

# On some factors licensing the locative alternation

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## Abstract\*

We review some factors playing a role in licensing the Ground frame in the locative alternation, in particular in connection with German *be-* and Russian *za-*

## 1 Introduction

In English verbs like *load* enter in the two constructions exemplified in (1).

- (1) a. John loaded hay on the truck.  
(Figure frame)  
b. John loaded the truck with hay.  
(Ground frame)

This is called the *locative alternation*, and it exemplifies the constructional versatility of verbs. The locative alternation is found in many languages. Here we focus on some factors at play in allowing verbs to occur in the variant with the Location as direct object (the Ground frame).

## 2 Semantic factor : compatibility of the verb with the constructional meaning

In languages like French (F) or English (E), alternating verbs are morphologically identical in both constructions (1a & 1b). This suggests that, given a (neo)constructional perspective, the meaning of the verb is central for its ability to be integrated in the type of meaning associated with each construction.

### 2.1 German

It has been argued that in German, the *be-* prefix selects a locative argument, to be realized as a direct object (e.g. Wunderlich 1997, Brinkman 1997). However, Dewell (2004) and Iwata (2008 :153-155), show that the facts are not that simple, since some of the relevant verbs are licit

in the Ground frame with or without the prefix (compare 2b with 2c).

- (2) a. Die Mutter streicht Marmelade aufs Brot.  
“The mother is spreading jam on the bread”  
b. Die Mutter streicht ein Brot mit Marmelade.  
“The mother is spreading a sandwich (open-faced) with jam.”  
c. Die Mutter bestreicht ein Brot mit Marmelade.  
“The mother is (be-)spreading a piece of bread with jam.”

According to these authors, there is a difference in Aktionsart between the prefixed and unprefixed verb in the Ground frame, which, simplifying matter, amounts to a contrast between activity (with *be-*) versus accomplishment (without *be-*): “the *be-*verb typically describes a sustained activity with no defined endpoint, in contrast to the simple verb in the location-as-object frame, which has an endpoint” (Iwata 2005 : 154). If this analysis is on the right track, we must conclude that, as in E/F, it is the lexical meaning of the verb that is relevant for its compatibility with the two frames, the prefix introducing aspectual features orthogonal to those associated with the frame.

This is not the end of the story, however, since it is also the case that some German verbs may appear in the Ground frame *only* when prefixed with *be-* (e.g. *werfen/bewerfen*, *streuten/bestreuten*, *schütten/beschütten*), while appearing in the Figure frame without *be-*:

- (3) a. Bin auch für Kernkraft! Überlegt einmal, wieviel Kerne wir täglich in den Mülleimer werfen, ...  
“I am for nuclear power, too! Just think how many seeds (lit. nuclei) we throw into the garbage can everyday, ...”  
b. ... Überlegt einmal, mit wievielen Kernen wir täglich den Mülleimer bewerfen, ...  
“... Just think with how many seeds a day we be-throw the garbage can, ...”

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Michaelis and Ruppenhofer (2001 : 32) note that the only meaning available for (3b) is one “in which the seeds are thrown at the outside of the garbage can rather than inside it”, contrary to what is the case in (3a). The (b) example conforms to the aspectual generalization proposed by Iwata (it describes an activity); but as we saw, this by itself is insufficient to license the Ground frame. If the meaning of *werfen* is equivalent in the relevant respects to that of *throw*, which does not alternate, we must conclude that what licenses the Ground frame is neither the lexical meaning of the verb on its own, nor an aspectual meaning associated with *be-*. Thus, *be-* plays a crucial role in the well-formedness of the Ground frame in at least some cases, and the factor at play is still unclear. One possibility suggested by Michaelis and Ruppenhofer is that *be-* licenses the Ground frame and in addition requires the direct object to satisfy some requirement, like : “the goal argument must denote the exterior of an object” *ibid.*, p. 32), “be planar” (*ibid.*, page 48). When the verb meaning conflicts with the meaning of the construction, the constructional meaning overrides it (provided the characteristics of the event allows a reanalysis) (*ibid.* p. 49).

A somewhat different case is that of a verb like *giessen*, for which *pour/verser* is the approximate equivalent often given. French *verser* is restricted to the Figure frame, as is English *pour*, although a few examples in the Ground frame are attested. In German, unprefixated *giessen* appears in both frames. The two verbal forms are possible when the direct object is *Blumen* (‘to water the flowers’, Booij 1992, Kordoni 2003). Koch & Rosengren (1996 :19) observe a meaning difference between *giessen/begiessen* in the Ground frame, which relates to the notions of internal vs external change :

“The form with *be-* means an ‘outer equipment’, whereas the non-prefixed form has a functional interpretation of ‘inner equipment’. Thus,

\*Der Mann goß den Puddel mit Wasser  
 ‘The man poured the poodle with water’)

sounds funny, since it implies that the poodle may start growing like a flower when ‘sprinkled’. Contrary to this

Der Mann begoß den Pudel mit Wasser  
 ‘The man poured the poodle with water’  
 makes perfect sense.”

Leaving aside the aspectual difference there might be between *giessen* and *begiessen* in the Ground frame, the lexical meaning difference between the two verbs suggests that *giessen* has

two distinct lexical entries. In the Figure frame, it means *pour*; in the Ground frame its meaning is closer to *water*. *Begiessen* appears to be the prefixed version of *giessen* in its *pour* interpretation. If so, one could again try to defend the view that *be-* selects a locative argument to be realized as direct object, separately from the aspectual import that it might have.

To conclude this section, Dewell’s and Iwata’s view on the contrast between presence or absence of *be-* with certain verbs in the Ground frame are very interesting : if the contribution of *be-* is purely aspectual, as suggested by Iwata, this raises the question of why the assumed equivalents of a number of E/F verbs that just occur in the Figure frame do alternate in German, whether prefixed or not. Does the meaning of the German verbs differ from that of the E/F verbs with which they are often equated, and in a way that would make the difference in behaviour expected? For those verbs that require the prefix *be-* to appear in the Ground frame, is the aspectual contribution sufficient to make the Ground licit, given the meaning attached to the construction and to the verbs?

## 2.2 Russian

Russian does not seem to be as versatile as German. The only verbs entering the Figure frame that we have seen mentioned as licit also in the Ground frame without a prefix are *mazat* ‘smear/spread’ and *gruzit* ‘load’ (but obviously, this could be a gap in the limited literature we have consulted), suggesting that their lexical meaning is of a type compatible with the meaning associated to each frame.

Apart from these two verbs, the presence of a prefix, generally *za-*, less often *o(b)-* or *u-*, seems to be required in order for a verb that occurs in the Figure frame to also appear in the Ground frame. This is illustrated in (4) and (5) for the verb *sypat* ‘pour’, which expresses a manner of movement and requires *za-* to occur in the Ground frame (examples from Mezhevich 2003) :

- (4) Oni sypali pezok v luzhu.  
 They poured-IMPF sand-ACC into puddle  
 ‘They were pouring the sand into the puddle’
- (5) Oni za-sypali luzhu peskom.  
 They ZA-poured-PF puddle-ACC sand-INSTR  
 ‘They dried up the puddle by pouring sand into it’

It appears that, in general, the relevant prefixes, combined with Figure frame verbs, directly li-

cense the Ground frame. Olbishevskaja (2005) indeed suggests that the relevant prefixes do two things: 1) they introduce a (result) State; 2) they take two arguments, a Location realized as direct object, and a Figure, realized as an oblique in the instrumental case. Regarding the suggested argumental properties, this is very similar to the analysis proposed by Wunderlich and Brinkmann for German *be-*, and is not unexpected given that these prefixes are homonymous with prepositions expressing topological relations: *o(b)*, a cognate of German *be-*, is glossed as *about, around*; *za* is glossed as *behind*. Traces of these meanings found in the prefixed verbs play a role in their distribution (Tsedryk 2006).

Mezhevich's view is partially different. With freely alternating verbs like *gruzit'*, *za-* does not appear to take the location as an argument since the Ground frame is allowed without it. Mezhevich argues that the role of *za-* is purely aspectual: unprefixated *gruzit'* in the Ground construction indicates that the activity denoted by the verb potentially can result in the location being filled, while the presence of the prefix indicates that the potential result has been reached. Loosely speaking, this is the opposite of the aspectual contrast mentioned in relation to the absence vs presence of *be-* in German (it might thus be interesting to look more closely at the similarities and differences between *o(b)* and *be-*). For her, the prefixed verb expresses a *change of state* related to the manner of motion expressed by the verbal root, and the location object is an argument of this complex verb. The prefix itself identifies the result subevent in a complex event structure. She considers the meaning of these prefixes as "too vague to express any specific state", they have "no specific semantic content" (p. 14). The result subevent is the source of the licensing of the Ground frame with these complex verbs.

Why doesn't Mezhevich assume that *za-*, when it appears in the Ground frame, selects a Location as an external argument in the result subevent, which is very tempting, given its meaning? Her reason is that "Russian prefixed verbs are not necessarily transitive" (p. 15), and presumably, because the *za-*prefixed locative verbs may appear in both the Ground and Figure frames, as shown below (examples from Nina Kazanina, pc).

- (6) a. On zalil benzina v bak  
 He zalil petrol-GEN into tank-ACC  
 'He put gas in the tank'

- (7) b. On zalil bak benzinom  
 He-NOM za-pour.PAST tank-ACC with gas  
 'He filled the tank with gas'

Olbishevskaja's analysis does not address the issue of why *za-*prefixed verbs may appear in the Figure frame, but Tsedryk (2006) does. Tsedryk (2006, chapter 4) argues that in the Ground frame, the verb selects as a complement a small clause headed by *za-*, considered a resultative (R) or low-applicative head. When used in the Ground frame, *za-* assigns two theta-roles, a Goal and a Theme (corresponding to the Ground and the Figure). The representation of the VP in the Ground frame construction is as in (9), where *za-* assigns the instrumental case to its complement, just as the preposition *za* does in (8) (Tsedryk p. 83).

- (8) Oni byli za kirpichami  
 They were behind bricks.INSTR
- (9) [VP lil [RP [DP bak]<sub>GOAL-ACC</sub> [R' za- [DP benzini]<sub>THEME-INSTR</sub>]]]

Let us turn to the Figure frame. In the construction without *za-*, the Location argument is the complement of a locative preposition, *v* in the case of (8). In that configuration, the verb *lit'* takes what Tsedryk calls a SYM(metrical) complement, where the Theme DP and the PP combine directly, without an intermediate head. The verb assigns the Theme role to SYM, but as SYM is not referential, the role percolates to the DP immediately dominated by SYM.

- (10) [VP lil [SYM [DP benzini]<sub>THEME-ACC</sub> [PP v [DP bak]<sub>GOAL-ACC</sub>]]]

For the Figure frame including the prefix *za-*, Tsedryk suggests that the result phrase headed by *za-* is the complement of the verb, as it is in the Ground frame construction. But this time, *za-* does not take its Location and Figure arguments directly. It takes a SYM phrase complement, just as unprefixated *lit'* does. This gives us a richer representation:

- (11) [VP lil [RP za- [SYM [DP benzini]<sub>THEME-ACC</sub> [PP v [DP bak]<sub>GOAL-ACC</sub>]]]]]

Besides the obvious structural differences between (10) and (11), Tsedryk declares that in (10) the PP does not have a thematic relation with the verb itself, which supports only a Theme theta-role, while in (11) the PP has a the-

thematic relation with the verbal prefix. In (11), *bak* saturates the Goal theta-role of *v* as well as the Goal theta-role of *za-*. *Benzin* saturates the Theme theta-role of *za-* as well as the Theme theta-role of *lit'*. Thus, in Tsedryk's syntactic approach, *za-* may enter two constructions. The Ground frame results when *za-* takes an internal and an external referential argument; the Figure frame results when *za-* takes only a complex, non-referential internal argument, the SYM phrase. This unified account of *za-* in the Figure and Ground frame is attractive in that the arguments are realized in different ways depending on the syntax while at the same time satisfying the lexical requirements of verbs, prefixes, and the preposition in a flexible way. The insights of this analysis can certainly be expressed by linguists of various theoretical persuasions in their favorite framework.

Because of space limitations we have not discussed *ob-*, which as we have indicated, could be compared to German *be-*. For interesting observations about *ob-*, we refer, besides some nice observations in Tsedryk's thesis, to Lewandowski (2010) on *ob-* in Polish.

### 3 Conclusion

Taking English and French as a starting point, where the distribution of verbs in the Figure and Ground frame appears to depend solely on the lexical information carried by the verb, we briefly reviewed factors proposed to account for the licensing of the Ground frame in German and in Russian. We showed that purely locative or purely aspectual approaches are insufficient, and suggested that Tsedryk's analysis of Russian *za-* was attractive because of the flexible way in which the lexical requirements of various functors could be satisfied. It may be extended to German *be-* if we assume that *be-* is a low applicative, but one that may only take its Theme and Location arguments directly, not take a SYM complement, as discussed in Hirschbühler and Mchombo (2006), that is, *be-* may not take a SYM phrase as its internal argument. We will it to further research to answer the question as to why *be-* and *za-* would differ in this way. In this connection, it would be interesting to see if *ob-* sides more with *be-* than with *za-*

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