

Goal-Source Asymmetry and Russian Spatial Prefixes

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Abstract

In this paper, I draw on data from Russian to argue for an asymmetry between Goal and Source prepositional phrases. Source prepositional phrases are structurally ambiguous; they can occur both as arguments and adjuncts in certain syntactic contexts. Goal prepositional phrases are unambiguously arguments. I claim that Source prepositions have lexically specified semantics, which determines their relative structural freedom; whereas Goal prepositions are derived from locative prepositions when the building of the event structure takes place and therefore they are bound to be arguments of the verb.

1. Introduction

There is an ongoing debate in the literature on the question whether there exists an asymmetry between Goal and Source prepositional phrases (PPs) and what the roots of this phenomenon are. The approaches advocating the existence of such an asymmetry (Nam 2004, Filip 2003) have been extensively criticised by their opponents (Gehrke 2005, Arsenijević 2005) both on empirical and theoretical grounds.

In this paper I present evidence from Russian in favour of the existence of a Goal and Source asymmetry. The evidence is constituted by the following facts: (i) the asymmetric distribution of Goal and Source prefixes; (ii) PP remnant fronting facts.

On the basis of the analysis of result phrases for Russian and English proposed in Ramchand and Svenonius (2002) and Svenonius (2004b), I argue that the roots of the Goal-Source asymmetry are in a deep lexical asymmetry between Goal and Source prepositions. While Source prepositions have lexically specified Source semantics, Goal prepositions are derived from locative prepositions when the building of the event structure takes place. As a result Source PPs function as structurally ambiguous elements. They can be embedded under the Result head in the presence of the spatial prefix or they can act as complements of the Process head or even as adjuncts to VP. On the other hand, Goal PPs are crucially dependent on the Result phrase in receiving goal directed interpretation. Therefore, they obligatorily function as complements of the Result head.

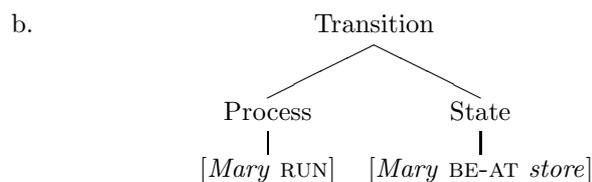
In the final sections I provide data, which indicates that a refined classification of spatial prefixes is required in Russian, where the Identity Con-

dition and telicity are the criteria for the subdivision. I also discuss the cases when the distribution of directional prefixes is governed by the spatial properties of the reference object, which they refer to, and what I call ‘open space’ entities.

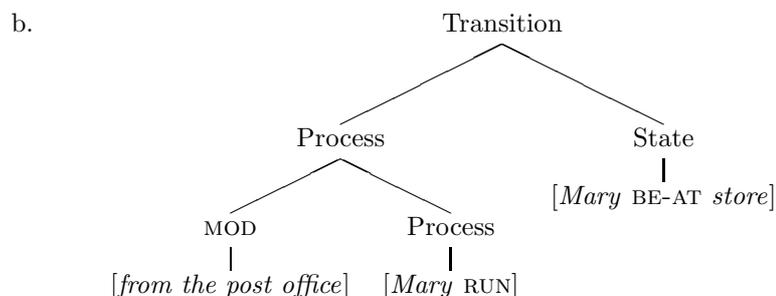
2. Nam’s and Filip’s accounts of Goal-Source Asymmetry

Nam (2004) advocates two distinct underlying base positions for Goal and Source PPs: a VP-internal position for Goal PPs and a VP-external position for Source PPs. Based on the event structure analysis for accomplishments (or transitions) proposed by Pustejovsky (1991), which is composed of two parallel subevents: a process and a result state, Nam argues that the mapping of the result state from syntax onto semantics takes place VP internally. Thus, only Goal but not Source PPs can compose a result state. Furthermore, Nam claims that what Source PPs do is to modify the process subevent. The semantic structures of predicates modified by Goal and Source PPs are illustrated in (1) and (2), respectively.

(1) a. Mary ran to the store.



(2) a. Mary ran to the store from the post office.



The result state subevent introduced by the expressions of directed motion has been traditionally analysed in terms of telicity. Following Tenny (1994) and Ramchand (2004), among others, I use the term telicity to refer to the property of an event containing a temporal end point, which marks the transition point into the result state. The diagnostic for the presence of the result state in the event structure that I employ here is the traditional *for an hour* and *in an hour* telicity test (cf. Dowty 1979, Ramchand 2004). According to these tests, the adverbial modifier *in an hour* is a ‘measurer’

of the duration of the process before it reaches the culmination point or result state. On the other hand, *for an hour* measures out the duration of the homogenous, non-culminated event and in this way it is incompatible with the presence of a result state.

Nam's approach, however, predicts that events modified solely by Source PPs would never be telic. This is apparently not completely true, as the examples in (3) show (all non-English examples in this paper are Russian).

- (3) a. Alex walked from school/out of the hotel in/*for three minutes.
 b. Deti vy-šli iz škol-y *p'jatj minut /za p'jatj
children out-walked out school-ACC five minutes /in five
minut.
minutes
 'The children walked out of the school in five minutes'

A similar claim has been advocated in Filip (2003), where she states that Source-modified verbs, unlike Goal-modified verbs, do not create telicity, which is true in examples like (4).

- (4) Gehrke (2005)
 a. John ran away from the car for ten minutes/*in ten minutes.
 b. John ran away to the car *for ten minutes/in ten minutes.

Gehrke (2005) reports that the grammaticality of the judgements of Dutch and Czech examples used by Nam and Filip as arguments in favour of their claims is not reliable. Furthermore, Gehrke argues that the asymmetry between Goal and Source PPs is neither syntactic nor connected with the possibilities for the prepositional phrases inducing telicity, but is related to the nature of the result state which they provide. While Goal PPs refer to the non-upward monotonic states, Source PPs introduce upward monotonic states. The notion of upward monotonicity is taken by Gehrke from Winter and Zwarts' Modification Condition, which states that a vector denoted by a spatial preposition is upward monotonic if any lengthening of the vector preserves the truth conditions. Thus, any lengthening of the vector denoted by Source PPs would never violate the truth conditions of the preposition, since the vector will always be *outside* or *away* from the reference object. On the other hand, the lengthening of the vector denoted by Goal PPs would cause the vector to exceed the borders of the reference object and in this way violate the truth conditions which require the vector to be *in*, *on* or *at* the reference object.

In what follows I will put forward the arguments motivating the necessity to define a distinct syntactic status for Goal and Source prepositional expressions. I will also present a model, in which the asymmetry under consideration is the consequence of the labour division between the lexicon and the syntax with respect to the derivation of Goal and Source prepositions.

The model that I will propose eventually appears to be similar to Nam's

and Filip's approaches in the sense that it also postulates an adjunctive nature of Source PPs in contrast with pure argumentative nature of Goal PPs. Furthermore, it predicts that Source PPs may not necessarily induce telicity as opposed to Goal PPs.

3. Goal-Source asymmetry in Russian

3.1. Result phrase analysis

Svenonius (2004b) and Ramchand and Svenonius (2002) take as the basis of their analysis of directional prepositions the tripartite VP structure as given in Ramchand (2006). According to Ramchand (2006), the VP structure corresponds to the event structure which consists of the three subevents construed in the following hierarchical order:

- (5) (causing subevent) [process subevent (result state)]

Each subevent is associated with a particular XP in the verb argument structure. The causing event is thus associated with *v*P, a process subevent with VP and a result state subevent with Result Phrase (RP). The meaning of the verb is derived from the composition of these subevents. The presence of RP in the structure identifies the existence of the result state and thus makes the whole event telic.

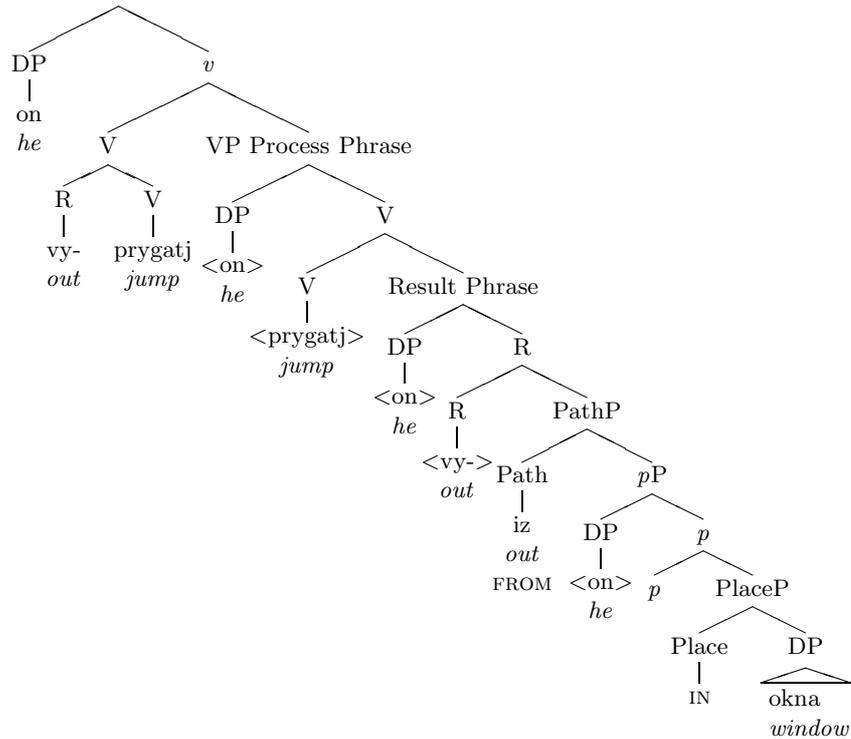
Directional prepositions and particles in English and directional prefixes in Russian induce telicity and, therefore, they are treated in the result phrase analysis as instances of lexicalisers of RP in the expanded argument structure of the verb. However, directional prepositions in Russian in the absence of a prefix on the motion verb always give rise to atelic interpretation, regardless of whether they are of type Goal or Source. The contrast between telic prefixed predicates and the atelic unprefixated predicates is illustrated in (6)-(7). The structure in (7) is interpreted as referring to the path, which is directed with respect to the reference object in a manner defined by the directional preposition, but does not contain a transition point.

- (6) Deti vo-šli v dom.
children in-went in house.ACC
 'The children went into the house.'
- (7) Deti šli v školu.
children went in school.ACC
 'The children were going to school.'

Thus the basic configuration for expressions containing a directional prefix is as in (9), for the sentence given in (8).

- (8) On *vy-prygnul iz okna*.
he out-jumped out window.GEN
 ‘He jumped out of the window.’

- (9) *vP Cause Phrase*



As (9) shows, the directional prefix *vy-* originates within a Result phrase, then moves further up and incorporates into verb.

For structures that do not contain a prefix, two options of structural configuration are available. The first option would be to say that no Result projection is involved in the derivation and the directional prepositional phrase in such a case functions as a complement of the Process head. Alternatively, we can assume that RP is present in the structure under consideration, but it is phonologically null. The cost of choosing this alternative is the necessity of making another assumption which would state that in a language like Russian the Result head needs to be phonologically expressed in order for the resultative interpretation to be available. If the Result node is null, the derivation yields an atelic interpretation only.

I will argue that both alternatives exist in Russian. Due to the peculiar characteristics of Goal prepositions, which I will dwell on later, Goal PPs can only employ the second option, whereas Source PPs can only exploit the first alternative.

3.2. Distribution of Goal and Source prefixes in Russian

The distribution of Goal and Source prefixes in Russian appears to be subject to the Identity Condition defined in (10).

- (10) *Identity Condition*
 The verbal prefix corresponds to the type of the prepositional phrase it co-occurs with, where the type refers to the distinction between Goal and Source prefixes/prepositions.

The examples in (11)-(12) depict the Identity Condition at work. As illustrated, the combinations of Goal prefixes *v-*, *za-*, *do-* with Goal prepositions *v*, *do* as well as the combinations of the Source prefix *vy-* with the Source preposition *iz* are always grammatical, whereas the co-occurrence of Goal prefixes with Source prepositions, and Source prefixes with Goal prepositions yields ungrammaticality:

- (11) a. My vy-šli *v dom /iz doma.
we out-went in house.ACC/out house.GEN
 ‘We went (into the house/)out of the house.’
 b. Oni vy-katili bočku ??v sarai /iz saraja.
they out-rolled barrel.ACC in barn.ACC/out barn.GEN
 ‘They rolled the barrel (into the barn/)out of the barn.’
 c. My vy-jehali *v Moskvu /iz Moskvu.
we out-went in Moscow.ACC/out Moscow.GEN
 ‘We went (into Moscow/)out of Moscow.’
- (12) a. My vo-šli v dom /*iz doma.
we in-went in house.ACC/out house.GEN
 ‘We went into the house(/out of the house)’
 b. Oni v-katili bočku v sarai /*iz saraja.
they into-rolled barrel.ACC in barn.ACC/out barn.GEN
 ‘They rolled the barrel into the barn(/out of the barn)’
 c. My v-jehali v Moskvu /*iz Moskvu.
we in-went in Moscow.ACC/out Moscow.GEN
 ‘We went into Moscow(/out of Moscow)’
 d. Deti do-šli do doma /??ot kladbičša v
children to-went to house.GEN/ from graveyard.GEN at
polnoč.
midnight
 ‘The children reached the house(/from the graveyard) at mid-
 night’

However, the Identity Condition is not so strict on Source prefixes in double PP constructions. As shown in (13a) Source prefixes allow Goal PPs in cases when the structure contains a Source PP ((13a)-(13b)) or its presence is clear from the context (13c).

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- (13) a. My vy-jehali iz Moskvy v Saratov.
we out-went out Moscow.GEN in Saratov.ACC
 ‘We went out of Moscow to Saratov.’
- b. Oni vy-katili bočku iz saraja v dom.
they out-rolled barrel.ACC out barn.GEN in house.ACC
 ‘They rolled the barrel out of the barn into the house.’
- c. My vy-šli v sad.
we out-went in garden.ACC
 ‘We went in the garden (from the house).’

On the other hand, Goal prefixes strictly obey the Identity Condition and the presence of the Goal PP does not save the situation:

- (14) a. ??Oni v-katili bočku iz saraja v dom.
they into-rolled barrel.ACC out barn.GEN in house.ACC
 ‘They rolled the barrel out of the barn into the house.’
- b. ??Oni za-katili bočku iz saraja v dom.
they into-rolled barrel.ACC out barn.GEN in house.ACC
 ‘They rolled the barrel out of the barn into the house.’
- c. *My v-jehali iz Moskvy v Saratov.
we into-went out Moscow.GEN in Saratov.ACC
 ‘We left Moscow for Saratov.’
- d. ?Oni do-katili bočku ot saraja do doma.
they to-rolled barrel.ACC from barn.GEN to house.GEN
 ‘They rolled the barrel from the barn to the house.’
- e. ??Deti do-šli ot doma do kladbišča v
children to-went from house.GEN to graveyard.GEN at
 polnoč.
midnight
 ‘The children reached the graveyard from the house at mid-
 night.’

The Identity Condition does not hold for all Goal and Source prefixes and prepositions. The examples in (15) and (16) show that the Goal prefix *pri-* and the Source prefix *u-* are not sensitive to whether the prepositional complement of the verb is of type Source or Goal.

- (15) a. Oni pri-katili bočku iz saraja v dom.
they to-rolled barrel.ACC out barn.GEN in house.ACC
 ‘They rolled the barrel from the barn to the house.’
- b. Oni pri-katili bočku iz saraja.
they to-rolled barrel.ACC out barn.GEN
 ‘They rolled the barrel from the barn.’
- c. My pri-jehali iz Moskvy v Saratov.
we to-went out Moscow.GEN in Saratov.ACC
 ‘We left Moscow for Saratov.’

- d. My pri-jehali iz Moskvy.
we to-went out Moscow.GEN
 ‘We came from Moscow.’
- (16) a. Oni u-katili bočku iz saraja v dom.
they away-rolled barrel.ACC out barn.GEN in house.ACC
 ‘They rolled away the barrel from the barn to the house.’
- b. Oni u-katili bočku v saraj.
they away-rolled barrel.ACC in barn.ACC
 ‘They rolled away the barrel to the barn.’
- c. My u-jehali iz Moskvy v Saratov.
we away-went out Moscow.GEN in Saratov.ACC
 ‘We left Moscow for Saratov.’
- d. My u-jehali v Saratov.
we to-went in Saratov.ACC
 ‘We went away to Saratov.’

It should be noted, that in (15)-(16) the reference object is not specified. This means that *iz Moskvy* and *v Saratov* in the examples (15c)-(15d) and (16c)-(16d) imply that the motion actually might originate and terminate at some point which is near but still outside of Moscow and Saratov. It is more difficult to imagine a situation when the reference object is not specified for examples like (15a)-(15b) and (16a)-(16b), it is, however, possible. In these cases a ‘barn’ and a ‘house’ would have a more general meaning, such as not only a building, but the grounds located in the vicinity of a barn or a house.

On the contrary, in examples (11)-(12) the reference object is always specified, i.e. the motion originates or terminates strictly inside of the Ground.

3.3. Problem for the Result phrase analysis

In order to accommodate the observed distribution pattern into the Result phrase analysis, let us define the syntactic status of Goal and Source PPs in double PP configurations like those exemplified in (13)-(14).

Traditional constituency tests show that a Goal PP and a Source PP are not cohabiters of the same projection in Russian. One of the tests is demonstrated in (17)-(18), where we can see that both Source and Goal PPs pass the topicalization test successfully (17), but they cannot be topicalized as a single unit (18).

- (17) a. [Iz doma] on vy-šel v sad.
out house.GEN he out-went in garden.ACC
 ‘Out of the house he went into the garden.’
- b. [V sad] on vy-šel iz doma.
in garden.ACC he out-went out house.GEN
 ‘Into the garden he went out of the house.’

- (18) a. *[Iz doma v sad] on vy-šel.
out house.GEN in garden he out-went.ACC
 ‘Out of the house into the garden he went’
 b. ??[V sad iz doma] on vy-šel.
in garden.ACC out house.GEN he out-went
 ‘Into the garden out of the house he went’

It has been suggested in the literature that in a double PP construction at least one of the two PPs must be an adjunct. (Neeleman & Weerman 2001). If that is correct, either the Goal or the Source PP in (13)-(14), (17)-(18) functions as an adjunct. The Result phrase analysis predicts that since the Result projection is a layer in the argument structure of the verb, an adjunct to VP may not contain RP. Thus, the directional prefix can originate only within a prepositional phrase, which is the complement of the verb, but not a VP adjunct.

Furthermore, as examples (13)-(14) show, only a Source prefix is grammatical in double PP constructions. Therefore, a Goal PP functions as a VP adjunct and a Source PP is the complement of R node in double PP constructions. In other words, what we have to postulate here is the structural ambiguity of Goal PPs, which may apparently surface as complements of RP in the structure which contains a single directional PP and a prefix, or as an adjunct to VP in cases when a Source PP is present in the structure.

In the next section I will show, however, that the described prediction of the Result phrase analysis with respect to the cases in (13)-(14) is problematic and goes against certain facts about the Goal Source asymmetry in the prepositional domain.

3.4. Proposal

In what follows, it will be shown that there exists a deep lexical asymmetry between Goal and Source PPs, which in Russian (due to intrinsic properties of the language) finds its syntactic realisation in split PP fronting constructions and in the distribution of Goal and Source prefixes.

The point of the departure will be the examination of the prepositional inventory in Russian. Already here we can see that there is an asymmetry in the internal structure of Goal and Source PPs, their meaning and the case assignment properties.

As Table 1 shows, Goal prepositions *v* ‘into’, *na* ‘onto’, *pod* ‘under’ and *za* ‘behind’ have homophonous locative correlates *v* ‘in’, *na* ‘on’, *pod* ‘under’, *za* ‘behind’. The distinction between them is based on the case the prepositions assign to their complement. Directional prepositions assign Accusative case to the ground, whereas locative prepositions assign Prepositional case. This alternation is well known in the literature and attested in many languages.

Table 1. *Goal and Source prepositional inventory in Russian*

Locative prepositions			Goal prepositions		
<i>v</i>	(PREP)	‘in’	<i>v</i>	(ACC)	‘into’
<i>na</i>	(PREP)	‘on’	<i>na</i>	(ACC)	‘onto’
<i>pod</i>	(PREP)	‘under’	<i>pod</i>	(ACC)	‘under’
<i>za</i>	(PREP)	‘behind’	<i>za</i>	(ACC)	‘behind’
<i>u</i>	(GEN)	‘near/at’	<i>do</i>	(GEN)	‘to’
			<i>k</i>	(DAT)	‘towards’

Locative prepositions			Source prepositions		
-			<i>ot</i>	(GEN)	‘from’
-			<i>iz</i>	(GEN)	‘out of’
-			<i>s(so)</i>	(GEN)	‘from (the surface)’

Interestingly, Goal prepositions *k* ‘towards’ and *do* ‘to’ do not have a corresponding homophonous locative preposition. However, the fact that both *k* ‘towards’ and *do* ‘to’ entail that the final point of the motion/path they refer to is located at or near the Ground enables us to refer to the locative preposition *u* ‘near/at’ as a semantic correlate of directional prepositions *k* ‘towards’ and *do* ‘to’.

Furthermore, *k* ‘towards’ and *do* ‘to’ assign Dative and Genitive case, respectively, instead of Accusative case. The preposition *k* ‘towards’ occurs most naturally with the prefix *pri-*. Recall from section 3.2 that this is the prefix which together with the Source prefix *u-* does not comply with the Identity Condition. It will be shown in subsequent sections that the distinct behaviour of the prefixes *pri-* and *u-* is not limited to these properties only. In contrast with the rest of the spatial prefixes in Russian, these prefixes do not affect the aspectual properties of the predicates they modify.

Source prepositions show a distinct behaviour from Goal prepositions. Firstly, they assign only Genitive case to their complements. Secondly, they do not have homophonous locative correlates, as noted above. A similar picture is to be found in German. Zwarts (2006) points out that Source PPs on par with locative prepositions always take the Dative.

English prepositions exhibit similar properties. Goal PPs with the exception of *into*, *to*, *toward* have correlates in the domain of locative prepositions or contain a locative component as is the case with the compound prepositions *into*, *onto*. In contrast with Goal PPs, Source PPs do not correspond to any of the locative PPs nor do they have a locative component in their phonological representation in English.

In order to make sense of these observations, let us consider the generalization made by Ramchand (2006) about the nature of Goal prepositions. Ramchand claims that RP, apart from contributing resultative meaning to

the event, is responsible for imposing a Goal-directed motion reading on the locative Ps. From this we can infer that Goal PPs emerge from locative PPs when the building of the event structure takes place.

From this perspective, I have to assume that the Source meaning of Source prepositions is present before the building of the event structure takes place, i.e. already in the lexicon, since they do not have corresponding homophonous locative counterparts from which they can be derived in RP, but nevertheless denote that directed motion. If this is true, then Source prepositions do not require RP in order to receive a path reading, they contain a Path layer already in their structure (in the sense of Svenonius' decomposition analysis 2004a,b).

I claim that what RP does to a locative PP is essentially to introduce the path into the denotation of the preposition. The merge of the prefix in the structure triggers the necessity of realizing the Result state. From this moment R starts looking for a point contained in the path, which could be identified as a temporal bound of the Result state, and picks out the only available delimiting point, i.e. the end point of the path and marks it as a transition point. As soon as the transition point is marked, the resultative meaning arises and a Goal preposition occurs.

Since a Source preposition contains a path already in the lexicon, there is no reason for the Source preposition to be embedded under RP in order to get the path interpretation. Thus the Source PP might as well originate as a complement of a motion verb. When the prefix enters the derivation, R selects a point for marking the transition; in the case of Source PPs the only possible option for this is the beginning point of the path.

As for English, in order to identify the Result state, the presence of the particle is not required. Ramchand and Svenonius (2002) claim that the movement of the Figure into the specifier of R is sufficient for this purpose. I suggest that the introduction of the path and spatial and temporal delimiting cannot be discontinued in English, contrary to what we have seen in Russian.

The question which immediately arises with respect to English is why the Source PP cannot be generated in similar fashion as a complement to the motion verb, since it already contains the Path layer in its internal structure. This would contradict the fact that Source PPs in English induce telicity as shown in (3a). The solution to this problem suggested here is based on the assumption that motion verbs in English cannot immediately select a directional PP without an RP which functions as a mediator. In Russian, however, this possibility is open for directional PPs in general, but only Source PPs can use it, as their path component need not be licensed by RP.

With these assumptions in mind, let us return to the discussion of the structural ambiguity of Goal PPs in contrast with Source PPs which the Result Phrase analysis predicts, when it accommodates the data given in (13)-(14) (cf. §3.2). I claimed that Source PPs are independent of RP in

receiving the path interpretation, whereas Goal PPs originate within the RP from locative Ps and for this reason Goal PPs cannot possibly occur outside of RP in either V complement or adjunct position. Source PPs then are perfectly grammatical as both complements and adjuncts. Thus we have arrived at a conclusion different from what the Result phrase analysis predicts.

In what follows I will provide evidence drawn from Russian which supports my claim about the structural ambiguity of Source PPs and the obligatory requirement the grammar puts on Goal PPs, namely that they must be the complement of RP.

The first argument pertains to the cases illustrated in the examples in (19). It is known that stative verbs sometimes allow Source PPs and Source particles as their complements, but never Goal PPs in English and Russian. This contrast naturally follows from the fact that Goal PPs are crucially dependent on RP, and from the common assumption (Tenny and Pustejovsky 2000) that stative verbs are incompatible with resultative interpretation. On the other hand, since Source PPs do not require RP to get a path interpretation, they can originate as complements of stative verbs.

- (19) a. On iz Moskvy />(*v Moskvu).
he from Moscow.GEN / in Moscow.ACC
 ‘He is from Moscow.’
- b. Kogda on s poezda, on očenj ustavšij.
when he from train.GEN he very tired
 ‘After a trip on the train, he is very tired.’
- c. *Kogda passažiry v poezd, oni očenj nervnye.
when passengers in train.ACC they very nervous
 ‘When passengers are getting on the train, they are very nervous.’
- d. He is out/away/from Moscow.
- e. *He is into Moscow/to Moscow.

Case is another marker that the grammar employs to express the relation between a P and a V, as well as between the participants of an event. The fact that Goal and Source PPs systematically (with minor exceptions) and cross linguistically exhibit distinctive case assignment characteristics is not accidental and serves as an indication of a deeper asymmetry between Goal and Source PPs.

The second argument comes from the cases of incomplete Source and Goal PPs fronting. Thus, as shown in (20a) and (20b), both Source and Goal PPs can be fronted stranding their DP complement. However, when the structure contains both a Source PP and a Goal PP, only Goal PPs can optionally leave their Ground *in situ*, in cases (20d). The stranding of the Ground by the Source PP is ungrammatical in such cases (20c). This contrast holds for unprefix verbs as well.

- (20)
- a. [Iz kakogo] on vy-šel doma?
out which he out-went house.GEN
 ‘Out of which house did he go?’
 - b. [V kakoi] on vo-šel sad?
in which he into-went garden.ACC
 ‘In which garden did he go?’
 - c. *[Iz kakogo] on vy-šel doma v sad?
out which he out-went house.GEN in garden.ACC
 ‘Out of which house did he go into the garden?’
 - d. [V kakoi] on vy-šel sad iz doma?
in which he out-went garden.ACC out house.GEN
 ‘In which garden did he go out of the house?’

Following Bašić (2004), I analyse the examples given in (20) along the lines of a Remnant Movement approach. The main idea of the Remnant Movement analysis is that incomplete fronted structures are derived in several steps. First, the evacuation of some part of the phrase within IP takes place (usually this process is attributed to scrambling), and then the whole phrase containing the trace of the evacuated material is fronted to the sentence initial position.

The examples in (21) illustrate the derivation of the data in (20). The result of the first movement, that is, the VP-internal scrambling of DP, the complement of PP, is given in (21b). The next step is the fronting of the remnant PP, including pronominal adjective and the nominal trace, to the specifier of the Focus projection as shown in (21c).

- (21)
- a. [V kakoi] on vy-šel sad iz doma?
in which he out-went garden.ACC out house.GEN
 - b. On vy-šel sad_i [_{PP} v svoi t_i] iz doma
he out-went garden.ACC in his out house.GEN
 - c. [_{FocusP} [_{PP} V kakoi t_i]_k [_{CP} [_{TP} on [_{VP} vy-šel sad_i
in which he out-went garden.ACC
 [_t]_k iz doma?]]]]]
out house.GEN

Thus the question that needs to be answered with respect to the data described in (20) and (21) and the objectives of the current paper is the following:

- (22) Why does a Goal PP preclude a Source PP fronting with VP-internal stranding of the prepositional complement, while the opposite is not the case?

Ideally, we would like the extraction peculiarities described here to be consequences of the syntactic structure and the familiar syntactic operations involved in building this structure. The answer follows naturally from as-

sumptions about the Goal Source Asymmetry I have made above. Under my proposal the derivation of (20d) proceeds as follows: at the point when the Goal and the Source PP are competing for a complement position of the Result head, the Goal PP is always the winner, since it is always required to be the complement of RP in order to get a Goal-directed interpretation. The Source PP is lexically independent of RP, therefore it can originate in an adjunct position.

The distinction between arguments and non-arguments with respect to extraction properties has been discussed in the literature, no consensus about the nature of this phenomenon, however, has been reached. (Rizzi 1990, Starke 2001).

Russian also demonstrates such properties. Split PP fronting is precluded for prepositional adjuncts in general in Russian when a verb argument is embedded in the structure. The following examples show that this is the case for locative prepositional adjuncts (23a), for temporal prepositional adjuncts (23b) and other prepositional adjuncts (23c):

- (23) a. [Na kakom] deti risujut stole (*kartinu)?
on which children paint table.PREP picture.ACC
 ‘On which table are the children painting (a picture)?’
- b. [V kakoi] deti risovali denj (*kartinu)?
on what children painted day picture.ACC
 ‘On what day did the children paint (the picture)?’
- c. [S kakim] Petja risoval drugom (*kartinu)?
with what Petja painted friend.INST picture.ACC
 ‘With which friend was Petja painting (the picture)?’

The answer to the question in (22) would then attribute the ungrammaticality of the extraction out of the Source PP in the cases like (20c) to the structural ambiguity of Source PPs. When Source PPs are generated in the adjunct position, the extraction of material out of them is always precluded, due to independent properties of Russian. The extraction out of Goal PPs is always legitimate then, since no restrictions on extraction apply to argument positions in Russian.

Furthermore, recall that while Goal PPs are exceptionally marked for Accusative case, Source PPs always go with Genitive case in Russian. In standard practice Accusative case is treated as a structural case, assigned in an argument position only. Thus, there is no possibility for a Goal PP to receive the Accusative in the adjunct position. In my approach the Accusative acts as an indicator that the introduction of the path into the structure of a locative preposition has taken place and a Goal preposition has been derived. Since Source prepositions exist already in the lexicon, Genitive case functions as a lexical case, assigned by a preposition to its complement. Thus Source PPs can be marked for Genitive case, regardless of whether they originate in an adjunct or argument position.

To recap, I have shown that the asymmetric extraction properties demonstrated by Goal and Source PPs in Russian indicate that there is a syntactic asymmetry between Goal and Source PPs.

Furthermore, I claim that the observed syntactic asymmetry has its roots in an asymmetry between Goal and Source PPs which is embedded deep in the lexicon. The model I propose here does not explain the asymmetric distribution of Goal and Source prefixes in Russian; this is, however, beyond my ambition in the present paper. I do not intend to provide an analysis of this phenomenon, but limit myself to postulating the problem and leaving it as a task for future research.

4. On the status of prefixes *pri-* and *u-*

In section 3.2 I demonstrated that the distribution of prefixes *pri-* and *u-* is not subject to the Identity Condition. In this section I will draw the parallel between this property and the fact that the mentioned prefixes, though having spatial meaning, do not induce resultativity.

Interestingly, when the prefix *pri-* or *u-* is attached to a verb, both *for an hour* and *in an hour tests* appear to be unsuccessful (24).

- (24) a. My *pri-jehali v Moskvu* *12 časov/??za 12 časov.
we to-went to Moscow.ACC 12 hours in 12 hours
 ‘We came to Moscow’
- b. My *pri-jehali iz Moskvu (v Saratov)* *12 časov/
we to-went out Moscow.GEN in Saratov.ACC 12 hours
 *za 12 časov.
in 12 hours
 ‘We came from Moscow (to Saratov).’
- c. My *u-jehali (v Moskvu) (iz Saratova)* *12 časov/
we away-went to Moscow.ACC out Saratov.GEN 12 hours
 *za 12 časov.
in 12 hours
 ‘We went away (to Moscow) (from Saratov).’

The picture becomes somewhat muddy when transitive verbs of motion with prefixes *pri-* and *u-* are tested. As the examples in (25) show, telicity is imposed on transitive verbs not by the prefixes *pri-* and *u-*, but by the direct object. The fact that the mass or count properties, bare plurality of the noun phrase in object position affect the aspectual character of the whole sentence is well discussed in the literature (Tenny 1994, Svenonius 2004b, Svenonius 2004a). The nouns, which perform the role of the direct object in (25), are all countable, having some fixed quantity and used in a singular form, nevertheless ‘a barrel’ and ‘a wardrobe’ induce telicity, while ‘a basket’ and ‘a kitten’ do not.

- (25) a. Oni pri-taščili bočku (iz saraja) (v dom)
they to-dragged barrel.ACC out barn.GEN in house.ACC
 *polčasa /za polčasa.
half.hour in half.hour
 ‘They dragged the barrel (from the barn) (to the house) in half an hour.’
- b. Oni u-taščili škaf (iz doma) (v saraj)
they away-dragged wardrobe.ACC out house.GEN in house.ACC
 *čas /za čas.
hour in hour
 ‘They dragged away the wardrobe (from the house) (to the barn) in an hour.’
- c. Oni pri-taščili korzinku (iz saraja) (v dom) *čas/
they to-dragged basket.ACC out barn.GEN in house.ACC hour
 *za čas.
in hour
 ‘They brought a basket (from the barn) (to the house)’
- d. Oni u-taščili kotenka (iz doma) (v saraj)
they away-dragged kitten.ACC out house.GEN in house.ACC
 *čas/*za čas.
hour in hour
 ‘They took the kitten away (from the house) (to the barn).’

I claim that the property that unites ‘a barrel’ and ‘a wardrobe’ against ‘a basket’ and ‘a kitten’ is ‘heaviness’: The events are distinguished on the scale of heaviness. The scale of heaviness is divided into two regions by a point which designates the norm for heaviness. The norm is defined in terms of the physical effort required for the transformation of the object. If extra physical effort is needed, the degree of heaviness is estimated as above the norm. The interval that precedes the norm point for heaviness is the interval where non-telic events are mapped onto. Respectively, the interval, which follows this point, accommodates telic events. Thus, direct objects, specified for “heaviness”, such as ‘a barrel’ and ‘a wardrobe’, map the events on the scale of heaviness to the interval which follows the norm for heaviness point, whereas ‘a kitten’ and ‘a basket’ (in the context given in (25)) are not specified for “heaviness” and for this reason map the event onto the non-telic interval.

The conclusion that I arrive at here is that the prefixes *pri-*, *u-* do not trigger the emergence of the Result Phrase, but originate higher in the VP structure, and therefore they fail the *in an hour* test for telicity. This conclusion runs counter to the analysis of lexical prefixes proposed in Svenonius (2004b) and Ramchand (2004). It has been argued that lexical prefixes as opposed to superlexical prefixes originate VP-internally, while the latter originate VP-externally. The distinction between these two groups of prefixes is based on their distinct properties. The properties of lexical prefixes

which distinguish them from superlexical prefixes are the following: they (i) have core spatial meaning, (ii) readily form idiomatic constructions, (iii) affect the argument structure of the verb, (iv) allow the formation of secondary imperfectives (by means of adding a secondary imperfective suffix) and (v) induce telicity. Superlexical prefixes (i) do not make much contribution apart from giving rise to perfectivity and (ii) do not form idiomatic constructions, (iii) do not affect the argument structure of the verb, (iv) do not allow the formation of secondary imperfectives and (v) do not induce telicity.

The prefixes *pri-*, *u-* clearly have a spatial meaning, they do not seem to change the argument structure of the verb and finally in general do not allow the formation of secondary imperfectives (26b)-(26c), though with some exceptions (26a).

- (26) a. *pri-katyvatj*, *pri-taskivatj*, *u-katyvatj*, *u-taskivatj*
to-roll *to-drag* *away-roll* *away-drag*
- b. **pri-begivatj*, **pri-haživatj*, **pri-letyvatj*, **pri-nashivatj*,
to-run *to-go* *to-fly* *to-bring*
- c. **u-begivatj*, **u-haživatj*, **u-letyvatj*, etc.
away-run *away-go* *away-fly*

The prefixes in question thus exhibit the properties of both lexical prefixes (i) and superlexical prefixes (iii) and (iv). In addition they are neutral with respect to having telic/non-telic properties. From this perspective our suggestion that these prefixes originate VP-externally does not look so surprising. What this data indicates is that a more fine-grained classification of prefixes in Russian is required.

5. The distribution of prepositional phrases referring to “open space” entities

The picture of the distribution of Goal and Source prepositions and prefixes in Russian would not be complete if the puzzling behaviour of another group of Goal and Source prepositions were not described. These are the prepositions which require as their complement DPs referring to what I will call “open spaces”, which do not have specified material boundaries, such as ‘park’, ‘street’, ‘field’, ‘square’, ‘roof’, ‘balcony’, ‘beach’, ‘desert’, ‘station’, ‘clearing’, etc.

“Open space” prepositions also impose requirements on the co-occurrence with certain types of Goal and Source prefixes. Their distribution pattern however differs from what has been described in section 3.2 for “closed space” PPs. Recall from section 3.2 that prefixes *vy-*, *ot-*, *v-*, *za-*, and *do-* show sensitivity to the Identity Condition. With respect to the combination with “open space” PPs, these prefixes fall into two groups: those that retain sensitivity to the Identity Condition and have exactly the same distribution pattern (prefixes *ot-* and *do-*) and those prefixes that

do not normally occur with “open space” PPs (prefixes *vy-*, *v-*, *za-*). The examples in (27) show that the Source prefix *ot-* cannot combine with “open space” Goal PPs, since it requires a Source PP, and similarly the Goal prefix *do-* is precluded from combinations with “open space” Source PPs, whereas it is completely licit with “open space” Goal PPs:

- (27) a. My *oto-*/(?? *do-*)šli *ot* ploščadi.
we from/ to-go from square.GEN
 ‘We went from/to the square.’
 b. My (**oto-*)/*do-*šli *do* ploščadi.
we from/to-go to square.GEN
 ‘We went from/to the square.’

The examples in (27) demonstrate that the Source preposition *s* when combined with “open space” entities does not tolerate the corresponding prefixes *vy-*, *v-*, *za-* regardless of whether the latter are of type Goal or Source.¹

- (28) a. **Ja vy/ vo-*šel *s* ploščadi.
I out/in-went from square.GEN
 ‘I left the square/I went to the square.’
 b. **Mamy vy/ v-*veli detei *s* kryši.
mothers out/in-led children.ACC from roof.GEN
 ‘The mothers took the children from the roof/to the roof.’

Surprisingly, contrary to what we might expect, pursuing the idea of the Identity Condition, the “open space” Goal PPs *na/v* are incompatible with the corresponding Goal prefixes *v-* and *za-*, but are completely licit with the corresponding Source prefix *vy-* (29):

- (29) a. Krestjane *vy/(*vo-*)šli *v* pole.
peasants out/ in-went in field.ACC
 ‘The peasants went into the field.’
 b. Deti *vy/(*v-*)bežali *na* poljanu.
children out/ in-ran on clearing.ACC
 ‘The children ran out into the clearing.’
 c. Korobki *vy/(*v-*)stavili *na* balkon.
boxes.ACC out/ in-put on balcony.ACC
 ‘The boxes were taken out onto the balcony.’

On the other hand, *pri-* and *u-* prefixes have no limitation whatsoever here again, to the type of the “open space” PP they can go with, as shown in (30):

¹Note however an exceptional case like in (i):

- (i) V gorod oni *vo-*šli *s* uličy *neglavnoi, neparadnoi*.
in town.ACC they in-went from street.GEN not.main not.front
 ‘They went into the town not from the main, front street.’

- (30) a. Ja u /pri-šel s ploščadi.
I away /to-went from square.GEN
 ‘I left the square/I went to the square.’
- b. Mamy u /pri-veli detei s kryši.
mothers away /to-led children.ACC from roof.GEN
 ‘The mothers took the children away from the roof/to the roof.’

Thus we have seen that there is no homogeneity within Goal and Source prepositions and prefixes in Russian with respect to their distribution. The criterion employed here for the classification of Goal and Source prefixes is the Identity Condition, which controls for the preservation of Goal or Source type PPs within a single sentence. Three groups of Goal and Source prefixes can be distinguished accordingly: the first group contains prefixes which are subject to the Identity Condition, these are the Goal prefixes *v-*, *za*, *do-*; the second group includes the Source prefixes *ot-*, *vy-* whose distribution seems to be not so strictly regulated by the Identity Condition, since they appear in combinations with Goal PPs, provided the structure contains a corresponding Source PP; the third group is represented by the prefixes *pri-*, *vy-* which exhibit free distribution. Furthermore, the third group of prefixes show exclusive behaviour by not inducing telicity/atelicity, as well as not providing specific localization of the path.

The Identity Condition however does not explain why the Goal prefix *v-* is always ungrammatical in combination with “open space” PPs, and the only licit option available for the Source prefix *vy-* is a corresponding “open space” Goal PP.

It is also unclear how the model based on the Result phrase analysis which I presented here would account for the distributional properties of Goal and Source prefixes in combination with “open space” PPs.

Thus there are many questions that came up in this work, which need to be carefully studied and analysed in a model perhaps departing from the one advocated here, but which would clearly postulate a distinct status for Goal and Source PPs.

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