

A formal approach to terminativity and telicity in Russian

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A common criterion for distinguishing atelic and telic phrases in English is their compatibility with time measure phrases (MPs) preceded by *for* versus *in*. In Russian, by contrast, *for*-phrases are expressed by an accusative NP while *in*-phrases corresponds to a PP headed by the preposition *za* ‘behind, beyond’:

- (1) Anna čitala^{IPF} des’at’ minut. (2) Anna dočitala^{PF} knigu za des’at’ minut.
Anna read.PST.SG.F ten.ACC minute.PL.GEN Anna *do*.read book.SG.ACC *za* ten minute
Anna read for ten minutes. Anna finished reading the book in ten minutes.

The examples in (1) illustrate the correlation of telicity, perfectivity and prefixation in Russian and other Slavic languages. There is an ongoing debate as to which extent this correlation is based on strict rules. Borer (2005), among others, assumes that Slavic prefixes encode telicity on the verb; Filip (2003), on the other hand, points out that while all perfective verbs may be regarded as semantically telic, prefixes should not be viewed as perfectivity or telicity markers. Moreover, “[t]here is an intuitive agreement that telic predicates are completed or inherently bounded, but what exactly that means is very much under debate” (Rothstein, 2008, p. 3).

If one assumes that perfective verbs are telic then the test for telicity by means of time adverbials does not work for Russian. It is neither obligatory for a telic verbal description to be compatible with a *za*-headed temporal PP nor does the compatibility indicate that the predicate denotes single completed events. (Examples of the latter are given by secondary imperfective verbs with habitual interpretation and basic imperfective verbs with generic interpretation.) The prefix *po-* with its ‘somewhat/for some time’ interpretation is a case in point of the former fact. For instance, the verb *počitat*^{PF} (‘to read for some time’) is perfective and denotes bounded reading events, but it is only compatible with accusative temporal adverbials:

- (3) On počital^{PF} knigu pjat’ minut. (4) *On počital^{PF} knigu za pjat’ minut.
he *po*.read.PST.SG.F book.SG.ACC five minute he *po*.read.PST.SG.F book.SG.ACC *za* five minute
‘He read the book for 5 minutes.’

Corre (2015), following Padučeva and Pentus (2008) and Mehlig (2008), therefore argues for an extended notion of telicity which includes cases of *terminativity* as encoded by delimitative *po-*. Kagan (2016), building on Filip (2000), proposes a scale-based analysis of delimitative *po-* along the following lines: *po-* picks out an event-related scale in the semantic structure of the verb as a dimension of measurement and imposes the constraint that the amount of change along that scale does not exceed a contextually given standard of expectation. In (3), the scale in question can be identified with the time course of the event itself.

The main goal of the present paper is (i) to explain the (in)compatibility of accusative MPs and *za*-headed MPs in the cases under discussion by (ii) modelling the scalar semantics of *po-* and related prefixes within a feature-based decompositional framework. To this end, it is worthwhile to take a look at paired verbs of motion: a limited set of basic imperfective verbs which exist in *determinate* (directed, unidirectional) and *indeterminate* (multi-directional, non-directed) forms. Like Kagan (2016), we assume that determinate motion verbs lexicalize a *path scale*, in contrast to indeterminate verbs. Consider the pair of motion verbs *begat*_{indet}/*bežat*_{det} (‘to run’). When prefixed with *po-*, the indeterminate verb but not the determinate verb can take an accusative time MP (5).

- (5) Vasja pobegal_{indet}/*pobežal_{det} 2 časa. (6) Vasja probégal_{indet}/*probežál_{det} 2 časa.
Vasja *po*.run.PST.SG.M 2 hours Vasja *pro*.run.PST.SG.M 2 hours
‘Vasja did two hours of running.’ ‘Vasja ran for two hours (without stopping).’
- (7) Vasja probégal_{indet}/probežál_{det} 20 kilometrov za 2 časa.
Vasja *pro*.run.PST.SG.M 20 kilometers *za* 2 hours
‘Vasja ran 20 kilometers in two hours.’

termin.	telic	example	time scale (indet. verb)	path scale (det. verb)
+	+	<i>pro</i> -pref. verb	accusative time MP <i>za</i> -headed MP	<i>za</i> -headed MP
+	–	<i>po</i> -pref. verb	accusative time MP	—

Table 1: Overview of the relation between scale type, telicity, and measure phrase type

Prefixation with *pro*-, by comparison, gives rise to the verbs *probegat* ('to run for some time') and *probežat* ('to run some distance or past something'), which behave like *po*-prefixed verbs with respect to accusative time MPs (6). In contrast to the *po*-prefixed verbs, however, which are not compatible with *za*-phrases without reinterpretation, the *pro*-prefixed verbs can also combine with *za*-headed time MPs (7).

The different effects of the two prefixes can be explained by assuming that *pro*-, in contrast to *po*-, imposes a closed scalar structure as the dimension of measurement on the selected scale, which may be time or path depending on the type of the motion verb. This means, first, that the type of the selected scale has to be compatible with the type *closed scale*. For scales that are not inherently closed this means to specify a segment that can be regarded as a closed scale (like a *two hours* segment of the time scale). A second point is concerned with the kind of the mapping that the prefix imposes between the event stages and the degrees of the scale (segment) specified in the measure dimension. In the case of *po*-, the information contributed by the prefix is just the presence of the initial and final stages of the event, whereas in case of *pro*-, these stages are in addition bound to the minimum and the maximum degrees of the scale (segment).

In traditional terms, *pro*-prefixed verbs are telic event predicates while *po*-prefixed verbs are not. In order to distinguish the latter from atelic predicates, we call them *terminative*, following the terminology mentioned above. This leads to a three-way distinction: atelic/terminative/telic. Table 1 summarizes how the attachment of the types of MPs depends on the event type. While the attachment of *za*-headed MPs requires a telic event predicate, the attachment of accusative MPs depends on the scale selected for delimiting the event: accusative MPs are only possible if the event is measured along the time scale and not along any other (e.g. path) scale.

Following Zinova (2017), we model the semantic elements and constraints just described by employing a frame-based decompositional system with types and relations in line with Kallmeyer and Osswald (2013). In this model, *pro*- imposes a closed scalar structure as the measure dimension (the value of the event attribute MDIM) on a scale component provided by the verb frame. Moreover, *pro*- binds the minimum and maximum of the closed scale introduced by MDIM to degrees on the selected scale that are required to hold at the initial stage (INIT) and the final stage (FIN) of the event, respectively. The prefix *po*-, by contrast, simply characterizes the event as bounded by introducing the attributes INIT and FIN into the frame representation.

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