

Semantic Analysis of the Prefix ZA- in Russian

This study discusses a mechanism of verbal prefixation in Russian, based on the analysis of the semantic behavior of the perfectivizing verbal prefix ZA-. The lexical verbs in Russian are obligatorily divided into grammatical perfective and imperfective aspectual categories. Most morphologically basic verbs in Russian are imperfective, while perfective ones are derived by a variety of verbal prefixes, such as ZA-. Based on this fact, some accounts of prefixation have claimed that verbal prefixes serve as grammatical markers of perfectivity in Russian (Avilova 1976). Other scholars, such as A.V. Isačenko, view prefixes as lexical word-formational elements (Isačenko 1960). In the current work, I will side with the latter author. I will argue that ZA- acts as a lexical aspectual shift operator that derives special subtypes of accomplishments from activity verbs.

A recent theory of prefixation in Russian, formulated in Filip 2000, Filip & Rothstein 2006, treats verbal prefixes as vague measure functions, applying to some measured entity X (e.g., object, location, temporal trace of event) and yielding a range of values for X with respect to some relevant ordered measure scale, so that the value of X is equal to (or exceeds or falls short of) some contextually predetermined value on the scale. For instance, the prefix PO- in *poguljat'* (to walk for a short time) restricts the temporal duration of the walking event to fall short of a default duration for walking events in the given context.

An examination of the ZA-prefixed verbs in Russian, compared against their base imperfective forms, shows that the prefix ZA- acts as both a measure function and an aspectual type-shift operator, turning atelic activities into telic accomplishments, and also restricting an extent of affectedness of a measured entity X to be above some contextual norm. In the case of ZA-, X can be a location, as in (1); an object, as in (2); or a temporal trace of an event, as in (3).

(1) Ivan zašel^{PRF} daleko v les za čas.
 Ivan ZA-walked far in forest in hour
 'Ivan walked far into the forest in an hour.'

(2) Varen'e sil'no zagustelo^{PRF} za čas.
 Jam considerably ZA-thickened in hour
 'The jam thickened up in an hour.'

(3) Computer zarabotal^{PRF} za čas.
 Computer ZA-worked in hour
 'Computer started working in an hour.'

I follow Rothstein 2004 in defining an accomplishment verb as denoting a complex event of change, which is a sum of an activity subevent and a subevent of change, where the event of change is related to the activity via an incremental relation, as shown in (4).

(4) $\lambda e. \exists e_1, e_2 [e = (e_1 \uparrow e_2) \wedge \text{ACTIVITY}(e_1) \wedge \text{BECOME}(e_2) \wedge \text{INCR}(e_1, e_2, C(e_2))]$

An incremental relation assumes a contextually determined incremental chain, $C(e_2)$, imposed on the event of change, via the *stage of* relation holding between its subevents (where stage is defined as in Landman 1992). This essentially assigns to the BECOME event a division into the contextually relevant parts of the change of state event.

In spirit of Mehlig 2007 and Tatevosov & Ivanov 2006, who distinguish between various subtypes of accomplishment verbs in Russian, I propose an extension of Rothstein's 2004 theory of accomplishments by arguing that the prefix ZA- derives three unique subtypes of accomplishment events: locative

accomplishments, denoting an event of change in location (as in 1); resultant accomplishments, denoting an event of change in material entity (example 2); inchoative accomplishments, affecting a temporal trace of an event (example 3). An *above-the-norm* measure effect arises due to the fact that the *ZA*-derived accomplishments, unlike the lexical ones, contain a general 'built-in' scalar structure in their BECOME subevent of change, introduced by *ZA*- (call it BECOME ESTABLISHED event). This structure regulates the division of an event of change into substages, and also determines the range of values of affectedness of *X* at which events, denoted by *ZA*-prefixed accomplishments, hold. The three meanings of *ZA*- – locative, resultant, inchoative – stem from a single invariant meaning of *ZA*-, depending on the type of argument of the event of change. The generalized template for a *ZA*-prefixed accomplishment is shown in (5).

- (5) $\lambda R \lambda x_1 \dots x_N \lambda P \lambda e. \exists e_1, e_2 [e =^S (e_1 \sqcup e_2) \wedge P_{ACT/STATE}(e_1) \wedge \theta_{1 \dots N}(e_1) = x_1 \dots x_N$
 $\wedge \text{BECOME ESTABLISHED}(e_2) \wedge \text{Arg}(e_2) = R(e_1) \wedge \text{INCR}(e_1, e_2, C(e_2))]$,
 where $R(e_1)$ is either $\theta(e_1)$ or $\tau(e_1)$.

The arguments of BECOME ESTABLISHED event stand in a thematic hierarchy with respect to each other. A goal argument precedes a theme, which precedes a temporal trace of an event. As a consequence, verbs with obligatory goals acquire a locative meaning of *ZA*-; verbs with obligatory material themes get a resultant meaning; while verbs with neither goal nor theme become inchoatives by default. Verbs, which allow alternative argument structures, display predictable alternations of meanings of *ZA*-. Moreover, some imperfective verbs can be coerced into occurring with *ZA*- by the *By-Analogy-With-Prototype* lexical coercion process, discussed in the given study. Such verbs undergo a visible change in their lexical meaning and argument structure in the process of coercion. Finally, the semantic analysis of *ZA*- explains the correlation between prefixation and perfectivity by adopting the Filip & Rothstein 2006 account of perfectivity. According to F&R 2006, a prefix yields an ordered set of events, which are then subjected to the application of the maximal perfectivity operator MAX_E .

References

- Filip, H. 2000. The Quantization Puzzle. In James Pustejovsky and Carol Tenny (eds.), *Events as grammatical objects, from the combined perspectives of lexical semantics, logical semantics and syntax*, 3-60. Stanford: CSLI Press.
- Filip, H. & S. Rothstein. 2006. Telicity as a semantic parameter. *Formal Approaches to Slavic Linguistics* (FASL) 14, 139-156. The Princeton University Meeting, edited by J. Lavine, S. Franks, H. Filip and M. Tasseva-Kurkchieva. Ann Arbor, MI: University of Michigan Slavic Publications.
- Isačenko, A.V. 1960. *Grammatičeskij stroj russkogo jazyka v sopostavlenii so slovatskim. Morphologia, pt. 2*. Bratislava.
- Landman, Fred. 1992. The progressive. *Natural Language Semantics* 1. 1-32.
- Mehlig, H.R. 2007. Aspect and bounded quantity complements in Russian. To appear in S. Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*. Amsterdam: John Benjamins.
- Rothstein, S. 2004. *Structuring events: A study in the semantics of lexical aspect*. Oxford: Blackwell's.
- Tatevosov, S. & M. Ivanov. 2007. Event structure of non-culminating accomplishments. Ms. Moscow State University.
- Tikhonov, A.N. 1962. K voprosu chistovydyvyx prstavok v russkom jazyke. *Trudy Samarkandskogo gosudarstvennogo universiteta*, 118, 31-57. Samarkand.