de Gruyter.

Brecht, Richard D. 1985. "The Form and Function of Aspect in Russian". *Issues in Russian Morphosyntax* ed. by Michael S. Flier & Richard D. Brecht, 9-34. Columbus: Slavica.

Depraetere, Ilse. 1995. "On the necessity of distinguishing between boundedness and telicity". *Linguistics and Philosophy* 18: 1-19.

Filip, Hana. 2003. "Prefixes and the delimitation of events". *Journal of Slavic Linguistics* 11/1: 55-101.

----------. 2000. "The Quantization Puzzle". *Events as Grammatical Objects* ed. by Carol Tenny & James Pustejovsky, 39-93. Stanford: CSLI.

Fowler, George. 1996. "An Articulated Theory of Aspect and Prefixation". *Formal Approaches to Slavic Linguistics 3* ed. by Jindřich Toman, 97-122. Ann Arbor: Michigan Slavic.

Herrity, Peter. 2000. *Slovene: A Comprehensive Grammar*. London: Routledge.

Hout, Angeliek van. 2000. "Projection Based on Event Structure". *Lexical Specification and Insertion* ed. by Peter Coopmans et al., 403-427. Amsterdam: John Benjamins.

Merše, Majda. 1995. *Vid in vrstnost glagola v slovenskem knjižnem jeziku 16. stoletja. Aspect and Aktionsart in the 16th Century Slovene Literary Language*. Ljubljana: SAZU.

Muha, Ada V. 1993. "Glagolske sestavljenke - njihova skladenjska podstava in vezljivostne lastnosti [Syntactic base and valency of verbal derivatives]". *Slavistična revija* 41: 161-92.

Piñón, Christopher. 1994. "Aspectual composition and the Polish pofective". *Formal Approaches to Slavic Linguistics 2* ed. by Sergei Avrutin et al., 341-373. Ann Arbor: Michigan Slavic.

----------. 1999. "Durative adverbials for result states". *West Coast Conference on Formal Linguistics 18* ed. by Sonya Bird et al., 420-433. Somerville: Cascadilla Press.

Pustejovsky, James. 1991. "The syntax of event structure". *Cognition* 41: 47-81.

Ramchand, Gillian. 2003. *First Phase Syntax*. Ms., University of Oxford.

Rappaport Hovav, Malka & Beth Levin. 2001. "An Event-Structure Account of English Resultatives". *Language* 77/4: 766-797.

Smith, Carlota. 1999. "Activities: States or Events?". *Linguistics and Philosophy* 22: 479-508.

Spencer, Andrew & Marina Zaretskaya. 1998a. "Verb prefixation in Russian as lexical subordination". *Linguistics* 36: 1-39.

---------- & ----------. 1998b. "*Pri*-prefixation in Russian". *Journal of Slavic Linguistics* 6/1: 107-135.

Strigin, Anatoli & Assinja Demjjanow. 2001. "Secondary predication in Russian". *ZAS Papers in Linguistics* 25: 1-79.

Verkuyl, Henk J. 1999. *Aspectual Issues*. Stanford: CSLI.

Žele, Andreja. 2001. *Vezljivost v slovenskem jeziku [Valency in Slovenian]*. Ljubljana: SAZU.

Žaucer, Rok. 2002. *The Role of Verbal Prefixes in Slavic: Evidence from Slovenian Locative Denominal Verbs*. M.A. Thesis, University of Ottawa.