

Accusative case in PPs

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1. Introduction

In some Indo-European languages, such as most Slavic ones, Latin, or German, a number of prepositions with spatial meanings take nominal complements in two different cases: an oblique case (e.g. dative, locative¹, or instrumental), as in (1), and accusative (2).

- (1) a. Elena čitala knigu v komnate. *Russian*
Elena read book.ACC in room.LOC
'Elena read a/the book in a/the room.'
- b. Hans schob den Wagen in dem Graben. *German*
Hans pushed the.ACC cart in the.DAT ditch
'Hans pushed the cart inside the ditch.'
- (2) a. Elena položila knigu v sumku. *Russian*
Elena put book.ACC in bag.ACC
'Elena put a/the book in a/the bag.'
- b. Hans schob den Wagen in den Graben. *German*
Hans pushed the.ACC cart in the.ACC ditch
'Hans pushed the cart into the ditch.'

In this paper, we will concentrate on Serbo-Croatian (S-C) and German (G), but we assume that the analysis can be applied to other languages that display this kind of case alternation in the PP domain.

Traditional grammar generalizes that prepositions assign accusative in the context of a change of state, most frequently of location, in which the relevant PP denotes the result state or final location of this change. Locative, or other oblique cases, are assigned in PPs that modify the entire event (structurally represented as VP), usually for place. Accusative is linked to the denotation of the goal. The traditional account has one major problem: it requires there to be two lexical entries for each preposition showing this behavior, one assigning accusative, and another some oblique case. Such an approach is also found in one of the few more formal accounts of this type of data, namely Bierwisch (1988) for German. Although this would not be the only case in which such a claim has been put forward, it is certainly methodologically more desirable to have a theory that treats each of these prepositions as one single lexical entry. We will argue that the prepositions that display case alternations on their complements bear a locative meaning only. The meaning of goal or directionality will be shown to result from the particular embedding of the locative PP within the VP.

More recent discussion of the case alternation is found in den Dikken (2003), van Riemsdijk (2007) and Caha (in preparation). What these accounts have in common is that they propose additional PP-internal structure to derive the directional (goal) reading with these prepositions and to license or trigger accusative case marking on their complements. However, they do not spell out the conditions under which this additional structure is licensed, so that they face the

¹ The locative case is sometimes also called prepositional case. This term should not be confused with the locative (vs. directional) meaning or nature of particular spatial expressions.

same kind of problems that emerge for approaches that treat the Ps under discussion as lexically ambiguous. Furthermore, they add theoretical burden that is not really needed. We argue instead, that accusative case results from the embedding of the PP in the overall context, and thus that it is part of the PP-external syntax. This will allow us to spell out important restrictions about the availability of accusative case with these Ps in general. In particular, we will address the fact that PPs with complements bearing accusative case enter a special relationship with the main verbal predicate. Given that our proposal differs fundamentally already in the basic assumptions from these other approaches we will not discuss them in more detail.

In this paper, we adhere to a non-standard view that one and the same nominal expression may receive more than one case(-marking), but that each newly received one requires that the previously present case(-marking) be phonologically deleted.² This results in what we refer to as the overriding of one case by another.

The paper is organized as follows. In section 2, we formulate several generalizations about the assignment of accusative case inside PPs, and then develop a more general analysis of case assignment in section 3, including both structural and inherent cases. Section 4 shows how the account captures the data generalizations discussed in section 2 and also how it deals with apparent problems. Section 5 concludes.

2. Data generalizations

An important fact to note is that not all Ps display the case alternation under question. If at all, only locative PPs can appear with both cases, in which case the accusative case correlates with a directional reading. In addition, there are locative Ps that only appear with an oblique case and thus do not display this case alternation. At the one end of the spectrum, we have a language like Latin in which only *in* 'in' and *sub* 'on' participate in the alternation, and all other locative Ps appear with oblique cases only. At the other end there is German, in which almost all locative Ps (except for *bei* 'at') can appear with both cases. Languages like Russian, Czech or Serbo-Croatian seem to be somewhere in the middle.

Finally, all the languages under discussion have Ps that are lexically directional (expressing a goal, source or route meaning) and never alternate. The generalisation here is that the goal and source Ps appear with dative and/or genitive case, whereas the route Ps appear with accusative case.³ In this paper, we will provide an account of the emergence of accusative case with Ps that participate in the case alternation. We only discuss case assignment with Ps that may assign both accusative and an oblique case (2K-Ps), and leave the issue of case assignment with non-varying Ps for future research.

In the following, we will address generalizations about the languages under discussion concerning the assignment of accusative case in 2K-PPs.

2.1. The relation between the verb and the PP

The first generalization we want to draw attention to is one about the relation established between the verbal predicate and the PP.

² By case-marking, we mean the case that appears as a consequence of agreement with another case-marked expression, rather than of direct case-assignment.

³ The latter in addition often involve marking by postpositions and/or prefixes/particles in Slavic or in Germanic languages like German and Dutch.

(3) Generalization 1:

Accusative case is assigned irrespective of the preposition, but directly depending on the relation that the denotation of the verb establishes with the locative component of the PP.

Observe the examples in (4) and (5). In Serbo-Croatian (as well as in Russian and other Slavic languages, e.g. Czech, see Gehrke 2008), the complements of PPs referring to the location of the entire event appear with instrumental or locative case, as in (4).

- (4) a. Olovka je bila/ležala pod/nad/pred/za kutijom. S-C
pen.NOM AUX been/lie under/above/in_front_of/behind box.INST
'The pen was/lie under/above/in front of/behind a/the box.'
- b. Olovka je bila/ležala u/na kutiji. S-C
pen.NOM AUX been/lie in/on box.LOC
'The pen was/lie in/on a/the box.'

The precise oblique case to be assigned depends on the particular preposition and its meaning: prepositions involving a perspectival axis (i.e. the projective meanings, as opposed to the non-projective ones, as discussed in Zwarts & Winter 2000, Kracht 2002, Bierwisch 1988, inter alia) appear with instrumental case (4a), whereas those involving a kind of containment relation appear with locative case (4b). In German, the oblique case we find in the relevant examples is always dative (5).

- (5) Der Stift war unter/über/vor/hinter/in/auf/neben der Kiste. G
the.NOM pen was under/above/in_front_of/behind/in/on/next_to the.DAT box
'The pen was under/above/in front of/behind/in/on/next to the box.'

However, when PPs refer to the final location, i.e. the goal of an event, as in (6), their complements appear in the accusative case in both languages under discussion.

- (6) a. Bacio je olovk-u pod/nad/pred/za/u/na kutiju S-C
thrown AUX pen.ACC under/above/in_front_of/behind/in/on box.ACC
'He threw the pen under/above/in front of/behind/in/on a/the box.'
- b. Er warf den Stift unter/über/vor/hinter/in/auf/neben
he.NOM threw the pen under/above/in_front_of/behind/in/on/next_to
die Kiste. G
the.ACC box
'He threw the pen under/above/in front of/behind/in/on/next to the box.'

Note that in the Slavic languages under discussion, this is irrespective of the presence of the perspectival axis component in the denotation of the PP.

With respect to the dependency on the verbal denotation and the type of relation the verb establishes with the PP we distinguish between three different types (see also Gehrke 2008). First, there are verbs that only allow a locative interpretation of the PPs under discussion, i.e. the PP can only modify the entire event but cannot specify a goal of the event. This is the case with stative and (semi-)copular verbs like *lie*, *stay*, *be*, *remain* as in (4) and (5), which do not express any (literal or metaphorical) movement and also cannot express dynamicity or change. PPs with accusative case (acc-PPs) are generally unacceptable with these verbs, because they cannot refer to a change of state or location and do not involve entities undergoing a change of state or location. In the following, we will refer to such entities as undergoers, following Van Valin & La Polla (1997). We will come back to the relevance of an undergoer in section 2.2.

(9) **Generalization 2:**

Accusative case can be assigned to a nominal expression appearing as the complement of a preposition only if the eventuality also involves an entity undergoing a change.

This is illustrated by the contrast between the examples in (10) and (11). In (10a), for instance, the throwing eventuality entails a change of location of the direct object (the pen), and an acc-PP referring to the final location of the direct object is possible. With the stative eventualities in (11), on the other hand, no object undergoing a change can be identified and only obl-PPs are acceptable, which modify the event as a whole by specifying its overall location.

- (10) a. Bacio je olovku u kutiju. S-C
thrown AUX pen.ACC in box.ACC
'He threw a/the pen in a/the box.'
- b. Sie hängte die Wäsche an die Leine. G
she.NOM hung(CAUS) the.ACC laundry on the.ACC line
'She hung up the laundry.'
- (11) a. Olovka je bila u kutij-i/*u S-C
pen.NOM AUX been in box.LOC/*ACC
'A/the pen was in a/the box.'
- b. Kreirao je scenu u pozorišt-u/*e. S-C
design AUX scene.ACC in theater.LOC/*ACC
'He designed a/the scene in the theater.'
- c. Die Wäsche hing an der/*die Leine. G
the.NOM laundry hung on the.DAT/*the.ACC line
'The laundry was hanging on the line.'

Sometimes the undergoer is not explicitly expressed, as in (12).

- (12) a. Sie schoss in die Wand. G
she.NOM shot in the.ACC wall
'She shot into the wall.'
- b. Udario je u drv-o. S-C
hit AUX in tree.ACC
'He hit into a/the tree.'
- c. Er richtete die Kamera auf die Hauptdarstellerin. G
he.NOM pointed the.ACC camera on the.ACC main_actress
'He pointed the camera at the main actress.'

In expressions of this type, it is nevertheless possible to clearly identify an entity undergoing a change. In (12a), we find a verb of ballistic motion with an implicit undergoer of the change of location, namely a bullet or bullets, that have been shot. (12b) can have two interpretations. Under the unaccusative interpretation, the subject of the sentence, which is, underlyingly, the object, under the standard approach to unaccusative structures, is undergoing a change (we will come back to unaccusative structures in section 2.3). Under the active transitive interpretation of (12b), there is a contextually given instrument undergoing a change (i.e. he hit into the tree with something, his fist or something else). Finally, (12c) involves an implicit undergoer of pointing, similar to the verbs of ballistic motion (in this case an imagined line from the camera to the actress).

2.3. The PP as a secondary resultative

Finally, we want to turn to the function the PP fulfils with respect to the VP.

(13) **Generalization 3:**

PPs taking a nominal complement in accusative always denote a secondary resultative predicate of the undergoer of a change of location.

In intuitive event-decomposition terms, PPs with complements bearing accusative case express the predicate of the result subevent. The subject of the result subevent is the undergoer of change: the result of the change is that the undergoer bears a certain property. At the same time, the subject of the result subevent (the undergoer) is the internal argument of the main verb and thus is assigned accusative in the default case. In section 3, we present an account that captures these intuitions.

The claim that an acc-PP is a resultative secondary predication over the internal argument DP (the undergoer) appearing with accusative case is illustrated in (14).

- (14) a. Roberta hat den Laster auf den Hügel gefahren. G
Roberta.NOM has the.ACC truck.ACC on the.ACC hill driven
'Roberta drove a/the truck onto a/the hill.'
- b. Mačka se sakrila pod krevet. S-C
cat.NOM REFL.ACC hidden under bed.ACC
'The/a cat went to hide under the bed.'

Laster 'truck' in (14a) and *se* (Refl) in (14b) take accusative case and represent the undergoers of the change of location expressed by the eventuality. As a result of the change of location, these two undergoers bear the property specified by the PP in the result subevent and the P complement appears with accusative case. In the driving eventuality in (14a), the truck undergoes a change of location and at its end, as a result, it is on the hill; in the hiding eventuality in (14b), the cat undergoes a change of location, and at the end, it is under the bed.

There are apparent counter-examples to the generalization in (13). First, there are cases in which the undergoer does not bear accusative but some other case, such as instrumental (15a) or nominative(16), (17).

- (15) a. Marija je udarila rukom u jastuk. S-C
Marija.NOM AUX hit hand.INST in pillow.ACC
'Marija hit into the pillow with her hand.'
- b. Marija je udarila ruku u radiator. S-C
Marija.NOM AUX hit hand.ACC in radiator.ACC
'Marija hurt her hand on a/the radiator.'

The contrast between (15a) and (15b) illustrates the fact that the undergoer can be realized by a direct object in accusative case only if it is not simultaneously an instrument, i.e. if the eventuality is not controlled by the agent. It seems here that two cases compete to be assigned to the undergoer/instrument, accusative and instrumental, and the latter wins.

A second type of potential problem for our generalization in (13) involves unaccusative structures (16).

- (16) Jovan je seo pred automobil. S-C
 Jovan.NOM AUX sit_down in_front_of car.ACC
 ‘Jovan sat down in front of a/the car.’

Here, the old question arises why the logical object appears as the subject of the sentence and hence with nominative case.

Finally, potentially problematic cases involve directional meanings arising with intransitive manner of motion verbs when combined with acc-PPs (17).⁵

- (17) a. Hans sprang in den Fluss. G
 Hans.NOM jumped in the.DAT river
 ‘Hans jumped into the river.’
- b. Das Boot trieb an die andere Seite des Sees. G
 the.NOM boat drifted at the.ACC other side the.GEN lake.GEN
 ‘The boat drifted to the other side of the lake.’
- c. Sie tanzten auf die Bühne. G
 they.NOM danced on the.ACC stage
 ‘They danced onto the stage.’

Without these PPs, the intransitive verbs are commonly assumed to be associated with an unergative structure where the subject of the sentence (the only argument of the verb) is a true subject, since it is the entity associated with the causer or agent rather than with an undergoer. The cases where a PP is added are subject to debate. According to some, we are dealing with an unaccusative structure here (e.g. Hoekstra 1999, Neeleman & van de Koot 2002, Folli 2002, Beck 2005, among others), whereas others maintain that the subject is still only the agent or causer (e.g. Rothstein 2004), which means that the structure should still be treated as an unergative. We adhere to the former position; in particular, we assume that in these cases the DP really denotes an entity undergoing a change of location (and possibly also the agent of the event, like an underlyingly reflexive structure).

Our proposal to be outlined in section 3 and applied to the data in section 4, captures these data, and we show that the apparent problems outlined here in fact do not pose a problem for our account.

2.5 Summary of the facts

In sum, there are the following generalizations that an adequate account of the phenomenon of case alternations within the PP in the languages under discussion has to capture. First, the case alternations of complements to PPs involve two cases, one of which is accusative and the other an oblique case. Given that accusative case is typically a structural case assigned to the direct object of the verb, we have to explain why this case also appears on prepositional complements. Second, only locative Ps license this case alternation (i.e. meanings like *in*, *on*, *behind*, *under*); those involving a component of direction (*towards*, *from*) or degree (*from*, *until*) combine with nominal expressions in only one case. Third, PPs with an accusative case complement establish a particular relation with the verb they combine with, by being secondary resultative predicates over the internal argument of the verb, i.e. the undergoer of the event. Finally, for a PP with accusative case to be possible, it is crucial that the verb itself allows for a change of state or location interpretation with respect to the argument expressing

⁵ See also Levin & Rappaport (1995) for a more general discussion.

the undergoer, and that the PP can be interpreted as the final value of the property of the undergoer that is subject to change.

The data generalizations raise the questions in (18).

(18) *Questions raised by the data*

- (Q1) Why is the same case assigned to the undergoer and to the complement of PP?
- (Q2) What is the relation established with the verb, and how is it established?
- (Q3) Why are only locative meanings involved?
- (Q4) What is the status and the nature of the oblique cases with these Ps?

In the following section, we propose an account that is meant to answer these questions and to capture the generalizations of this section.

3. The proposal

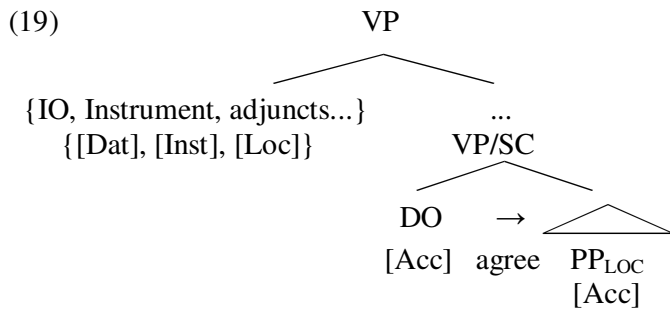
Before presenting our account, let us briefly outline the major aspects of event structure that we assume (mainly following Arsenijević 2006), and on the background of which we formulate our analysis. We consider atelic eventualities to be simple in terms of their syntactic, aspectual and argument structure. Their predicate is defined on one interval (temporal or abstract), and they may specify a state, or possibly a process. Predicates specifying telic eventualities are defined on two adjacent intervals. In the first interval, some process takes place, in which some property changes its value. We refer to the part of the event specified over the first interval as the process subevent. In the second interval, a state is specified, which presents a value of the property under change reached by the process. We refer to the second interval as the result subevent.

This configuration is directly represented by the syntactic structure. The result subevent is specified at the bottom of the respective syntactic structure of VP, and the process subevent is specified somewhat higher. Different constituents, heads, arguments and adjuncts, have to merge within the structural domain of the subevent they semantically contribute to. For instance, agents and instruments merge within the structural sequence of the process subevent, whereas goals and result-related degrees merge within that related to the result subevent. Undergoers may merge in both domains.

Other aspects of the syntactic structure are of lesser relevance to our analysis, and our account is compatible with different structures proposed for the VP and its resultative predicate. In this paper, we use Hoekstra's (1988) small clauses (SC), without necessarily committing to more particular aspects of his view. In a similar fashion, we take that accusative case is assigned to direct objects in the specifier of a functional projection that we mark as VP, but which corresponds to Borer's (2005) FP. It is, however, necessary for our account that this phrase projects immediately on top of the structure that represents the resultative predicate. We identify two possible general accounts, one in terms of agreement, the other in terms of assignment.

3.1 Agreement

An account in terms of agreement states that there is an agreement relation between the undergoer and the resultative predicate, established within the structure representing the resultative predication (19).

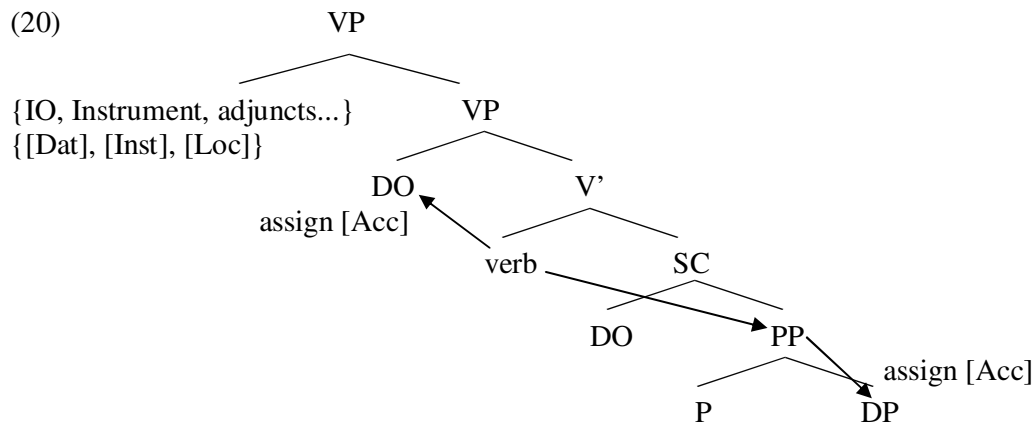


This account answers the questions raised in (18) in the previous section as follows. First, the same case is assigned to the undergoer and to the complement of PP because agreement in the VP domain targets case (while agreement in the TP domain targets phi-features). Hence, case on the complement of PP comes from agreement. The second question concerns the relation established with the verb. Only undergoers may have a resultative predicate (only entities undergoing a change may reach a state that results from a change), and the availability of this role depends on the interpretation made available by the verb. Third, only locative meanings are involved because bare locative meanings satisfy the minimality requirements for agreement. A further projection on top of the locative one intervenes for agreement, as we will illustrate in more detail in section 4. Finally, with respect to the status and the nature of the oblique case with these Ps, we propose that it is always there, inherent to the respective locative meanings, but it is overwritten by the structural case when agreement takes place.

Let us then turn to the second possible account, in terms of case assignment.

3.2 Assignment

An assignment approach to the case alternation under discussion is given in (20).



VPs with resultative meanings involve a local relation between the verb and the resultative predicate because the undergoer moves from the resultative to SpecVP. Due to this locality, accusative is assigned by the verb to the locative PP. The locative component is lexicalized by the P, but the case stays the one assigned by the verb.

The assignment account answers the questions raised in (18) in the previous section in the following way. First, the same case is assigned to the undergoer and to the complement of PP because the verb assigns accusative to all the local arguments. Since the subject of SC has moved, and is assigned accusative case as well, the local domain is extended to the predicate of SC. Second, only verbs with meanings that can combine with resultatives may merge in the V head projected by a resultative predicate and this accounts for the relation established between the verb and the PP. Third, in analogue to the agreement account, only locative

meanings are involved because locative meanings satisfy the minimality requirements for case assignment. A further projection on top of the locative one intervenes for case assignment. Finally, also under the assignment account we propose that the oblique case is always there, inherent to the respective locative meanings, as a weaker specification of case, but it gets overwritten if structural case is assigned.

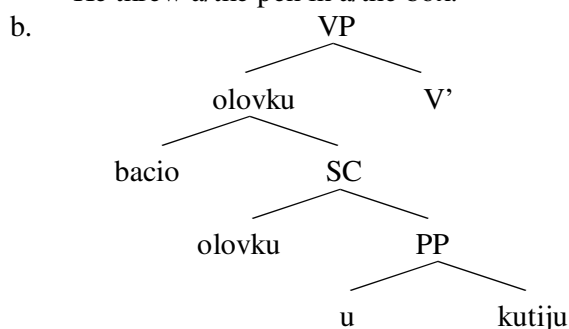
Thus, the main difference between an agreement account and an assignment lies in the answer to question 1, i.e. why is the same case assigned to the undergoer and to the complement of PP. In the remainder of the paper, we choose to use the assignment analysis, for reasons of space. Only when the agreement approach makes different predictions or requires a different treatment, we explicitly treat it separately.

4. Accounting for the data generalizations

This section illustrates how the account proposed in the previous section captures the data generalizations discussed in section 2. First, let us turn to the most straightforward case in (21).⁶

(21) *Accusative PPs*

- a. Bacio je olovku u kutiju. S-C
 thrown AUX pen.ACC in box.ACC
 ‘He threw a/the pen in a/the box.’



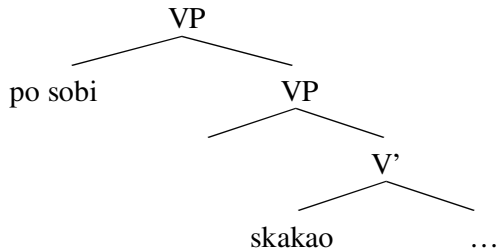
In (21), we have a resultative event of throwing, where an object, a pen, undergoes the change of location from not being inside a box to being inside it. Accusative case is assigned both to the DP expressing the undergoer (the pen) and to the complement of the locative P. The PP expresses a secondary resultative predication over the verb’s internal argument, the undergoer.

Our account predicts that in PPs that do not function as secondary resultative predicates over the internal argument, accusative case cannot appear on the complement of P, and only an oblique case is possible. The following examples show that this prediction is borne out. First, if a locative PP modifies the entire event and does not express a secondary resultative predicate, the complement of P appears with an oblique case. This is illustrated in (22).

(22) *Oblique PPs that modify the entire VP*

- a. Skakao je po sobi. S-C
 jumped AUX over room.LOC
 ‘He jumped around the/a room.’

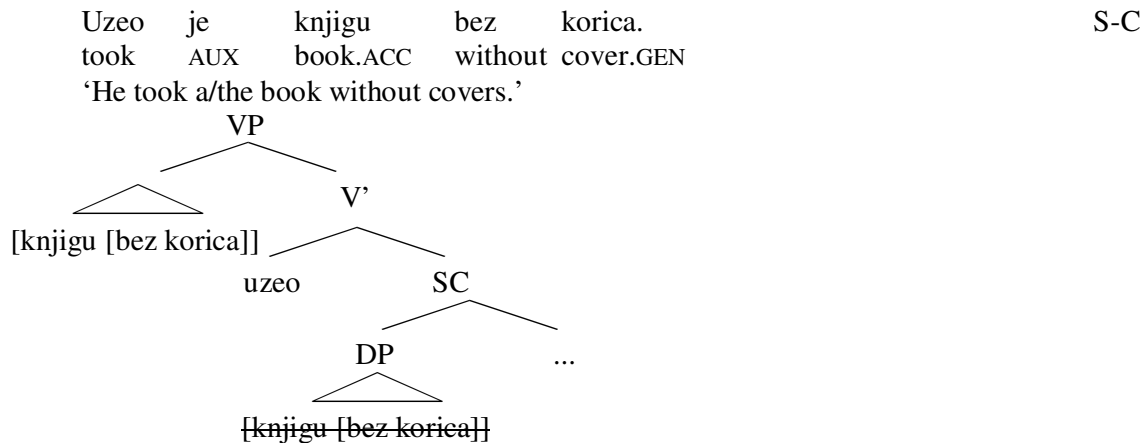
⁶ In this section we will mainly concentrate on Serbo-Croatian, but it should be clear by now that we assume the account also to work for the other languages under discussion.



In (22) the locative PP is an adjunct to the VP and thus no accusative case is assigned to the complement of P.

Second, locative PPs can also appear as complements (or sometimes modifiers) of DPs. For example, in (23), we have a DP-internal PP that appears with an oblique case.

(23) *DP-internal oblique PPs*⁷



The DP-internal PP in (23) is non-local to the verb, as N and its functional projections intervene. Therefore, accusative case cannot be assigned to the P complement, and it bears an oblique case instead.

With respect to the oblique cases that appear with these Ps in contexts in which the PP is not embedded as a resultative predicate, in principle two accounts are possible. Either the oblique case is directly (lexically) assigned by the P, and it can be overridden by (structural) accusative case if the PP is embedded as a secondary predicate (in some kind of case hierarchy). Or one could argue that case is never assigned by the P directly, in neither configuration (i.e. P is not a case assigner at all). Rather, both accusative and the particular oblique cases are structural and associated with particular functional projections in the extended projection of the PP (e.g. in German dative with Place and accusative with Path as in den Dikken 2003, or a particular account in terms of various case shells that appear within the PP and that get peeled off when the PP undergoes particular movement operations, as in Caha in preparation).⁸ We believe that the former option is more compatible with our approach,

⁷ We assume that the verb *uzeti* ‘to take’ involves a resultative predicate paraphrased as ‘being with the agent’, but we do not go into specifying any particular representation for it. This is anyway orthogonal to the current issue of DP-internal oblique PPs.

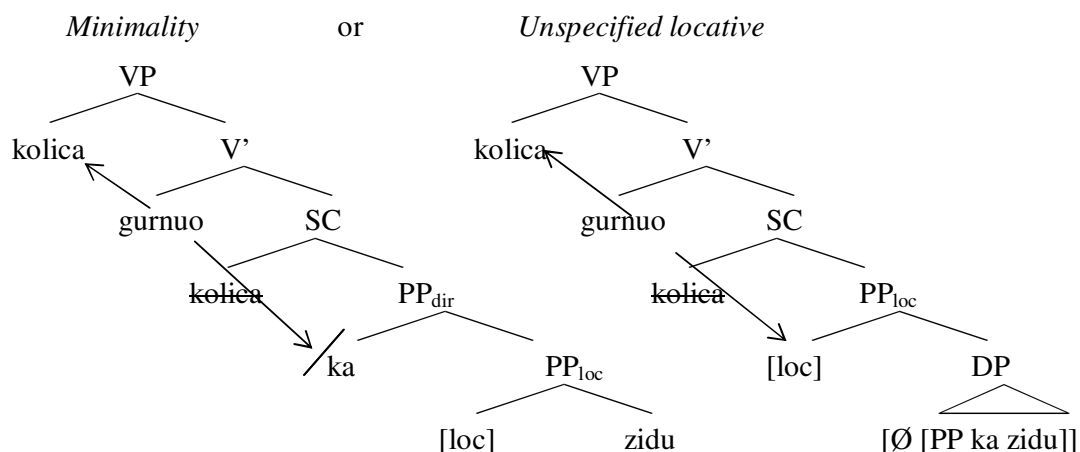
⁸ A proposal along similar lines is found in van Riemsdijk (2007) for German. He assumes that accusative case is licensed by a route component in the extended projection of the P, and that dative is a default case that is assigned whenever the DP lacks a case (since a DP has to bear case). However, this account cannot be carried over to the Slavic languages under discussion, since there are different oblique cases involved and a potential default case cannot be identified. Note also that den Dikken’s (2003) account for German cannot be directly carried over to the Slavic cases for the same reason.

given that we do not assume additional PP-internal structure (see also Gehrke 2008 for problems for den Dikken’s 2003 account).⁹

In particular, we argue that if a locative PP (PP_{loc}) is directly embedded under V and the assignment domain is thus extended as proposed in our analysis, lexical case is not assigned but gets overridden by accusative case. The V selects a complement and blocks its case assigning properties: it overrules the oblique case appearing inside such PPs otherwise. Instead, the entire complement of V is marked for accusative case – the case of its original external argument. Accusative case, consequently, only emerges in case a bare PP_{loc} is embedded under the verb. With richer prepositional structures, on the other hand,¹⁰ other projections, such as PP_{dir} or DegP, intervene between the verb and PP_{loc} and thus block accusative case from emerging on the complement of P. This is illustrated in the examples in (24), in which particular directional PPs do not appear with accusative case.

(24) *Directional PPs that do not appear with accusative case*

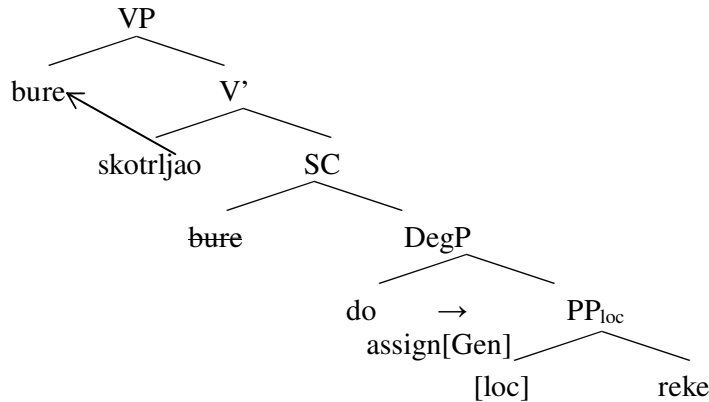
- a. Gurnuo/pomerio je kolica ka zidu. S-C
 pushed/moved AUX trolley.ACC towards wall.DAT
 ‘He pushed/moved a/the trolley towards a/the wall.’



- b. Skotrljao je bure do reke. S-C
 rolled_down Aux barrel.ACC till river.GEN
 ‘He rolled a/the barrel down to the river.’

⁹ However, there might be a point in case for postulating particular case projections for the oblique cases, which then would turn out to be structural as well (see, in particular, Caha in preparation for discussion). For reasons of space we cannot go into this here but only focus on explaining the emergence of accusative case in PPs.

¹⁰ We adhere to the commonly held assumption that directional PPs are more complex than locative PPs in involving at least one projection associated with a directional meaning like goal, source or route (here: PP_{dir} , using the terminology of van Riemsdijk & Huybregts 2007), which embeds another projection associated with the specification of a locative space, with respect to which the path expressed by the directional PP extends (here: PP_{loc}). For a general discussion and motivation of this more complex structure for directional PPs, see Asbury et al. (2008) and the references cited therein.



In the minimality-based account, there are two projections bearing components of a prepositional meaning: one with a directional contribution, and one with a pure locative meaning. In such a structure the locative PP is not syntactically local to the verb anymore: the directional component intervenes for the relation that yields accusative marking. In the unspecified locative account, a direct embedding of one PP under another is avoided. Instead, a locative PP takes a zero noun as its complement, and the noun in turn takes a directional complement. This view keeps the uniformity of selection: verbs involving a component of motion always select bare locative PPs, but this locative PP is specified to denote a place on the path leading towards some other location. This semantic component comes from a PP complement to the zero noun, specifying that the unspecified place introduced by the zero noun is on the path to the place specified by the complement of the embedded PP (*zid* ‘the wall’ in (24a)). In this approach, accusative marking is simply invisible, because it stands on a zero noun.

A similar point is made in (24b), which illustrates that some languages seem to be able to express a goal-like meaning by PPs involving prepositions with the meaning *until*, which do not combine with accusative case. Here, the Serbo-Croatian preposition *do* ‘to, until, next to’ is the one we are concerned with, which only combines with the genitive case. Our take on it is that *do*-phrases in S-C (as well as their cognates in other languages), do not actually denote goals, as argued in more detail in Gehrke (2008). They do not specify the location of the undergoer in the result-stage of the event. Rather, they specify a degree on some scale, such that the result stage of the eventuality is in the domain of this degree. Therefore we propose that *do* heads a DegP and embeds a PP_{loc} whose head is empty. The fact that it specifies the degree and not the goal, and that the goal is just in the domain of the location it determines, puts the *do*-phrase out of the reach of accusative agreement, which only targets the resultative predicate. The examples in (25) further strengthen this proposal.

- (25) a. Spustio je korpu do zemlje / *zemlju. S-C
 move_down AUX basket.ACC to ground.GEN / *ground.ACC
 ‘He got a/the basket to the ground(-level).’
- b. Bacio je kamen do reke / *reku.
 thrown AUX stone.ACC to river.GEN river.ACC
 ‘He threw a/the stone to the river.’

The point we are trying to make here is most obvious in examples like (25b), where the intuition is that the sentence talks about how far the stone is thrown, not where exactly it ended up. The fact that we do not assume Ps like *do* to specify proper goals is also reflected by the choice of translations for the preposition (*to, until, next to*).

Further evidence for our account of DegP in the PP domain preventing accusative case from being assigned to the complement of P comes from (26).

- (26) a. Lopt-a je bila (?? 3 metra) u sobi. S-C
 ball.NOM AUX been 3 meters in room.LOC
 ‘The ball was three meters in the room.’
- b. Lopt-a je bila (3 metra) unutar sobe.
 ball.NOM AUX been 3 meters inside room.GEN
 ‘The ball was three meters inside the room.’

These examples illustrate that prepositions that display the case alternation under discussion, such as the one in (25a), are degraded when modified by scalar expressions, indicating the general absence of a DegP. However, when they also have a genitive-taking variant,¹¹ as in (25b), this variant will be well-formed, which indicates that such PPs do combine with a DegP. These PPs, in turn, never display the case alternation under discussion, but take only genitives, just like the class under discussion in (24b).

In section 2, we discussed examples in which a PP with accusative case expresses a secondary resultative predicate, but the DP undergoer bears a case other than accusative. First, there are unaccusative structures in which the undergoer of change, the subject of the resultative PP with a complement in accusative, does not bear accusative but nominative case (27).

- (27) Jovan je seo pred automobil. S-C
 Jovan.NOM AUX sit_down in_front_of car.ACC
 ‘Jovan sat down in front of a/the car.’

The example in (27) involves a structure in which the subject, in addition to the role of the undergoer, also has the role of the agent. The immediate question is how come the undergoer of change stays unmarked (how its role gets ‘absorbed’), i.e. why this sentence involves no reflexive to mark the role of the theme in the respective eventuality. This is a general question in the domain of argument structure, and is in no way triggered by, or special to our account. One possible strategy in accounting for these facts is to argue that a reflexive is underlyingly present, i.e. that certain verbs such as the causative *sesti* ‘sit down’ in (27) are specified for a reflexive meaning which may or has to be left without phonological realization (cf. the German equivalent *sich setzen* which always appears with a reflexive).

However, the problem with the sentence in (15a), repeated here as (28), in which instrumental case appears on the undergoer, cannot be solved in this way.

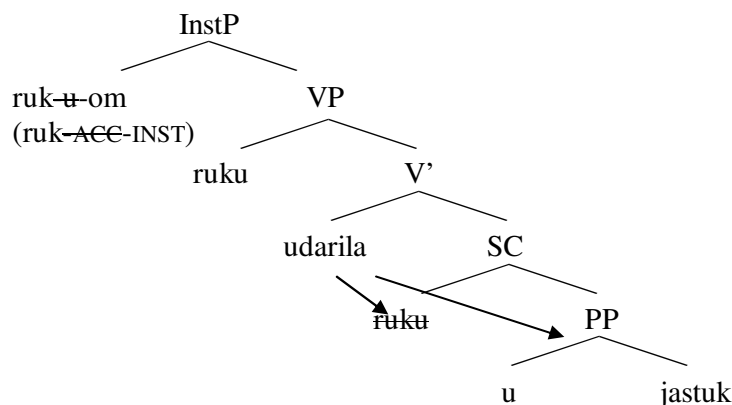
- (28) Marija je udarila rukom u jastuk. S-C
 Marija.NOM AUX hit hand.INST in pillow.ACC
 ‘Marija hit into the pillow with her hand.’

Here the participant that intuitively undergoes a change of location, the final location of which is specified by the acc-PP, is represented by a DP in instrumental case. The meaning of (28) does not involve reflexivity, as reflexivity in S-C is subject-oriented and the undergoer in (28) coincides with the instrument. Moreover, the undergoer of change can be realized by a direct object in accusative, but only if it is not simultaneously an instrument, i.e. if the eventuality is not controlled by the agent, as was shown in (15b). It seems that a better account is the one in which two cases compete to be assigned to the undergoer/instrument in (28): accusative and instrumental (or nominative), and the latter wins. In line with the general view of this paper, that cases may get overridden, we predict that the one to win is

¹¹ Certain Ps in S-C have variants that select complements in genitive, and, as it appears, have a stronger scalar semantic component. Genitive is in general a case that appears with operators potentially relating to scalar structures, from quantification, through negation, to the semantics of degree.

instrumental, as the case of the instrument role, which is related to the structurally higher process-subevent. For cases like (28), we propose the structure in (29).

(29) *Overwriting the structural case*



As an important note on the side, it should be pointed out that resultative eventualities are often described without an overt constituent lexicalizing the result predicate, as in (30).

(30) Jovan je slomio vazu. S-C
 Jovan.NOM AUX broken vase.ACC
 'Jovan broke the/a vase.'

Under our proposal, accusative case is primarily assigned to the undergoer, as the default case marking the subject of change, and by extension of the assignment domain also to the complement of the preposition in resultative PPs. Hence, if there is no goal expressed overtly by a nominal expression, there will not be a PP with a complement bearing accusative case. Such is the case in examples like (30): when the resultative predicate is not overtly specified, it has fully incorporated into the verb, and accusative surfaces only on the undergoer. While the need to account for this type of examples is general for any account of the VP structure and its aspectual and argument-structural properties, the absence of an accusative-marked resultative predicate in a large number of VPs denoting resultative eventualities does not directly conflict with our account.

A final potentially problematic issue that we want to mention comes from Russian. In Russian, a language that shows a case assignment pattern in the PP domain similar to the one we find in S-C, the direct object, if non-specific and in the scope of negation, surfaces not in accusative case as usual (31a), but in genitive case (31b).

(31) a. Ivan skazal pravdu. *Russian*
 Ivan said truth.ACC
 'Ivan has told the truth.'

b. Ivan ničego ne skazal.
 Ivan nothing.GEN not said
 'Ivan said nothing.'

If the accusative case on the complement of a goal PP were to come from agreement with the direct object, we would expect that the case of the nominal expression appearing as the complement of PP should also be genitive. However, this is not borne out as the data in (32) show.

and the complement of PP. Previous approaches that tie accusative case to additional PP-internal structure (associated with some meaning of directionality) cannot account for this.

There are some issues we had to gloss over, either for reasons of space or because we have not worked out the details yet. For example, in our view, acc-PPs specify the final location of the internal argument DP, which is the undergoer of a change of location along an incremental path. Therefore, an important prerequisite for accusative case marking with 2K-PPs is that the verb has to introduce some meaning of motion (literal or metaphorical), in order to license an incremental verbal path (see Gehrke 2008). Then there are issues that previous approaches seem to have a better handle on, simply because our proposal so far has nothing to say about them. For example, where does accusative case with non-alternating PPs with the meaning of a route come from (an account is offered in van Riemsdijk 2007, but the present account needs to take a different angle)? What are the syntactic and semantic structures of the oblique cases (van Riemsdijk 2007 proposes dative in German to be the default case, whereas Caha in preparation has an account for the clearly semantically motivated difference between instrumental and locative case in Slavic languages)? Finally, even in the domain of PPs appearing both with locative and directional meanings, there is a phenomenon of PP-internal word order variation in languages like Dutch (pre- vs. postpositions), which is elaborated in detail in Gehrke (2008), who shows that it closely matches the situation with case-alternating PPs. The account proposed in this paper should therefore be extended to the Dutch data as well (see Gehrke 2008).

References

- Arsenijević, Boban (2006). *Inner Aspect and Telicity: The Decompositional Nature of Eventualities at the Syntax-Semantics Interface*. LOT Dissertation Series 142. Utrecht: LOT.
- Asbury, Anna, Berit Gehrke, Henk van Riemsdijk and Joost Zwarts (2008). 'Introduction: Syntax and semantics of spatial P.' In: Anna Asbury, Jakub Dotlačil, Berit Gehrke and Rick Nouwen (eds.), *Syntax and Semantics of Spatial P*, *Linguistik Aktuell / Linguistics Today* 120, Amsterdam: John Benjamins, 1-32.
- Beck, Sigrid (2005). 'There and back again: A semantic analysis.' *Journal of Semantics* 22:3-51.
- Bierwisch, Manfred (1988). 'On the grammar of local prepositions.' In: Manfred Bierwisch, Wolfgang Motsch and Ilse Zimmermann (eds.), *Syntax, Semantik und Lexikon*. Berlin: Akademie-Verlag, 1-65.
- Borer, Hagit (2005). *Structuring Sense: An Exo-Skeletal Trilogy*. Oxford: Oxford University Press.
- Caha, Pavel (in preparation). 'The locative-directional alternation in German and Dutch, and its implications for case assignment in passives.' Ms. Tromsø University.
- Chierchia, Gennaro (2006). 'Broaden your views: Implicatures of domain widening and the spontaneous logicality of language.' *Linguistic Inquiry* 37.4:535-590.
- den Dikken, Marcel (2003). 'On the syntax of locative and directional adpositional phrases.' Ms. City University of New York.
- Folli, Raffaella (2002). *Constructing Telicity in English and Italian*. PhD dissertation, University of Oxford.
- Gehrke, Berit (2008). *Ps in Motion: On the Semantics and Syntax of P Elements and Motion Events*. LOT Dissertation Series 184. Utrecht: LOT.
- Hoekstra, Teun (1988). 'Small clause results.' *Lingua* 74.2-3:101-139.

- Hoekstra, Teun (1999). 'Auxiliary Selection in Dutch.' *Natural Language and Linguistic Theory* 17:67-84.
- Jackendoff, Ray (1983). *Semantics and Cognition*. Cambridge, MA: MIT Press.
- Kracht, Marcus (2002). 'On the semantics of locatives.' *Linguistics and Philosophy* 25:157-232.
- Levin, Beth (1993). *Verb Classes and Alternations: A Preliminary Investigation*. Chicago/London: The University of Chicago Press.
- Levin, Beth, and Malka Rappaport Hovav (1995). *Unaccusativity: At the Syntax- Lexical Semantics Interface*. Linguistic Inquiry Monograph 26. Cambridge, MA: MIT Press.
- Maienborn, Claudia (2003). 'Event-internal modifiers: Semantic underspecification and conceptual interpretation.' In: Ewald Lang, Claudia Maienborn and Cathrine Fabricius-Hansen (eds.), *Modifying Adjuncts*. Berlin: Mouton de Gruyter, 475-509.
- Neeleman, Ad, and Hans van de Koot (2002). 'Bare resultatives.' *Journal of Comparative Germanic Linguistics* 6:1-52.
- van Riemsdijk, Henk (2007). 'Case in spatial adpositional phrases: The dative-accusative alternation in German.' In: Gabriela Alboiu, Andrei Avram, Larisa Avram and Daniela Isac (eds.), *Pitar Mos: A Building with a View. Papers in Honour of Alexandra Cornilescu*, Bucharest: Bucharest University.
- van Riemsdijk, Henk and Riny Huybregts (2007). 'Location and locality.' In: Simin Karimi, Vida Samiiian and Wendy K. Wilkins (eds.), *Phrasal and Clausal Architecture*, Amsterdam: John Benjamins, 339-364.
- Rothstein, Susan (2004). *Structuring Events: A Study in the Semantics of Lexical Aspect*. Oxford: Blackwell.
- Talmy, Leonard (1985). 'Lexicalization patterns: Semantic structure in lexical forms.' In Timothy Shoen (ed.), *Language Typology and Syntactic Description III: Grammatical Categories and the Lexicon*. Cambridge: Cambridge University Press, 57-149.
- Van Valin, Robert D. Jr. & Randy LaPolla. 1997. *Syntax: Structure, Meaning and Function*. Cambridge: CUP.
- Zwarts, Joost and Yoad Winter (2000). 'Vector space semantics: A model-theoretic analysis of locative prepositions.' *Journal of Logic, Language, and Information* 9:169-211.