

Imperfectivity, Perfectivity, and Delimitativity
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It is a common assumption among aspectologists that perfective verbs in Slavic languages are bound to be telic. (A stronger version of this assumption is that perfective/imperfective opposition can be completely reduced to telic/atelic opposition.) In this paper, I will discuss facts from Russian that can cause complications for this assumption. The crucial data is that Russian delimitative perfective verbs (formed with the prefix *po-*, see Isachenko 1960, Flier 1985, Zaliznjak & Shmelev 2001, Filip 2000), sharing a bulk of properties with other perfective verbs, nevertheless pattern with imperfectives in two crucial respects:

- (i) they accept *for*-adverbials, disallowing *in*-adverbials;
- (ii) they behave like imperfective verbs with respect to the aspectual composition.

The first fact has been discussed extensively by Filip (2000). As Filip observes, this prefix renders the meaning of a small quantity or a low degree relative to some expectation value, thus being comparable to vague quantifiers like *a little*, *a few*, etc. Unlike most perfectives, delimitatives fail to be quantized (=telic) according to the standard definition (Krifka 1992, 1998) (a predicate P is quantized iff whenever it applies to x and y, y is not a proper part of x).

Filip (2000) analyses *po-* as an extensive measure function (see (1)), and represent (2a) roughly as in (2b):

- (1) a. $\llbracket po- \rrbracket = \lambda P \lambda x [P(x) \wedge m_c(x) \leq s_c]$, where P is homogeneous
 m_c is a free variable ranging over extensive measure functions of the type P, s_c is a contextually determined expectation value.
- (2) a. *po-side-l v kresle-e* ‘sat in the arm chair for a while’
 b. $\llbracket po-sidel v kresle \rrbracket = \lambda e \exists x [\text{sit}(e) \wedge \text{arm_chair}(x) \wedge \text{at}(x, e) \wedge \tau(e) \leq s_c]$
 τ is a temporal trace function that assigns to every eventuality its running time.

This analysis correctly represents vagueness of delimitatives, captures similarities between delimitatives and nominal predicates containing weak determiner quantifiers like *a few*, *little*, etc., and allows to solve the quantization puzzle, manifestation of which is (i).

Yet, Filip (2000) does not discuss delimitatives denoting eventualities that stand in incremental relation with one the arguments, exemplified in (3).

- (3) *Vasia po-pisa-l pis'm-o.*
 Basil PO-write-PST:M letter-ACC:SG
 Basil was involved in writing a/the letter for a while.

Here two crucial facts are to be observed. First, the NP *pis'mo* ‘letter’ possesses the partitive reading: (3) implies that only a part of the letter has been written and, accordingly, only a part of the event WRITE A LETTER is referred to. In this respect, (3) is strictly parallel to the corresponding imperfective sentence *Vasia pisal_{IPFV} pi'smo*. But as far as the imperfective is concerned, partitivity has to do with the imperfective aspectual operator relating eventualities in the original extension of the predicate to their proper parts ($\llbracket \text{IMPERFECTIVE} \rrbracket = \lambda P \lambda e' \exists e [P(e) \wedge e' \leq e]$). Given perfectivity of *po*-verbs, no such operator must be present in the representation of *popisal pis'mo*.

Furthermore, the very possibility of (3) is not predicted by (2a), since in order to satisfy the input constraint for the extensive measure function contributed by the prefix, *pisat' pis'mo* must be homogeneous, that is, cumulative and subdivisible. But in (3) *pis'mo* is quantized and stands in incremental relation to the event ‘write’, so, according to the principle of aspectual composition, the verbal predicate must be quantized, too.

Intuitively, the solution to these problems emerges on a view that in (3), as writing advances, at some moment the letter would have come to exist, but the process terminates before this moment is reached. What matters in (3) is the internal constitution of a letter, the stuff from which it consists, but not its bounds identifying it as an individual. Since bounds of the letter are disregarded, letter-stuff is treated like any other non-atomic stuff, in particular, like that constituting denotation of mass NPs.

Therefore, to account for the above data let us assume that partitivity comes into play not through the aspect, but through the nominal reference. In particular let us assume the change in the nominal predicate that allows it to refer to parts of entities in its original extension. This amounts to the claim that the phonologically empty partitive operator PART = $\lambda P \lambda y \exists x [P(x) \wedge y \leq x]$ (Krifka 1992) applies to the nominal predicate in (4a) yielding the predicate in (4b):

- (4) a. $\llbracket \text{pis'mo} \rrbracket = \text{letter}$; b. $\llbracket \text{pis'mo} \rrbracket = \lambda x \exists y [\text{letter}(y) \wedge x \leq y]$

Unlike the predicate **letter**, which is quantized, the predicate $\lambda x \exists y [\mathbf{letter}(y) \ \& \ x \leq y]$ is cumulative: if the individual x is a part of the object y , and the individual x' is also a part of y , then their sum $x \oplus x'$ is a part of y , too. It is also easy to see the this predicate is divisible. Due to the fact that *pis'mo* is the Incremental Theme, its referential properties are mapped into the verbal predicate, enabling the prefix *po-* to form the delimitative. Besides, (4b) provides an account for the partitive effect observed in (3). Furthermore, (4b) correctly predicts that since x is a part of y , the event of writing x is a part of the event of writing y .

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