INTERSECTING LOCATION AND POSSESSION

1. INTRODUCTION

The focus of this paper is the possessive relation arising in several configurations between the complement of a locative preposition (u ‘at/by’ and k ‘towards’ in Russian, bij ‘by’ in Dutch and la ‘to/at’ in Romanian, henceforth, u-preposition, heading a u-PP) and another NP in the same clause. I will show that u-PPs can introduce a number of distinct possessive relations in function of the syntactic context and that languages differ subtly in which such relations are available in which contexts.

The starting point of this investigation is the possessive PP complex (bolded) in examples like (1)-(3), where a possessive relation obtains between the denotatum of the NP complement of the u-PP (the ground), and the denotatum of the NP complement of the other P (henceforth, L-preposition heading an L-PP).\(^1\)

(1) a. Vor vytaščil košelék u neē iz sumki. Russian
   thief pulled.out wallet at/by her out.of bag
   The thief pulled the/a wallet out of her bag.
   
b. Položi spički ko mne v rjukzak. put.IMP matches towards me in backpack.ACC
   Put the matches in my backpack.

(2) a. A luat banii de la ea din geantă. Romanian
   has taken money.DEF.PL from to/at her from purse
   S/he took the money from her purse.
   
b. Am pus la Maria nisip pe pat. have.1SG put to/at Maria sand on bed
   I put sand on Maria’s bed.

(3) a. Ik zet het kind bij Jan/hem op de linkerknie. Dutch, Corver 1992a
   I put the child by Jan/him on the left knee
   I’m putting the child on Jan’s/his left knee.
   
b. Het was bij Marie in huis dat Jan was flauwgevallen.
   it was by Marie in house that Jan was fainted
   It was at Marie’s house that Jan fainted.

The possessive interpretation obtained in the possessive PP complex is surprising not only in virtue of the fact that it arises across a locative preposition, but also because the u-PP itself need not encode the possessive interpretation. While in Russian it can function as the main possessive predicate (4), in Romanian and in Dutch this is impossible (5).

(4) Possessive (Russian only)
   a. U Maši xorošie sosedii. at/by Masha good neighbors
      Masha has good neighbors.
   
b. K každoj sekci byl svoj ključ. towards each division was own key
      Each section had its own key.

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\(^1\) While the preposition is fixed in Dutch (bij ‘by/at’, alternating with bare dative) and in Romanian (la ‘at/to’), in Russian two prepositions can be used: u ‘by/at’ (historically, an ablative preposition, see Chodova 1966) in locative and ablative contexts and kko ‘towards’ in alternation with the bare dative in directional contexts. I will abstract away from this matter here.
(5) No possessive (Romanian and Dutch)
   a. *La mașina asta sunt cinci roți.
      at/to car.DEF this are five wheels
      intended: *This car has five wheels.
   b. *Bij deze auto zijn vijf wielen.
      at/by this car are five wheels
      intended: *This car has five wheels.

As the following examples show, in isolation u-PPs with an inanimate complement are interpreted as apudlocative (a.k.a. approximative or apudessive) in Russian and Dutch and as purely locative in Romanian.

    Mister.DEF Borza lives at/to Paris.
    Mr. Borza lives in Paris.
   b. De boom staat bij het huis.
      the tree stands by the house
      The tree stands in the vicinity of the house.
   c. U doma priparkovany tri mašiny.
      at/by house parked three cars
      There are three cars parked near the house.
   d. Učeniki podošli k doske.
      students approached towards blackboard
      The students approached the blackboard.

With animate complements they naturally receive a dominion interpretation, which, I believe, can be viewed the metaphorical extension of the general apudlocative interpretation of u-prepositions. While the precise definition of a dominion is difficult (see section 4.1), it is not limited to the home of the individual in question or their office – it can be non-specific but proximate (7a) or denote the whole country (7b); the same facts obtain in Dutch (7c-d), where the bij-PP denotes the contextually determined dominion, and for Romanian (7e).

    at who.GEN my matches at me.GEN place.IMP towards me
    Who has my matches? – I do. – Put them here [in the relevant contextual location associated with me, where they are expected to be kept].
   b. U nas inostrancev ne ljubjat.
      at/by us foreigners.ACC not love.3PL
      We don’t like foreigners here.
   c. Marie is bij Jan.
      Marie is by Jan
      Marie is at Jan’s.
   d. Je brief ligt bij de secretaris.
      your letter lies by the secretary
      The secretary has your letter.
   e. Scrisoarea ta este la secretară.
      letter.DEF your is to/at secretary
      The secretary has your letter.

On the notion of possession as the extension of the self in psychology see Belk 1988.
In what follows I will analyze what the syntax and semantics of $u$-PPs tell us about the encoding of various possessive relations. I will argue, following Corver 1992a, Broekhuis and Cornips 1997, Broekhuis, Cornips and de Wind 1996 and XXX, that the possessive PP complex is a projection of the L-PP with the $u$-PP occupying its specifier and that it is interpreted via Predicative Modification (Heim and Kratzer 1998). I will then discuss the range of interpretations available to $u$-PPs in the context of possessive relations in general. I will demonstrate that at least three separate possessive relations can be encoded by the $u$-PP and how the variation in the availability of these relations across different languages and syntactic configurations can be accounted for by independently available means.

2. The syntax of the possessive PP complex

Examining the possessive PP complex in Dutch, Corver 1992a and following him Broekhuis and Cornips 1997 and Broekhuis, Cornips and de Wind 1996 come to the conclusion that the two PPs form a constituent. Evidence for this conclusion comes from the fact that the two PPs can be topicalized (8a) or pronominalized (8b) together, or form a fragment answer (8c):

(8) a. Bij mij uit de buurt is Jan gebleven. Corver 1992a  
Jan kept away from me.

b. De katten lagen bij Marie op bed en de honden lagen daar ook. The cats lay by Marie on bed and the dogs lay there too.

c. Waar bevond zich de hond? Bij Marie onder de rok. Where was the dog? Under Marie’s skirt.

The same conclusion is drawn by XXX for Russian, where contrastive topicalization (9a), $wh$-movement (9b) and fragment answers (9c) can target the two PPs as a single unit, as well as by the obligatory directionality match in the possessive PP complex illustrated in (10) for Romanian, which shows the same behavior with respect to the same diagnostics (11).

(9) a. U Vasi v mašine ona zabyla knigi, a u Svety doma – sumku. In Vasya’s car she forgot books and at Sveta’s homeLOC bag

b. U kogo v sumke ona našla revol’ver? In whose bag did she find the revolver?

c. Gde ona sprjatala den’gi? – U Dimy pod krovat’ju. WhereLOC she hid money at Dima’sGEN under bedINS

(10) A luat bani de la Maria de sub pat. has taken moneyPL from to/at Maria from under bed
S/he took the money from under Maria’s bed.

(11) a. Unde ai pus nisip? La Maria pe pat. Where have2SG put sand to/at Maria on bed
Where did you put sand? – On Maria’s bed.

b. La cine pe pat ai pus nisip? On whose bed did you put sand?

On whose bed did you put sand?
The question arises what the internal structure of the possessive PP complex is and how the possessive interpretation is achieved. I will argue, following Corver 1992a, b, that the possessive PP complex is a projection of the L-PP and suggest that the u-PP is its specifier.

2.1. Headedness

Using evidence from Dutch, Corver 1992a argues that the u-PP (bij-PP, in Dutch) should be treated as a constituent inside the possessive PP complex and that the head of the locative PP is the head of the construction. The fact that modifiers of the L-PP can appear before the bij-PP (12) leads Corver to assume that the bij-PP is a modifier of the L-PP, as in (13).

(12) Zo ver mogelijk bij Marie in de keel stak Jan zijn vinger. Corver 1992a
Jan stuck his finger as far as possible into Marie’s throat.

(13) Corver 1992a

Russian shows the same behavior, incidentally demonstrating that the dative NP does indeed form part of the possessive PP complex:

(14) Ee glaza zaglanuli [glubokoemu v dušu].
her eyes looked deeply him.DAT in soul
Her eyes looked deep into his soul.

Further evidence to the same effect comes from allative and ablative uses of u-PPs. As Corver 1992a discusses, in the absence of an L-PP bij-PP cannot be either allative (15a) or ablative (15b). This means, naturally, that bij-PPs cannot head the possessive PP complex.

(15) a. Het kind dook bij Marie *(onder de rok).
the child dove by Marie under the skirt
The child dove under Marie’s skirt.

b. De appel viel bij Marie *(uit de tas).
the apple fell by Marie from the bag
The apple fell out of Marie’s bag.

While I agree with the thrust of the argument, the situation becomes more complicated once we turn to the other two languages. In Russian the ablative u-PP in (16a) can only have a pure possessive reading (as in (4)), but its allative counterpart with the preposition k(o) ‘towards’ in (16b) can also be interpreted as dominion (see also (7a)). Likewise, Romanian la-PPs allow allative interpretation, both in the dominion (17a) and in the purely locative use (17b); for the ablative one an overt ablative preposition is obligatory (17c), see also (10).

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3 With verbs of asking, removal and purchase u-PPs in Russian can indicate what looks like source, but is more likely to be possessive (see Luraghi, Pinelli and Naccarato 2018 for a discussion and comparison to other Slavic languages). The fact that the ablative possessive PP complex is not limited to these verbs further shows that the u-PP is a constituent inside the L-PP and not vice versa.

4 Dutch allows the equivalent of (16b) with the preposition naar ‘to’, but this preposition cannot be used as the head of a u-PP in a possessive PP complex.
(16) a. Vor ukral u neē košelēk.
theft stole at/by her wallet

\textit{The thief stole the/a wallet from her (not: from her house or office).}

b. Idēm ko mne.
go.IMP.1PL towards me

\textit{Let’s go to my place (also: to my office).}

(17) a. Am pus la Maria nisip.
I have put sand at Maria’s.

b. Carmen merge la universitate cu metroul.
Carmen goes at/to university by underground.DEF

\textit{Carmen goes to the university by underground.}

b. A luat bani de la Maria.
has taken money.DEF.PL from at/to Maria

\textit{S/he has taken money from Maria’s place.}

I conclude that \textit{u-}PPs are not inherently unable to function as goals or sources but rather that such function depends on the inherent properties of the head preposition. The Romanian preposition \textit{la} ‘at/to’ can be adessive or directional independent of its possessive PP complex use, so \textit{la-}PPs can be directional in the same way. The Russian preposition \textit{u} ‘at/by’ is strictly adessive while the preposition \textit{k(o)} ‘towards’ is allative, hence these are the uses that Russian \textit{u-}PPs are compatible with outside the possessive PP complex. Finally, the Dutch \textit{bij} ‘by’ is strictly adessive.

The question arises how Dutch and Russian \textit{u-}PPs can nonetheless be used directionally in allative and ablative possessive PP complexes. While this shows indeed that they do not head the possessive PP complex, being merged as specifiers or adjuncts, how do they acquire the missing interpretation there? To answer this question, I adopt the usual assumption (see Koopman 2000, Zwarts 2005, Svenonius 2008, 2010, den Dikken 2010, etc.) that directional PPs have two layers: a directional head (\textit{Path}) with a locative \textit{PlaceP} complement, illustrated below with the Russian complex ablative preposition \textit{iz-pod} ‘from under’. As the structure in (18) shows, the \textit{u-}PP can then retain its adessive interpretation inside the possessive PP complex; the movement of \textit{PlaceP} to [Spec, PathP] is necessary to get the surface word order and does not affect the interpretation:

\begin{align*}
\text{(18)} & \quad \text{PathP} \\
& \quad \text{PlaceP}_1 \quad \text{Path} \quad \text{Path’} \\
& \quad \text{Place}_1 \quad \text{DP}_1 \quad \text{Path} \quad \text{Path’} \\
& \quad \text{Place}_2 \quad \text{DP}_2 \quad \text{PlaceP}_2 \\
& \quad \text{u} \quad \text{neē} \quad \text{iž} \quad \text{krovati} \\
\text{= ablative ‘from [u-PP & under the bed]’} & \quad \text{= ablative ‘from [u-PP & under the bed]’} \\
\text{= locative ‘[u-PP & under the bed]’} & \quad \text{= locative ‘under the bed’}
\end{align*}

\textit{Path’} in (18) is overt (\textit{iž}) and ablative, while for the possessive PP complex we need a null allative \textit{Path’}. Independent evidence for it in Russian comes from the directional-locative case alternation in PPs in Indo-European languages (Bierwisch 1988, den Dikken 2003, 2010, Zwarts 2005, 2006, Lestradé 2006, Caha 2010, among others). In Russian, as shown in (19) and (20), the case assigned by some locative prepositions (locative in (19a) and instrumental in (20a)) changes into accusative when the PP denotes a direction rather than a location.

(19) a. Marina bežit v gorode.
Marina runs in city.LOC

\textit{Marina is running in the city.}
b. Marina bežit v gorod. Marina runs in city.ACC Marina is running to the city.


The null allative Path can be assumed to assign the formal feature [allative] (or some counterpart thereof) to its complement PlaceP, yielding accusative case-marking on the NP. On the assumption that this feature is also assigned to the u-PP in the specifier of PlaceP we can hypothesize that the changed form (k/ko) for the allative u-PP in Russian results from the spreading of this feature (PP-internal concord).

2.2. Extraction from the possessive PP complex

Corver 1992a, b notes that while bij-PPs can be extracted out of the possessive PP complex (21a), the extraction of the L-PP is degraded (21b). Assuming that the u-PP is a constituent inside the L-PP appears to explain this asymmetry: as the L-PP without its specifier or adjunct is a segment, it should be unable to move.

(21) a. Bij wie heeft Dracula zijn tanden in de nek gezet? Corver 1992b:355-356 at/by who has Dracula his teeth in the neck put Into whose neck did Dracula put his teeth?
b. ?? In de nek heeft Dracula bij ons thuis zijn tanden bij Sue gezet. in the neck has Dracula at/by us home his teeth at/by Sue put Dracula put his teeth in Sue’s neck at our home.

While the argument does show that the u-PP is a dependent of the L-PP rather than vice versa, it is complicated by the consideration of Russian and Romanian. In Russian and in Romanian the L-PP can be extracted, either by itself (in both languages) or pied-piping the entire possessive PP complex (maybe only in Romanian).

(22) a. Iz kakoj sumki ona u nego vytaščila den’gi? from what bag she at/by him pulled.out money Out of which of his bag did she pull out the money?
b. V kakuju komnatu oni podbrošili k nemu den’gi? in which room.ACC they planted towards him money In which one of his rooms did they plant the money?
c. *U nego iz kakogo karmana vor vytaščil košelěk? at/by him from which pocket thief pulled.out wallet

c. *Iz kakogo karmana u nego vor vytaščil košelěk? from which pocket at/by him thief pulled.out wallet

Various ways of overriding the case assigned by the locative preposition have been proposed, including the hypothesis that the surface case spells out a bundle of case-features (Matushansky 2008, 2010, 2012, 2016), case overwriting (Pesetsky 2013) or movement of sub-projections of the PP (Caha 2007, 2010).

Once again, the effect can only be detected in Russian in directional possessive PP complexes. There is a contrast between the ungrammatical ablative (22c) and the grammatical allative (36) below. As (36) becomes ungrammatical, when a which-NP is used, I hypothesize which may have to do with the choice of the wh-word rather than directionality.
(23) a. La Maria pe care pat ai pus nisip?  
    Romanian
    at/to Maria on which bed have.2SG put sand
    *On which bed of Maria's have you put sand?

    b. Pe care pat ai pus nisip la Maria?  
    on which bed have.2SG put sand at/to Maria
    *On which bed of Maria's have you put sand?

In Dutch fronting the entire possessive PP complex does not amend matters for L-PPs (though for *bij-PPs such pied-piping is possible (Corver 1992a)): 7

(24) a. *[In welke zak],i heeft Nicolien de tandeborstel bij Marie t_i verstopt?  
    in which pocket has Nicolien the toothbrush by Marie hidden

    b. *[Bij Marie in welke zak],i heeft Nicolien de tandeborstel t_i verstopt?  
    by Marie in which pocket has Nicolien the toothbrush hidden

The reason for the infelicity of (21b) and the ungrammaticality of (24) seems to be the fact that Dutch, unlike Russian or Romanian, allows preposition-stranding, which makes sub-extraction of the NP out of the L-PP possible. This sub-extraction (R-extraction) makes pied-piping unnecessary, as in (25). The correlation between the availability of R-extraction and the inability of the L-PP to move suggests that Russian and Romanian resort to L-PP pied-piping only because preposition stranding is impossible there.

(25) Waar, ging de naald toen [t_i [dwars bij Marie [t_i doorheen]]].  
    where went the needle then right by Marie through
    Right through which part of Marie did the needle go?  

    While the L-PP can be extracted out of the possessive PP complex only in Russian and in Romanian, *u-PPs can be extracted in all three languages, pointing once again at a structural difference in the position of the two PPs, though not making it any clearer whether the *u-PP is an adjunct or a specifier of the L-PP. 8

2.3. Adjunct or specifier?

It does not seem to me that there is any clear-cut evidence towards one or another conclusion. The fact that the *u-PP cannot be iterated seems to argue for treating it as a specifier, but then the apparent modifier in (12) cannot be iterated either. Hypothesized movement in directional *u-PPs, as in (18), is more congenial towards a specifier analysis, but the proposed method of semantic composition (Predicate Modification) is rather expected of adjuncts, and the same conclusion seems likely in view of the fact that modifiers of the L-PP are compatible with the possessive PP complex (12). Since nothing seems to depend on this distinction being drawn, I leave the matter open.

3. The configuration of possession in possessive PP complexes

If the possessive PP complex has the structure in (13), the question arises how the possessive interpretation arises. Three types of proposals have been made to answer this question: the small-clause structure (Broekhuis and Cornips 1997, Broekhuis, Cornips and de Wind 1996,

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7 I use a directional possessive PP complex here so as to avoid the possibility of the *u-PP functioning as a separate VP-modifier (see Corver 1992a, b for a discussion of this possibility).

8 The prohibition on the movement of segments can be circumvented by first extracting the *u-PP out of the possessive PP complex and then moving the remnant. Independent evidence for the existence of such remnant movement in Russian can be drawn from the phenomenon of NP-splitting (see Pereltsvaig 2008 and references cited therein). What remains a puzzle under this hypothesis is why the entire possessive PP complex cannot be fronted.

3.1. Small-clause structure

Broekhuis and Cornips 1997 and Broekhuis, Cornips and de Wind 1996 analyze two types of external possessors in Dutch: the bij-PP in the possessive PP complex and the dative (or the second object) construction in (26a), whose Russian and Romanian counterparts are given in (26b-c):

(26) a. *Ik zet Jan/hem het kind op de linkerknie.*  
I put Jan/him the child on the left knee  
                 Corver 1992a

b. *Ona prinesla knigu Timuru na rabotu.*  
XXX she brought book Timur.DAT on work.ACC  

She brought the/a book to Timur’s office.

c. *Am pus Mariei nisip pe pat.*  
Romanian have.1SG put Maria.DAT sand on bed  
I put sand on Maria’s bed.

Broekhuis and Cornips 1997 and Broekhuis, Cornips and de Wind 1996 propose that the constituency in (13) arises as a result of movement (locative inversion), with the underlying small-clause structure accounting for the possessive relation arising between the complement of bij and the ground in the L-PP (27a). To derive the dative counterparts of possessive PP complexes, as in (26a), they supplement (27a) with the questionable head-excorporation out of a specifier position, where the null equivalent of bij incorporates into the verb (27b).

(27) a. PP = (3a), adapted from Broekhuis and Cornips 1997

b. VP = (26a)

Scholten 2018 examines dialectal variation in external possession expressed as a dative, as in (26a) and (28), and adopts a possessor-raising analysis along the same lines as in (27b), but (since she does not consider external possession in bij-PPs and does not postulate a null preposition) without assuming bij-incorporation. She further extends this proposal towards
PP-internal possessees, as in the explicitly considered (29) and in the casually mentioned (26a).

(28) Ik was hem de handen. \(\text{Scholten 2018:181}\)

\[\begin{align*}
\text{I wash him.DAT the hands} \\
\text{I wash his hands.}
\end{align*}\]

(29) Ria aaide hem net over de wang. \(\text{Scholten 2018:80}\)

\[\begin{align*}
\text{Ria stroked him just over the cheek} \\
\text{Ria just stroked him on the cheek.}
\end{align*}\]

Finally, XXX, dealing with the Russian dative, as in (26b), appeal to the presence of a null preposition in what looks like a surface dative (see (14) for novel supporting evidence).

Two reasons can be provided for not treating (26) and (29) in the same way. Firstly, in Russian the case-marking on the possessor varies in function on its thematic role: while PPs specifying body parts as in (29) require accusative on the possessor (30a), allative possessive PP complexes necessitate dative (30b) or even a PP.

(30) a. Ria pogladila ego\/*emu po ščéke.
Ria stroked *him.ACC/DAT along cheek
\[\text{Ria stroked him on the cheek.}\]

b. Posylka prišla *ego/emu na rabotu.
parcel arrived *him.ACC/DAT on work
\[\text{The parcel arrived to his work.}\]

Secondly, external possessors of locative PPs in the direct object position are restricted to the part-whole relation and must be animate, both in Russian and in Dutch (31),\(^\text{10}\) while the possessive PP complex allows inanimate possessors in Dutch (see (54) below) and are not limited to the part-whole relation (see most examples in section 2):

(31) a. * Ria pogladila mašinu po kapotu.
Ria stroked car.ACC along hood

b. *Ik heb de auto op het dak geslagen.
I have the car on the roof hit

However, setting dative possessors aside, (27a) appears to have a clear advantage over (13) in its ability to account for the relation between the NP in the bij-PP (the possessor) and the ground NP in the L-PP (the possessees). This impression is, however, misleading.

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\(^9\) Romanian *-PPs and their corresponding datives can be doubled by a dative clitic, as in (i-ii), or even replaced by it (iii). A discussion of the syntax of this doubling would take us too far afield, but the phenomenon itself is highly relevant and I will return to this in section 4.3.

\(^10\) I hypothesize that the reason for this is a combination of two factors: the possessive relation involved (control, which requires an animate possessor, see section 4) and the semantic composition: the direct object specifying the location of the event, the locative PP must denote a location that coincides with that, yielding the obligatory part-whole relation between the direct object and the locative PP.

The animacy restriction observed by Neumann 1996 for German datives is of a different nature, as shown in section 4, see also Wierzbicka 1988:198-204.
First of all, to achieve this result, a number of additional steps are necessary. The small-clause structure should give rise to a proposition (*the left knee is Jan’s*), which is both a highly unlikely complement to a preposition and would give rise to the wrong interpretation (putting the child into a set of possible worlds). To avoid this problem it becomes necessary to assume that the L-PP is really the predicate of a small clause contained in a reduced relative, which should in principle be an island for extraction (contra (25)).

Secondly, in Dutch, unlike in Russian, *bij*-PPs cannot be used as main predicates with a possessive interpretation (see section 1), so the *bij*-PP in (27a) should in principle only have either the household interpretation or the apudlocative one, with cases like (32) unaccounted for, so that (32b), for instance, would be interpreted as “I left the keys in the car that is at Marie’s place or next to Marie”.

(32) a. Ik heb de sleutels *bij de secretareses op tafel* laten liggen.
I have the keys at/ by the secretaries on table let lie
*I left the keys on the secretaries’ table.*

    b. Ik heb de sleutels *bij Marie in de auto* laten liggen.
I have the keys at/ by Marie in the car let lie
*I left the keys in Marie’s car.*

Thirdly, the possessive interpretation of *u*-PPs seems to be limited to very few syntactic environments. In addition to the ground in the L-PP inside the possessive PP complex, *u*-PPs can link to direct (nominative and accusative) arguments, as in (33), but not to NPs in oblique cases, as in (34a), or to non-locative PPs, as in (34b):

(33) a. Bij deze fiet is het stuur kapot.
by/ at this bicycle is the steering broken
*This bicycle’s steering is broken.*

    b. Ona otbila u čajnika nosik.
she broke at tea pot GEN spout ACC
*She broke the tea pot’s spout off.*

    c. Am stricat volanul la mașină.
have 1SG broken steering wheel DEF at/to car
*I broke the steering wheel of the car.*

(34) a. Ona znaet u Vasi staršego syna.
she knows at/ by Vasya elder son ACC
*She knows Vasya’s elder son.*

    b. #Ona pomogaet u Vasi staršemu synu.
she helps at/ by Vasya elder son DAT
*At Vasya’s she helps the elder son.*

    c. *Êto zavisit u Vasi ot staršego syna.
this depends at/ by Vasya from elder son

Even setting dative arguments aside, the question arises why (34b) and (35) are strictly ungrammatical. If the complement of *u/bij* forms a constituent with the L-PP, *bij*-PPs should be able to appear wherever possessed NPs can, contrary to fact:

(35) a. *Ik heb jou bij Jan met het/z’n haar verbaasd.*
I have you by Jan with/the his hair amazed

    b. *Lina prišla u Maši s podrugoj.*
Lina came at/ by Masha with friend

Fourthly, there are instances of the possessive PP complex where the role of the L-PP is filled by a locative *wh*-word (25), (36) that does not seem to allow possessive modification in
principle. (The change in the word order inside the possessive PP complex may be due to the wh-word moving to the edge of the PP.)

(36) Kuda (k) tebe možno položit’ britvu – v rjukzak ili v sumku?
where.to towards you allowed.to.put razor in backpack or in bag

*Where in your possessions can I store the razor, in your backpack or in your bag?*

I conclude that the possessive relation in the possessive PP complex cannot be derived by assuming that the complement of *bij* forms a constituent with the L-PP.

### 3.2. ApplP as the locus of possessive semantics

The hypothesis that ApplP confers the status of a possessor to its specifier (see Pylkkänen 2002 for the original proposal) has been appealed to in the context of both datives associated with a direct argument (33) and of *u*-PPs. One such proposal (for dative external possessors) is exemplified in (37).

(37) PredP

\[
\begin{array}{c}
\text{DP} \\
\text{Dima}
\end{array}
\]

Pred

\[
\begin{array}{c}
\text{Pred'} \\
\text{Pred'}
\end{array}
\]

ApplP

\[
\begin{array}{c}
\text{DP} \\
\text{FSGDAT}
\end{array}
\]

Appl

\[
\begin{array}{c}
\text{PredP} \\
\text{PredP}
\end{array}
\]

Pred

\[
\begin{array}{c}
\text{NP} \\
\text{tp}
\end{array}
\]

N

\[
\begin{array}{c}
\text{PRO} \\
\text{PRO}
\end{array}
\]

friend.INS

*‘Dima was a friend to me’, Grashchenkov and Markman 2008*

Variations on the same view have been proposed for *u*-PPs by Tsedryk 2008, 2017, Markman 2009, Livitz 2012 (with the relevant projection identified as a possessive phrase, PossP), and Pshekhotskaya 2012. All of these proposals are characterized by the redundant simultaneous presence of a *u*-PP (with the role of the preposition generally left unspecified) and of an ApplP or a similar phrase as the putative source of the possessive semantics. However, assuming the original proposal for ApplP (Pylkkänen 2002), Appl\(^0\) is interpreted in function of what it merges with. With two NPs (for low applicatives, where an ApplP is merged with the verb) Appl\(^0\) encodes a possessive relation. However, when merged with a non-nominal constituent Appl\(^0\) relates an argument to an event, which means that in (37) and similar structures it should relate either the dative or the *u*-PP to the event denoted by its complement (being a friend, in (37)). The role of the preposition *u/bij/la* remains mysterious, as does how this preposition interacts with the different flavors of Appl (and why it should be there at all, if the specifier of ApplP should be filled by an entity per the original proposal). Finally, if a possessor-raising approach (cf. Grashchenkov and Markman 2008) is adopted for possessive PP complexes (38), then, as noted in XXX, it would involve movement to the complement position of a preposition, which is generally considered to be impossible, and movement to a thematic position ([Spec, ApplP]) if *u/bij/la* are assumed to be vacuous.

(38) L-PP/ApplP

\[
\begin{array}{c}
\text{p}^0 \\
\text{bij}
\end{array}
\]

\[
\begin{array}{c}
\text{L-PP} \\
in
\end{array}
\]

\[
\begin{array}{c}
\text{DP} \\
de keel Marie
\end{array}
\]
A non-structuralist variant of this view is the proposal of Padučeva 2004, who analyzes “possessor-splitting” as a change in the argument structure of the verbs involved (in her terms, a diathetic shift). The diathetic shift is characterized, according to Padučeva, by the addition of another argument slot to the verb, that of the Possessor. This view, however, cannot straightforwardly deal with the possessive PP complex, since there the u-PP combines with another PP rather than with a verb.

Summarizing, due to the presence of an overt preposition the ApplP-based proposals advanced in order to account for external dative possessors cannot be extended to u-PPs.

3.3. The possessive PP complex as an intersection of locations

The third approach to possessive PP complexes, focusing on Russian, comes from XXX. Adopting the structure (13) proposed by Corver 1992a, they suggest that the possessive interpretation is derived by Predicate Modification (Heim and Krätzer 1998): assuming that the u-PP with an animate complement is interpreted as its dominion (the sphere of influence or control of an animate individual interpreted as a set of locations where that individual has influence), it can be intersected with the set of locations denoted by the L-PP. As a result, the possessive relation between the controller and the ground in the L-PP is derivable as an conversational implicature: to have influence in a location closely associated with a given ground, an individual should also have influence over the ground itself. XXX further show that this inference is defeasible: the ground can be explicitly indicated as being in someone else’s possession: as illustrated in (39), from XXX, where NP$_2$ contains an overt possessor *papinoj ‘daddy’s’, cužoj ‘other’s’.

(39) Vor vytaščil košelěk u neě iz papinoj/cužoj sumki.
   The thief pulled out wallet at her out of daddy’s/other’s bag.

Adopting this proposal here, I will nevertheless demonstrate the need for a more refined approach. More specifically, as we will see below, the possessive relation obtaining between the complement of the u-PP and the ground in the L-PP is not constrained in the same way in the three languages under consideration, and when we compare that to the association arising between the direct argument possessee and the complement of the u-PP, the constraints are yet different. The hypothesis that possessive PP complexes are interpreted as locations leads us to expect the same restrictions on the u-PP when it functions as a VP modifier and when it appears inside a possessive PP complex, contrary to fact. In the remainder of this paper I will discuss how this unexpected distribution can be obtained.

4. The semantics of locative possession

Following with some adjustments Evans 1995, Vikner and Jensen 2002, Storto 2003, Arylova 2013, and many others (see Karvosvskaya 2018 for discussion and references), I assume that possession is not one homogenous notion, but rather a set of related notions consisting of a number of intersecting or concentric spheres. Thus adnominal possession involves a number of relations that can be encoded by a Saxon genitive, with a genitive preposition or case, or as construct state. Some of them are viewed as inherent (specified in the argument structure or qualia structure of the head noun), while others are supposedly free. The kinship relation, as in (40a), is usually viewed as inherent, while the vague and contextually specified connection as in (40b) is generally considered to be free. In addition to these, adnominal possession can encode the holistic or constitutive relation (the part-whole relation), as in (40c), the agentive relation (40d), the control or ownership relation (40e), and the various qualia relations in which the notions of the eventive theme role (40f), the telic role (40g), the product role (40h), etc., are often invoked. Further relations encoded with the same syntax involve quality (41a), constitution (41b), apposition (41c), and potentially many others (see Dowty and Barker 1992).
Intersecting location and possession

(40) a. Luna’s mother
b. the car’s human
c. the tree’s branches
d. Leonardo’s painting
e. my keys
f. the city’s destruction
g. your favorite chair
h. the book’s author

(41) a. mountains of this height
b. a ring of purest gold
c. the city of New York

Needless to say, it is not the case that the full range of these relations is available for any construction called possessive. As noted by Brugman 1988, Belvin 1996, Belvin and den Dikken 1997, Ritter and Rosen 1997, etc., with inanimate subjects the verb have can encode only inalienable possession, not allowing alienable direct objects (i.e., direct objects that are not inherently relational), as in (42). The same constraint has been noted for the possessive use of the proposition la- in Palestinian Arabic (Boneh and Sichel 2010, which discuss the part-whole relation as the core of the phenomenon) and for English post-nominal possessors (Dowty and Barker 1992).

(42) a. John has a hat. Ritter and Rosen 1997
b. *The table has a hat.
c. John’s cheeks have/are the colour of roses.

Likewise, the Russian preposition u ‘at/by’ can be used with inanimate possessors only if the possesssee is a relational noun or denotes an inalienable part of the whole:11

(43) a. U ètogo romana byl interesnyj sjužet/ xorošij izdatel’.
at/by this novel was interesting plot/ good publisher
This novel had an interesting plot/a good publisher.
b. #U ètogo romana byl xorošij magazin.
at/by this novel was good store
#This novel had a good store.

(44) a. U ètogo stolika byli krivye nožki.
at/by this table were crooked legs
This table had crooked legs.
b. #U ètogo stolika byla šljapa.
at/by this table was hat
#This table had a hat.

With animate possessors at least two distinct relations have to be distinguished: the already familiar part-whole relation and control (which will presently be shown to involve two distinct notions). Thus a range of studies, including Seiler 1973, 1983, Chappell and McGregor 1996a, Hagège 1993, Heine 1997, Herslund and Baron 2001, and Stassen 2009 suggest two sides to possession: sameness of location (cf. the spatial unity of Arylova 2013) and control, as defined in (45). The same notion is invoked by Cienki 1995 (who speaks of dominion), Brugman 1988 (discussing a schema of interest or involvement), Belvin 1996

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11 I include in the notion of a sub-part of the so-called abstract possession (see Heine 1997, Stassen 2009, among others), i.e., inalienable properties such as physical characteristics or content, but not such concepts as agent or originator. While it is unclear whether Boneh and Sichel 2010 count this latter as part of their abstract Part-Whole relation, I explicitly exclude them here.
Intersecting location and possession

(control), Zimmerling 2000 (disposal), Arylova 2013 (c-control, as distinguished from spatial unity, i.e., the part-whole relation), etc.

(45) X [the possessor] can expect Y [the possessee] to be in the same place as X when X wants, and X can do with Y what X wants. Evans 1995:146

Importantly, the control relation (as diagnosed in (46) by the applicability of a location question) is limited to animate possessors, as also shown by Tham 2006, who differentiates between the possession-have and the control-have, aka topic-have (assimilating the latter with the locative interpretation identified by Gruber 1976, see also the human location of Ritter and Rosen 1997 and the L-possessive of Kondrashova 1996).

(46) - Where are the mirrors? Tham 2006:144
- #The bathroom has them.

The behavior of u-PPs across languages and configurations suggests that the notion of control must be further subdivided into two separate ones: the narrower notion of involuntary control (which involves an animate individual’s body and items in contact with it) and the wider one of influence, or voluntary control (which involves their household, work place and similar spheres of influence).

Evidence for the latter comes, first and foremost, from the dedicated lexical items with this meaning, such as the French preposition chez (see Longobardi 2001) and the Hebrew preposition ecel ‘chez’ (originally ‘near, at’ in Biblical Hebrew, see Waltke and O’Connor 1990:11.2.3), both of which can also exhibit more abstract meanings:

(47) a. Chez nous, on a toujours bien mangé. chez us 3SG.IMPERS has always well eaten
They have always eaten well in our region.

b. Ma nišma ecel Yosi? what hear.PASS chez Yosi
How is it with Yosi?

Evidence for connecting this lexical entry with possession comes from the locative use of u-PPs with animate complements (see section 4.3), as in (48):

(48) a. U Maši vsegda čisto. at/by Masha always clean
It is always clean at Marie’s.

b. Bij Marie is het altijd schoon. at/by Marie is it always clean
It is always clean at Marie’s.

c. La Maria e mereu curat. at/to Marie is always clean
It is always clean at Marie’s.

Tham 2006, Sæbø 2009 and Le Bruyn, de Swart and Zwarts 2016 identify an additional use of have (i) where it encodes a contextually determined relation that is compatible with a definite complement, unlike the possession-have, and (according to Tham 2006) with an inanimate subject, unlike the control-have; Le Bruyn, de Swart and Zwarts 2016 furthermore link these additional uses to the presence of an overt indefinite article on the direct object of have in Romanian.

(i) - We need more trimmings for the tree.
- The tree has all those lights we got last year. It looks fine. We need something for the fireplace, though.

It seems likely furthermore that this “focus-have” (Tham 2006) is linked to the underspecified adnominal possession identified by Storto 2003.
Evidence for the more limited involuntary control comes from the tighter restrictions on the interpretation of $u$-PPs in certain contexts, but also from the various external possessor constructions. Thus Rooryck 2017 (citing Bally 1926, Diffloth 1974 and Guéron 2006) notes that in the French external possessor construction exemplified in (49) the dative clitic can function as the possessor of the weak definite in the direct object position only if the denotatum of the former is a body part or, in somewhat peripheral cases, an article of clothing or adornment, but only if in contact with the body. The relevance of contact rather than pure inalienability is also noted for the parallel construction in Hebrew by Berman 1981 and in German by Heine 1997:17-18 (for further cross-linguistic data see Nichols 1988, Iordanskaja and Mel’čuk 1995, Chappell and McGregor 1996b, Tsunoda 1996 and Haspelmath 2017).

(49) Pierre, lui$_i$ a ouvert la$_i$ chemise.  
Pierre him/her.DAT has opened the shirt

Pierre$_i$ opened his$_{p,i}$ shirt.

As will be shown by the interpretation of $u$-PPs in various syntactic contexts, different flavors of possession there need to be postulated as independent lexical entries rather than as a kind of ambiguity inherent in the unique possessive or apudlocative preposition. Of the many possessive relations discussed above three will be shown to be relevant: the part-whole relation (which turns out to be the only one available to inanimate possessors) and the two control relations available to animate possessors: involuntary control (permitting only those possessees that are in contact with the possessor) and voluntary control or dominion (which I will treat as a locative relation denoting the set of all locations under the influence of the possessor). As a result, the restriction of some contexts to animate possessors arises from the fact that the independently available relations expressed in these contexts and sharing “the possessive encoding” are pragmatically restricted to sentient individuals.

(50) inanimate

\[
\text{part-whole} \rightarrow \text{contact} \rightarrow \text{sphere of influence}
\]

animate

All these relations imply “affectedness” (Anderson 2017, Deal 2017, etc.) that is known to characterize those types of “possessor raising” constructions that Deal 2013, 2017 argues to involve base-generation of the possessor in its surface position. More precisely, any event occurring as part of an individual, in contact with an individual or in the sphere of influence of an individual would necessarily affect that individual. As a result, we automatically obtain the speakers’ intuition that using an external possessor and, more specifically, the possessive PP complex represents the possessor as affected by the event (cf. Paykin and van Peteghem 2003, Leont’ev 2005, Nam 2013, among others, for Russian; Dutch and Romanian speakers reported the same intuition).

13 While XXX distinguish the household interpretation (cf. the English at Paola’s/at the grocer’s) from the domination interpretation, I collapse the two into one category, since $u$-PPs do not differentiate between them.

14 I leave open the question of where kinship nouns fit in this schema. The fact that the configuration in (54) does not allow kinship nouns suggests that they do not pattern with body parts and hence are not included in the part-whole relation (which is also excluded on purely semantic grounds). For some discussion of how kin terms can typologically form a different hierarchy see Nichols 1988 and Dahl and Koptjevskaja-Tamm 1998, 2001. It is likewise possible that kin-denoting nouns being, like author or publisher, obligatorily relational do not introduce any special “possessive” semantics but simply use independently available mechanisms, as with adnominal possession. I leave this matter for future investigation.
4.1. Flavors of locative possession

Up until now we have been tacitly presupposing that the possessive PP complex in Russian, Dutch and Romanian involves the same phenomenon: a *u*-PP interpreted as indicating a possessor by virtue on the configuration it appears in together with its particular reading as the dominion of a sentient individual. However, a more careful investigation of the full range of the data sheds some doubts on this assumption. Specifically, as we will now see, *u*-PPs do not introduce the same possessive relations in different configurations.

As the following examples show, the hypothesis that a *u*-PP denotes the dominion of an animate individual is supported by Russian (51) and Romanian (52) *u*-PPs, which disallow inanimate complements in the possessive PP complex. Conversely, Dutch allows them (53):

(51) a. *Ja vytaščila zapasnoe koleso u mašiny iz bagažnika.
    I pulled spare wheel at/ by car out of trunk
    intended: *I pulled the spare wheel out of the trunk of the car.

b. *Ona sprjatala kluč (k) mašine pod kapot.
    she hid keys towards car under hood.ACC
    intended: She hid the keys under the hood of the car.

(52) *? Am pus bomba la avion pe aripă.
    have.1SG put bomb.DEF at/ to plane on wing
    intended: *I have put the bomb on the wing of the plane.

(53) a. Bij het vliegtuig op de vleugel zat een rare vlek.
    by the plane on the wing sat a strange spot
    There was a strange spot on the wing of the plane.

b. Ik heb het machinegeweer bij het vliegtuig op de vleugel gemonteerd.
    I have the machine gun on the wing attached
    I have attached the machine gun on the wing of the plane.

Examples (53) in Dutch suggest that the Dutch *bij*-PP denotes the part-whole relation, yet the dominion reading (32) is also possible.

The first natural hypothesis seems to be that the interpretation of the *u*-PP is different in Russian (where it cannot be non-possessive with animate complements) and in Dutch, where it systematically retains the apudessive interpretation. Yet the situation is yet more complex than such a simplistic description would indicate: in a different syntactic environment the restrictions on the possessor in the *u*-PP are different.

As the following examples indicate, the association between the direct argument (object or subject) possessee and the complement of *bij* in Dutch (whether animate or inanimate) is restricted to the part-whole relation (54). In other words, it is more restricted than the association arising in the possessive PP complex, which permits both the dominion reading for animate complements of *bij* (32) and inanimate possessors (53).15

(54) a. Ik heb bij deze fiets het stuur verbogen.
    I have at/ by this bicycle the steering bent
    *I have bent the steering of this bicycle.

b. Ik heb bij deze patiënt de penis amputeerd.
    I have at/ by this patient the penis amputated
    *I have amputated this patient’s penis.

---

15 There is individual and dialectal variation with respect to which body-parts can be externally possessed without an overt possessive pronoun. See Scholten 2018 for a discussion of this variation in Dutch and Rooryck 2017 for the insight that weak definites are implied. While in French all semantically appropriate nouns (body parts and items in contact with the body) can function as weak definites, Dutch is more constrained.
c. *Ik heb bij deze kerel de broek gestolen.
   I have at/ by this guy the pants stolen

d. Ik heb bij deze kerel de woonkamer geverfd.
   I have at/ by this guy the living room painted
   I have painted the living room in this guy’s house.

The contrast between (32) and (54b) cannot be attributed to the bij-PP and therefore has to be due to the different configurations that it is found in.

The situation appears to be reversed in Russian. Association with the direct argument is not restricted either to the part-whole relation or to animate possessors (55). Conversely, the possessive PP complex is only possible for animate possessors (51).17

(55) a. Lena slomala ramu u velosipeda. Russian
   Lena broke frame at/ by bicycle
   Lena broke the bicycle’s frame.

b. Ženya slomala u druga očki. Zhenya broke at/ by friend glasses
   Ženya broke her friend’s glasses.

It seems impossible, given these contrasts, to maintain that the semantics of u-PPs is the same across different configurations, which argues against the straightforward analyses of the possessive PP complex as a small clause or as an instance of Predicate Modification – clearly, some additional factors are involved.

4.2. The specter of possessive relations arising with u-PPs

To explain the contrasts above, I propose to appeal to two factors: the specific possessive relations that u-PPs can encode under various circumstances and the semantic type by which these relations are encoded. Specifically, locative PPs can in general denote properties of entities (sets of individuals), spatial properties (sets of locations), or event properties (sets of events), with each of these denotations being independently motivated by their use as main predicates, NP-internally or as VP adverbials (cf. Zwarts and Winter 2000, Kracht 2002). Given this, I suggest that the u-prepositions of Russian, Dutch and Romanian can all three denote various possessive relations, yet in different ways in the three languages.

As discussed above, three possessive relations can arise with u-PPs: the part-whole relation, the (involuntary) control relation (for animate individuals only, comprising body parts and items in contact with the possessor) and the dominion relation (also available only for animate individuals and giving rise to the sphere of influence readings).

All three languages allow their u-PPs to be interpreted as dominions of animate grounds (the L-possessive reading) in the context of a possessive PP complex, yet where it comes to u-PPs possessively associated with arguments, this reading is not available. To capture this

16 Needless to say, as with Romance external possessors, the choice of predicates permitting association of their arguments with u-PP is limited to those that affect the possessor.

17 Here and below I will use directional (allative or ablative) possessive PP complexes for diagnostics, because static ones cannot be reliably distinguished from a combination of two independently merged PPs, one of which is a u-PP, as in (i), which is a description of a car:

   (i) U mašiny v bagažnike raspolagaetsja uvesistyj subvufer.
      at/ by car in trunk is located weighty subwoofer
      The weighty subwoofer is located in the trunk of the car.

   When the possessive PP complex constituency is forced, e.g., by using a fragment answer, an inanimate ground in the u-PP is sharply ungrammatical:

       where is located subwoofer at/ by car in trunk
       Where is the subwoofer located? – In the trunk.
fact, I propose that the dominion interpretation is purely locative: it yields the set of locations in the sphere of influence of the animate ground. Having this denotation, it can be intersected successfully with the denotation of any locative PP, giving rise to the possessive PP complex: the set of locations that are in the relevant sphere of influence and in the denotation of the L-PP, as suggested by XXX. To illustrate the point, consider (56); for the sake of simplicity, the potential weak definite the car is treated as a regular definite.

(56) a. bij Marie in de auto
   by Marie in the car
   in Marie’s car

b. [bij Marie] = the set of locations in Marie’s sphere of influence

c. [in de auto] = the set of locations in the contextually unique car

As noted above (48), in all three languages under consideration u-PPs, when used as VP-modifiers, can have the dominion interpretation. Assuming as we did for the possessive PP complex that this interpretation is coded as a set of locations, a type-shifting operation is necessary that would make it possible for them to be reinterpreted as purely locative event modifiers (possibly, as vP-adjuncts). One formulation of such a type-shifting operation is provided in (57):

(57) For the set of locations S the type-shifting operation L2E is defined:

L2E(S) = λe : e is an event . ∃s ∈ S [e occurs at s]

Since the set of locations in the sphere of influence of an animate individual includes that individual’s body, examples like (3), (12) and (21), where the possessive PP complex relates to a body part, do not give rise to any problems, and neither do examples like (7) and (17), where u-PPs are used as VP-modifiers or as paths. Examples like (35), on the other hand, are ruled out on semantic grounds: a location-denoting u-PP may not be merged with a non-locative PP. Finally, as noted by XXX, an event occurring in the sphere of influence of an individual affects that individual, giving rise to the affectedness effect that is known to characterize possession expressed by u-PPs in the possessive PP complex.

Because only animate individuals can have a dominion (cf. the control-have of Tham 2006), we predict that the possessive PP complex is restricted to animate possessors. As also noted above, this prediction is correct for Russian (51), as well as Romanian (52), but not for Dutch, where the possessive PP complex allows inanimate possessors (53). Assuming that the part-whole relation is available in the possessive PP complex in Dutch but not in Russian or in Romanian, the natural question arises of why this should be the case.

One simple and wrong hypothesis would be that Dutch u-PPs but neither Russian nor Romanian u-PPs can give rise to the part-whole relation, which is not restricted to animates.  

18 Following XXX, I assume that a set of locations related to a certain ground object is unlikely to be in an individual’s dominion without that object itself being in the dominion of that individual, which gives rise to the possessive inference. That the inference is pragmatic in nature and does not relate to possession directly can be shown by the consideration of the following examples:

(i) # u Maši na ulice
at/by Masha on street

(ii) na Mašinoj ulici
on Masha’s street

The street in (i)-(ii) is not in Masha’s sphere of influence even if a possessive relation can be established. Likewise, locations that do not facilitate the possessive inference cannot be used in L-PPs: whereas a house can be in the sphere of influence of an individual, the space under it usually isn’t, explaining the contrast in (iii):

(iii) u Maši pod domom/krovatju
at/by Masha under house/bed

under Masha’s house/bed
That this simplistic hypothesis is wrong is shown by the fact that the part-whole relation is possible in all three languages when a $u$-PP is associated to a direct argument, as in (58):

(58) a. Am stricat volanul la mașină. Romanian
    have.1SG broken steering wheel.DEF at/to car
    I broke the steering wheel of the car.

b. Lena slomala ramu u velosipeda. Russian
    Lena broke frame at/by bicycle
    Lena broke the bicycle’s frame.

c. Ik heb bij deze fiets het stuur verbogen. Dutch
    I have at/by this bicycle the steering bent
    I have bent the steering of this bicycle.

Why is the part-whole relation available in (58), but not in (51) or (52)? To account for this fact I propose that this relation, unlike the dominion relation, is encoded as a property of events rather than locations: not as the set of locations that form part of the ground (i.e., the spatial overlap or unity relation, cf. Aarylova 2013), but as the set of events that occur at the ground, hence in one of such locations, i.e., as part of the ground. Naturally, event-modifying $u$-PPs can be merged as adjuncts in the extended VP but not as part of a possessive PP complex.

The affectedness associated with “possessor-raising” structures as in (58) arises as a result, while the possessive relation (restricted here to the part-whole relation) is once again a pragmatic consequence. To clarify, I assume, as seems to be compatible with its distribution, that the $u$-PP can be merged as a VP-adjunct and hypothesize that it behaves in the same way as a regular locative PP (see Kracht 2002): if an event occurs at a location, at least one of its arguments (generally, the internal one) has to be present at that location. Given that the location in question is an individual, if an event occurs as part of an individual, likewise, at least one of its arguments, the internal one, has to be part of that individual (and the same is true for entering or exiting possession). As a result, the possessive relation can be derived from the fact that the part-whole $u$-PP functions here as a VP-modifier.

Summarizing, I have proposed that $u$-PPs can encode two possessive relations: the part-whole relation and the dominion. I further postulated that the part-whole $u$-PP is an event modifier while the dominion $u$-PP is a spatial one, which can nonetheless be coerced into an event modifier, as in (57).\footnote{In addition, because both relations are not encoded in the terms of properties (sets of individuals), it is predicted that they cannot be used as NP-modifiers. This seems to be correct for Russian, but I will not elaborate this point here.} As a result, I have derived what the three languages have in common: the fact that $u$-PPs associated with inanimate direct arguments are restricted to the part-whole relation and that $u$-PPs in the possessive PP complex trigger the dominion interpretation, only allowed for animate individuals. What still needs to be explained is (a) that Dutch allows inanimate entities in the possessive PP complex and (b) that association to direct arguments in Russian is not restricted to the part-whole relation. How do the additional options become available?

4.3. Potential reasons for variation in the use of $u$-PPs

Two additional points of contrast between Russian and Dutch can be relevant for explaining the patterns above. On the one hand, in Russian the preposition $u$ ‘at/by’ is used as a default possessive preposition, which Dutch does not allow. On the other hand, in its apudlocative use the Russian preposition $u$ ‘at/by’, unlike its Dutch counterpart bij ‘by’, is incompatible with animate complements (see Seliverstova 2004:816-850, also discussing the conditions on the use of $u$ as opposed to około ‘around’ and vozle ‘next to’).
The possessive use of the preposition *u* ‘at/by’ is illustrated in (59). As is easy to see, it is unconstrained with animate possessors, though with inanimate ones it is limited to the part-whole relation (44) or relations present in the argument structure of the possessum (43a).

(59) a.  U Štirlica byl nordskij karakter.
    at/by Stirlitz was nordic disposition
    *Stirlitz had a nordic disposition.*

b.  Moja mašina byla togda u mamy.
    my car was then at/by Mommy
    *Mother had my car then.*

c.  U Bonda byl surovij načal’nik.
    at/by Bond was strict boss
    *Bond had a strict boss.*

The apudessive use of the apudlocative preposition *u* ‘at/by’ is illustrated in (60a), its directional (apudlative) counterpart is the preposition *k* ‘towards’ in (60b), which is not restricted to animates. The source use of the preposition *u* ‘at/by’ is only available for verbs of asking, removal and purchase and appears to be possessive rather than apudelative (see fn. 3).

(60) a.  U doma/#Lizy stojali tri ženščiny.
    at house/Liza stood three women
    *There were three women standing near the house/at Liza’s.*

b.  Učeniki podošli k učitel’nice/stolu.
    students approached towards teacher/table
    *The students approached the teacher/table.*

Given these lexical distinctions between *u* ‘at/by’ and *bij* ‘by’, it seems reasonable that *u*-PPs can encode a number of different meanings sharing some common cognitive core, which I will assume to be spatial proximity. Crucially, it is not the case that *u*-prepositions encode spatial proximity – rather, *u*-prepositions have a number of different meanings, distinct from language to language, and it is the common core of spatial proximity that triggers the lexical insertion of this particular phonological form.

Having established these additional constraints, we have now at our disposal the means of accounting for the distinctions between Dutch and Russian *u*-PPs. To determine which of the two points of dissimilarity between Russian and Dutch *u*-PPs is responsible for which factor of variation in associated *u*-PPs, we turn to Romanian.

Unlike Russian and like Dutch, Romanian does not use *la*-PP to express general static possession, showing that the restriction of the possessive PP complex to animate possessors in Russian and in Romanian, but not in Dutch does not correlate with the availability of the wide-scope possessive reading for *u*-PPs:

(61) a.  *La mašina asta sunt cinci roți.*
    at/to car.DEF this are five wheels
    intended: *This car has five wheels.*

b.  Het boek is bij Jan gebleven.
    the book is by Jan stayed.

---

20 As is well known, in present-tense existentials in Russian the copula is overt (*est’) if the possessee is presupposed to exist and absent if its existence is asserted (see Seliverstova 1973, Isačenko 1974, Chvany 1975, Šatunovskij 2000, Yanko 2000, Timberlake 2004:313, etc., for details). I avoid this complication by using the past tense.

21 I borrow the various apudlocative terminology from the literature on spatial case-marking, see Comrie 1999 and Creissels 2009; for its application to a preposition, Authier 2012.
The book remained next to Jan.
The book remained at Jan’s.
≠The book remained in Jan’s possession.

However, the possessive reading for u-PPs in Russian, but not in Dutch or in Romanian can account for the greater permissiveness of Russian where it comes to u-PPs associated with direct arguments (55). Assuming that the possessive u-PP in Russian can function as an event modifier along the same lines as suggested above for the dominion reading of the u-PP, we obtain the more permissive possessive relation in the same manner as above.

Two pieces of evidence can be adduced in favor of this hypothesis. On the one hand, u-PPs in Russian can indicate the frame of reference, as in (62) from XXX. Dutch bij-PPs do not have this option.

(62) Čto u nas protonosit’? – U nas cunami, ne znam es’che, gde. what at/ by us happens at/ by us tsunami not know.1sg yet where What have we got? – We’ve got a tsunami, don’t yet know where.

On the other hand, Romanian seems to permit the same range of possessors for la-PPs as Russian – but only if a dative clitic is present:

(63) a. *Am stricat mașina la Maria. have.1sg broken car.def at/to Maria
b. I-am stricat mașina la Maria. 3sg.dat-have.1sg broken car.def at/to Maria I’ve broken Mary the car.

Examples like (63b) support the intuition that the wider range of possessive relations available for u-PPs associated with direct arguments in Russian is due to the fact that Russian allows its u-PP to express general possession. Specifically, I suggest that correlation of the wider range of interpretations with clitic-doubling arises from the fact the true possessive use of la-PPs requires clitic-doubling. Independent evidence for treating clitic-doubled la-PPs in Romanian as datives indicating transfer of possession is given in Cornilescu, Dinu and Tigău 2017.

I summarize the relevant differences in Table 1. As is easy to see, I have attempted to link the greater permissiveness of Russian and Romanian regarding the linking between u-PPs and direct arguments to the independently attested additional interpretation associated with u-PPs in isolation in these languages. While on the one hand this requires us to abandon the hypothesis that u-PPs have the same meanings in different configurations, this move has been motivated on independent grounds: what unifies various u-PPs and is reflected in the same lexicalization is a common semantic core of spatial proximity, but not the same meaning.

Table 1: possessive restrictions on u-PPs

<table>
<thead>
<tr>
<th></th>
<th>Rus.</th>
<th>Dutch</th>
<th>Rom.</th>
</tr>
</thead>
<tbody>
<tr>
<td>animacy restriction in the possessive PP complex</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>part-whole restriction on association with direct arguments</td>
<td>no</td>
<td>yes</td>
<td>w/o clitic</td>
</tr>
<tr>
<td>possessive use of u-PPs</td>
<td>yes</td>
<td>no</td>
<td>w. clitic</td>
</tr>
</tbody>
</table>

This hypothesis, while explaining what happens with u-PPs associated with arguments, says nothing about the tighter constraints on the possessive PP complex in Romanian and in Russian, compared to Dutch: Russian (51) and Romanian (52) disallow inanimate possessors in the possessive PP complex and Dutch allows them (53). This distinction is furthermore complicated by the fact that, predictably, Dutch bij-PPs do not allow inanimate complements.
to acquire a dominion reading. Thus (64) cannot be used in the context provided even under the assumption that each airplane has a hangar associated to it (or a “personal space”):

(64) Context: Where did you put the legal documents concerning this plane that is now in the air? Are they in the head office now or in the hangar?

#Ik heb de papieren bij het vliegtuig geplaatst.
I have the papers by the plane placed

I put the papers near the plane.

Given that a bij-PP with an inanimate complement does not have the dominion reading or the general possessive reading and that the apudlocative reading would give an empty set in interaction with the part-whole relation (nothing can be simultaneously part of an object and next to it), the only candidate for the interpretation of examples like (53) is the part-whole reading arising in configurations like (58), where the bij-PP restricts an argument of the verb. Why is it, however, available for bij-PPs in the possessive PP complex in Dutch but not in Russian or Romanian?

Once again I suggest that the variation here is due to a formal difference in the lexical specification (the semantic type). To ensure that in Dutch (but not in Russian or Romanian) the part-whole bij-PP can function not only as a VP-modifier linked to one of the arguments, but also as a PP-modifier, I link the possible adjunction sites to the semantic type: a property of events vs. a property of locations. To obtain this outcome, it can be assumed that in Dutch the part-whole bij-PP is encoded as a property of locations subject to the same L2E rule (57); in Russian or Romanian, on the other hand, the part-whole u-PP is directly encoded as a property of events and as such can function as a VP-modifier (linked to one of the arguments of the main predicate), but not as part of the possessive PP complex. Once again, it is easiest to summarize the proposal in the form of a table:

**Table 2: possessive relations with u-PPs**

<table>
<thead>
<tr>
<th>Russian</th>
<th>Dutch</th>
<th>Romanian</th>
</tr>
</thead>
<tbody>
<tr>
<td>spatial</td>
<td>apudlocative</td>
<td>apudlocative</td>
</tr>
<tr>
<td>general possession</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>part-whole relation</td>
<td>event modifier</td>
<td>location modifier</td>
</tr>
<tr>
<td>dominion</td>
<td>location modifier</td>
<td>location modifier</td>
</tr>
</tbody>
</table>

Event modifiers can only be used as VP-adjuncts. Location modifiers can be either used in the possessive PP complex or coerced into event modifiers by the L2E rule (57). When coerced into an event modifier, the dominion interpretation gives rise to the purely locative reading (in the household or other controlled territory), as in (48). The part-whole relation on the other hand is linked to a direct argument in a non-spatial way.

5. **Conclusion and further questions**

Having investigated the syntax and semantics of associated possessively interpreted u-PPs in Russian, Romanian and Dutch, I have argued that the various restrictions on the possessive relation introduced by the u-PP observed in different syntactic contexts across these three languages can be accounted for by making two assumptions about the ambiguity of u-PPs. The first assumption touches upon the semantic type (or sort) of u-PPs: I proposed that they can be event modifiers or location modifiers. While in the possessive PP complex u-PPs are location modifiers, when they are associated to a direct argument, they should be treated as event modifiers (i.e., as VP-level adverbials). The second assumption concerns the specific possessive relation introduced by the u-PP. Three such relations were identified that are relevant for u-PPs: the general broadest-scope possessive relation (cf. Storto 2003, Tham 2006), which is available in Romanian (where it is indicated by dative clitic-doubling) and in
Russian, the part-whole relation, arising when a \textit{u}-PP is linked to a direct argument (but also in the possessive PP complex in Dutch) and also relevant for dative external possessors, and the dominion (or voluntary control) relation that is available in all three languages and encoded as a set of all locations in the sphere of influence of the ground (which must then be animate and capable of volition). The interplay of the two assumptions, which were shown to be needed independently, produces the patterns observed on the distribution of the three readings in the possessive PP complex and in association with a direct argument in the three languages.

The different possessive relations arising in different syntactic contexts were taken as an argument for the lexical ambiguity of the \textit{u}-prepositions in the three languages and, generally, for the independent lexical encoding of the various possessive relations. As \textit{u}-PPs require the assumption that different semantic types can be available for different possessive relations, it is necessary to assume that each given relation can be encoded as a separate lexical item – the identical lexical realization results from underspecification in Vocabulary Insertion rules.

The alternatives to my proposal, either the small-clause structure or an ApplP, cannot account for the fact that the restrictions on the possessive relation (part-whole or dominion) are different in the two syntactic environments considered: association to a direct argument or a possessive PP complex.

The hypotheses proposed leave a number of questions open. The first and foremost of them is that of what determines the semantic type associated with a given possessive relation and whether the other possessive relations discussed in section 4.1 require the assumption that different semantic types can be available for different possessive relations, it is necessary to assume that each given relation can be encoded as a separate lexical item – the identical lexical realization results from underspecification in Vocabulary Insertion rules.

The cross-linguistic applicability of the generalizations established here is another topic for future research. Among languages making use of PP-encoded external possession are Norwegian (Lødrup 2009) and Serbo-Croatian, whereas Finnish, while using adessive case to encode animate possession, does not permit the possessive PP complex – the question is why.

Finally, even in the languages examined here much remains a mystery. One topic that I have set aside is the difference between the dative and the PP in the allative possessive PP complex. While Leont'ev 2005 suggests that the bare dative, unlike the apudlative PP, has a benefactive interpretation in the possessive PP complex, the syntax and semantics of this generalization must be left for future investigation. Likewise, the choice between the use of a \textit{bij}-PP vs. double accusative in Dutch or a \textit{u}-PP vs. dative in Russian where linkage to direct arguments is concerned necessitates a deeper inquiry, which cannot be undertaken here.

6. **BIBLIOGRAPHY**


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