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# TO PPS IN THEIR PROPER PLACE FASL 26, UIUC, May 19-21, 2017

#### 1. Introduction

The puzzle and its solution in a nutshell: a combination of two PPs, with the NP complement of one interpreted as the possessor of the NP complement of the other:

On the connection between *u*-PPs and datives in association with arguments in Russian see Garde 1985, Paykin and van Peteghem 2003, Nam 2013, etc.; the ablative variant (1a) seems to have escaped attention

- (1) a. Vor vytaščil košelëk **u neë iz sumki**. Russian thief pulled.out wallet at her out.of bag

  The thief pulled the/a wallet out of her bag.
  - b. **U menja doma** živët lošad'. at me home.LOC lives horse *I have a horse living at my house.*
  - c. Položi spički **ko mne v rjukzak**. put.IMP matches towards me in backpack.ACC *Put the matches in my backpack*.
  - d. Ona prinesla knigu **Timuru na rabotu**. she brought book Timur.DAT on work.ACC *She brought the/a book to Timur's office*.

# Terminology:

- **possessive PP complex**: the bolded strings in (1)
- $\triangleright$  PP<sub>1</sub> and PP<sub>2</sub>: defined linearly in (1)
- $\triangleright$  the affectee: NP<sub>1</sub>
- $\triangleright$  **u-PP**: the first PP in the bolded strings in (1), can also involve the preposition k or be a bare dative. In (1) it is associated to a **locative**, but can also be **associated** to an argument:
- (2) a. **U futbolista Lebedja** lišnij ves. Zimmerling 2000 at footballer Lebed' superfluous weight *The footballer Lebed' is overweight.* 
  - b. Mal'čik nastupil **devočke** na nogu.
    boy stepped girl.DAT on foot.ACC
    The boy stepped on the girl's foot.

The possessive PP complex as a whole can be an argument (1) or an adjunct:

(3) U nix v Pitere ljubili Brodskogo, a u nas v Moskve – Sapgira. at them in St. Petersburg loved.PL Brodsky.ACC and at us in Moscow Sapgir.ACC In St. Petersburg they loved Brodsky, and in Moscow we did, Sapgir.

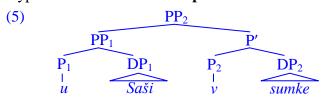
**Directionality match**: PP<sub>1</sub> is determined by whether PP<sub>2</sub> is allative (requires a dative NP<sub>1</sub> or k 'towards' as P<sub>1</sub>), or locative or ablative (requires the locative preposition u 'at' as P<sub>1</sub>):

(4) a. u menja doma/\*domoj at me.GEN home.LOC/DIR at my place

b. ko mne \*doma/domoj to me.DAT home.LOC/DIR to my place

Leont'ev 2005

Hypothesized structure: **PP specification:** 



#### Reasons:

- clear evidence that the two PPs form a constituent (e.g., topicalization (3))
- $\triangleright$  minor evidence for not treating PP<sub>1</sub> as an adjunct in Dutch (allows extraction)

Interpretation: the **Predicate Modification** mode of composition, generally used in the Heim and Kratzer system for all types of modification:

(6) **Predicate Modification** (Heim and Kratzer 1998:65)

```
If \alpha is a branching node, \{\beta, y\} is the set of \alpha's daughters, and [\![\beta]\!] and [\![\gamma]\!] are both in D_{\langle e, t \rangle} then [\![\alpha]\!] = \lambda x \in D_e. [\![\beta]\!](x) = [\![\gamma]\!](x) = 1
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Welcome consequences:

- $\triangleright$  a combination of a locative *u*-PP and a directional PP, or vice versa, is excluded
- as PP<sub>2</sub> is a locative/directional PP, PP<sub>1</sub> also is

What we need for PP<sub>1</sub> is a means of converting possession into a type of location

Proposal: **possession can be recast as a locative notion** (a spatial metaphor, Lakoff 1993); supported by its cross-linguistic realization (see Clark 1978, Stassen 2009, among others, for a typological overview)

Similar intuitions in generative syntax, sometimes implemented derivationally: Lyons 1967, Freeze 1992, Kayne 1993 (see Harves 2002 for a critique of the Kaynian approach to Russian), Tham 2013, Myler 2016, etc.

# Key concept: the sphere of influence/the purview of a sentient individual

**Deriving possession**: Predicate Modification in the structure (5) yields the intersection of two locations, one of which is a sphere of influence:

- (7) a. [U Sasha]] = in Sasha's sphere of influence
  - b. [[U Sasha in the bag]] = in Sasha's sphere of influence and in the bag

Pragmatically, for an object to be in Sasha's sphere of influence and in a/the bag, the bag in question must itself be in Sasha's sphere of influence, which *generally* entails that the bag is in Sasha's possession

NB: The locative encoding of possession is definitely not new. What is new is the association to **influence** (see section 4)

## 2. CONSTITUENCY

Unlike multiple path specifications in event modification (8a), the possessive PP complex requires a match in directionality:

- (8) a. On exal iz Peterburga v Moskvu čerez Klin. he rode from St. Petersburg in Moscow.ACC through Klin He traveled from St. Petersburg to Moscow via Klin.
  - b. #Ona prinesla knigi Saše s raboty. \*allative + ablative she brought books Saša.DAT from work

    She brought (the) books to Sasha from (her) work. \*allative + ablative + ablati
  - c. \*Ona zabrala knigi u Saši na rabotu. \*ablative + allative she brought books at Saša on work.ACC

The possessive PP complex can form an answer segment:

(9) a. Kuda ona položila den'gi? – Dime pod krovat'. where.DIR she put money Dima.DAT under bed.ACC Where did she put the money? -- Under Dima's bed.

b. Gde ona sprjatala den'gi? – U Dimy pod krovat'ju. where.LOC she hid money at Dima.GEN under bed.INS Where did she hide the money? -- Under Dima's bed.

The possessive PP complex can be moved as a unit by topicalization or wh-movement:

- (10) a. **U Vasi v mašine** ona zabyla knigi, a **u Svety doma** sumku. at Vasya in car she forgot books and at Sveta home.LOC bag *In Vasya's car she forgot her books, and at Sveta's home, her bag.* 
  - b. **V kotorom karmane u Vasi** ležit zubnaja ščetka? in which pocket at Vasya lies tooth brush *In which of Vasya's pockets does he keep a toothbrush?*

Fronting both PPs is the default option; splitting them changes the information structure:

- (11) a. **Komu na rabotu** ona prinesla knigi? wh-movement: directional who.DAT on work.ACC she brought books *To whose office did she bring books?* 
  - b. **Komu** ona prinesla knigi na rabotu? who.DAT she brought books on work.ACC For whom did she bring books to the office? To whose OFFICE did she bring books?
- (12) a. **U kogo doma** živët lošad'? wh-movement: locative at who.GEN home.LOC lives horse *Who has a horse at home?* 
  - b. **U kogo** živët lošad' doma? at who.GEN lives horse home.LOC *Who has a horse AT HOME?*
  - c. **U kogo** lošad' živët doma? at who.GEN horse lives home.LOC *Who has the horse living AT HOME?*
  - d. **U kogo** živët doma lošad'? at who.GEN lives home horse.LOC *Who has A HORSE at home?*

This is different from multiple path specifications, which must be adjoined independently, see Goldberg 1991):

- (13) a. Kuda ona edet iz Moskvy? where.DIR she travels from Moscow *Where is she going from Moscow?* 
  - b. \*Kuda iz Moskvy ona edet? where.DIR from Moscowshe travels

Also shows that the two PPs in (10) form a constituent

### 3. PP INTERSECTION: DERIVING THE POSSESSION INTERPRETATION

Frequent assumption: the possession relation is established by movement (possessor raising), and this is why an overt distinct possessor is impossible.

- (14) a. #Vor vytaščil košelëk **u neë iz papinoj/cužoj sumki**. thief pulled.out wallet at her out.of daddy's/stranger's bag
  - b. #Vor vytaščil košelëk **u neë iz sumki** eë papy. thief pulled.out wallet at her out.of bag her daddy.GEN

## Arguments against:

- movement to a non-c-commanding position
- movement to a theta-position (affectee)

Further relevant evidence:

- animate u-PPs without a possessor-raising effect (3.1)
- $\triangleright$  complex PPs without a *u*-PP (3.2)
- $\triangleright$  inanimate *u*-PPs as locatives (3.3)

Shape of the argument: we need intersective semantics (Predicate Modification) anyway, and it can account for the possessive PP complex

## 3.1. Animate u-PPs without possessor-raising effects

A *u*-PP can denote the home of the animate NP complement of the preposition:

```
(15) a. Ja ostanovljus' u Mariny (na Arbate).
I will.stay at Marina on Arbat.LOC
I will stay at Marina's place (on the Arbat Street).
```

b. Ja otpravila pis'mo Marine v Piter.
I sent letter Marina.DAT in St. Petersburg.ACC
I sent the letter to Marina in St. Petersburg (i.e., to her St. Petersburg address).

No possessive relation is established

Possibility: an implicit *home* adjoined to the u-PP – unlikely:

```
(16) U menja (est') dva okna.
at me is two windows
I have two windows. (NOT: My house has two windows)
```

The "home" interpretation is not available freely for *u*-PPs

Pragmatics is necessary anyway in order to determine what an animate u-PP denotes: there is no need to also complicate the structure (and what would the overt equivalent of the implicit adjunct be in broader cases?)

# 3.2. Complex PPs without a *u*-PP

Examples like (17), where no possession is established, show that a complex PP can indeed be interpreted by Predicate Modification, and the containment relation arising between the two locations involved (cf. den Dikken 2010) results from the pragmatics of locations; the actual constraint is that the intersection of the denotations of the PPs involved be non-empty.

- (17) a. Ja brosila knigi pod stol na pol. allative I threw books.ACC under table.ACC on floor.ACC

  I threw (the) books under the table on the floor.
  - b. Kuda ty brosila knigi? Pod stol na pol. Where you threw books.ACC under table.ACC on floor.ACC Where did you throw (the) books? Under the table on the floor.
  - c. Postav' sabvufery na pol. **Kuda na pol** nevažno. stand subwoofers on floor.ACC where.to on floor.ACC unimportant *Place the subwoofers on the floor, where precisely on the floor is unimportant.*

The final location of the books is determined by the intersection of the two locations: it is the place that is simultaneously under the table and on the floor

spatial P: animate NP

- (18) a. Ja brosala knigi pod stolom na polu. locative I threw books.ACC under table.LOC on floor.LOC

  I threw/would throw (the) books (while) under the table on the floor.
  - b. Gde ty brosalaknigi? Pod stolom na polu. Where you threw books.ACC under table.LOC on floor.LOC Where were you throwing (the) books? Under the table on the floor.

The location of the speaker is simultaneously under the table and on the floor

An intersectively interpreted locative/directional PP complex is independently motivated

### 3.3. Inanimate u-PPs (and non-associated k-PPs) are locative

The prepositions used in PP<sub>1</sub> in the possessive PP complex are otherwise locative:

- (19) a. U doma priparkovany tri mašiny. spatial P: inanimate NP at house.GEN parked.PPP.PL three cars

  There are three cars parked near the house.
  - b. Učeniki podošli k učitel'nice. students approached towards teacher *The students approached the teacher.*

Core intuition: **retain the locative meanings of the relevant prepositions**, place the burden of possession on the NPs involved

## 4. THE SEMANTICS OF POSSESSION AS LOCATION (MATUSHANSKY [IN PROGRESS])

Core assumption: **possession as a locative notion** (a spatial metaphor, cf. Lakoff 1993, etc.) What is **a locus**? Options:

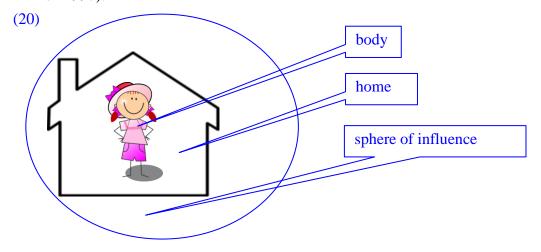
- a region (Wunderlich 1991: a primitive)  $\leftarrow$ !
- a set of points
- a set of vectors (Zwarts and Winter 2000)

To any object corresponds its location in space ('eigenspace', Wunderlich 1991):

- real space: a convex region that is topologically closed, i.e., includes its boundary
- metaphorical spaces: fall in love, come to grief, lost in translation...

## [+sentient] NPs can give rise to metaphorical loci

Novel: a [+sentient] complement of the prepositions u 'by' and k 'towards' is interpreted as a sphere of influence (**an extension of the self**, Zimmerling's *social space*?, cf. Belvin and den Dikken 1997):



Because the sphere of influence is an extension of the self, the addition of an object to it or its subtraction from it affects the self (the so-called **affectedness**)

# The restriction to animate NPs is explained: **inanimate (or dead) referents cannot exercise any influence**

Cf. also Boneh and Sichel 2010 on the syntactic distinctiveness of the part-whole relation for inanimates

The sphere of influence reading is available in the absence of an associated locative PP:

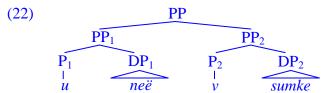
(21) U kogo moi spički? – U menja. – Položi ko mne. at who.GEN my matches at me.GEN place.IMP towards me Who has my matches? – I do. – Put them [in the relevant contextual location associated with me, where they are expected to be kept].

No reason to assume that the sphere of influence is structurally represented

Related question: the choice between a bare dative and a k-PP

### 5. THE INTERNAL STRUCTURE OF THE POSSESSIVE PP COMPLEX

Simplest structure: PP-adjunction (cf. Corver 1992 for Dutch):



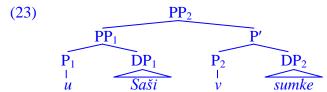
Argumentation:

- there can be more than one u-PP (but the first one is attached independently)
- > u-PP is optional (but Specs can be optional)
- there can be more than one locative/directional PP (but PPs can also be merged in [Spec, PP] or merged to the possessive PP complex)

Arguments for an asymmetric structure with a  $P_2$  head:

- $\triangleright$  fixed word order: *u*-PPs and *k*-PPs are initial
- $\triangleright$  P<sub>1</sub> is fixed, P<sub>2</sub> is variable
- $\triangleright$  Dutch: extraction out of the *u*-PP part of a locative possessive PP complex is okay

Assuming the u-PP is in [Spec, PP]:



Problem 1: what is the *u*-PP a Spec of with the locative and directional *doma/domoj* 'home'?

Problem 2: what happens in directional PPs?

- locative PP complex (as a complement of a shared directional head)
- directional PP complex

## 5.1. u-PP doubling

A *u*-PP can also function as a sentential adjunct dissociated from the locative/directional PP (cf. Corver 1992, Broekhuis, Cornips and de Wind 1996, Broekhuis and Cornips 1997 for the Dutch *bij*-PP):

(24) [U menja] tut v Londone terrorističeskij akt slučilsja. at me.GEN here in London terrorist act happened *I have a terrorist attack (having happened) in London.* 

The individual introduced by the u-PP is affected by the event (a beneficiary/maleficiary, but for its position)

This *u*-PP is a frame-setting adverbial (Maienborn 2001) and can be followed by a possessive PP complex (Leont'eva and Leont'ev 2008), by a locative (24) or directional PP, or by another *u*-PP:

- (25) a. Klubnjački **u tebja u babuški v ogorode** rastut. L&L2008 tubers at you.GEN at grandmother.GEN in kitchen.garden grow.PL *Tubers grow in your grandmother's kitchen garden.* 
  - b. **U menja** tut **u ženy noga** zabolela. at me.GEN hereat wife.GEN foot hurt.INCEP *My wife's foot started hurting*.

(25b) is unlikely to involve a constituent consisting of the two PPs and an NP, suggesting that either the two u-PPs start out as a constituent to the exclusion of the NP (Leont'eva and

Zimmerling 2000

Possible with *k*-PPs under the right circumstances:

Leont'ev 2008), or they are adjoined to the VP separately.

- (26) a. Ko mne k otčimu dočka priexala.
  to me to stepfather daughter arrived
  My stepfather's daughter came to visit (him at our joint place).
  My daughter came to visit me at my and my stepfather's place.
  - b. ? Ko mne k dočke na daču policija priezžala. to me to daughter on dacha police visited *Police has visited my daughter's (and mine) country house.*

On the most readily available readings, **the houses** in the examples in (26) are presupposed to be **shared between me and the relative**. If this were simple possessor-raising (however implemented), this effect would be unexpected

In our proposal, the arrival is into my sphere of influence as well as into that of the relative in question, with spheres of influence contextually interpreted as homes

Tentative conclusion: only one u-PP/k-PP within one possessive PP complex. Consistent with it being a specifier, unexpected if it is an adjunct

## 5.2. Multiple locative/directional PPs

Same question for locatives: do they form a constituent?

- (27) a. **Ko mne na rabotu v Gollandiju** prišla strannaja posylka. to me on work.ACC in Holland.ACC arrived strange parcel *There arrived a strange parcel in my office in Holland.* 
  - b. **U menja doma v Gollandii** v koridore živët lošad'. at me home.LOC in Holland in hallway lives horse *I have a horse living in the corridor at my house in Holland.*

The *u*-PP cannot be omitted, suggesting that the two locative PPs do not form a constituent to its exclusion:

(28) a. \*Na rabotu v Gollandiju prišla strannaja posylka. on work.ACC in Holland.ACC arrived strange parcel

b. #Doma v Gollandii (v koridore) živët lošad'. home.LOC in Holland in hallway lives horse

Possessive interpretation → the first two PPs form a possessive PP complex. The third PP can only be adjoined to it (indicating the possibility of PP-to-PP adjunction correctly interpreted via Predicate Modification)

## 5.3. Binding

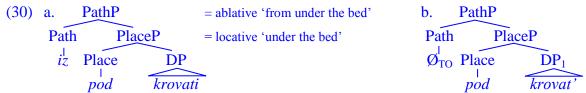
Minor evidence for *u*-PP as a Spec:

- (29) a. U Nabokova v knige pro nego ne raz upominajutsja šaxmaty. at Nabokov in book about him not time mention.PL.REFL chess.PL *In Nabokov's book about himself chess is mentioned more than once.* 
  - b. \*U nego v knige pro Nabokova ne raz upominajutsja šaxmaty. at him in book about Nabokov not time mention.PL.REFL chess.PL

Condition C and c-command out of a Spec? There could still be a PRO-argument of book

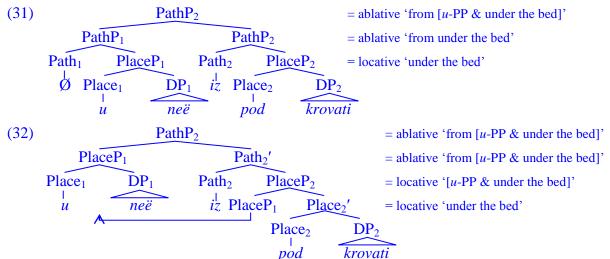
### 5.4. Directional embedding

Assumption: directional PPs have two layers: a directional head (Path) with a locative PlaceP complement (Koopman 2000, Zwarts 2005, Svenonius 2008, 2010, den Dikken 2010, etc.):



Two possibilities for directional possessive PP complexes:

- $\triangleright$  the directional head (Path<sup>0</sup>) is external to the locative possessive PP complex (31)
- each PP in the directional possessive PP complex has a directional head (Path<sup>0</sup>) of its own (32)



Movement is necessary to get the surface word order and does not affect the interpretation

### 6. CONCLUSION

The possessive PP complex is amenable to a straightforward compositional analysis with no *ad hoc* assumptions:

- $\triangleright$  u-PPs are uniformly locative
- interpretation is fully compositional
- possession and affectedness are derived from the pragmatics of influence
- a new take on possessor-raising and applicative arguments

Further questions for the Russian possessive PP complex:

- internal structure of the possessive PP complex
- $\triangleright$  the difference between bare datives and k-PPs
- > the role of the overt copula in Russian
- the syntax and semantics of possessive allatives and ablatives

### General questions:

- differences between Russian and Dutch (where *u*-PPs are not possessive when not associated)
- the role of the overt pronoun in bound possessives (Dutch dialectal difference)
- the source and cross-linguistic variability of the *home* interpretation
- the issue of animate loci in general

Future research: the sphere of influence

### 7. APPENDIX: RULING OUT ALTERNATIVE ACCOUNTS

[Spec, ApplP]: base-generation or movement

### 7.1. Potential alternative 1: ApplP

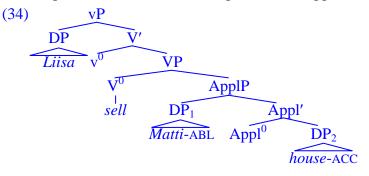
Pylkkänen 2002: benefactives and malefactives in Finnish as specifiers of ApplP:

(33) a. Liisa kirjoitti Mati-lle kirjee-n.
Liisa.NOM wrote Matti-ALL letter-ACC
Liisa wrote Matti a letter.

Finnish, Pylkkänen 2002:36

b. Liisa myi Mati-lta talo-n.
Liisa.NOM sold Matti-ABL house-ACC
Liisa sold Matti's house. (Lit.: Liisa sold a house from Matti.)

In Finnish, locatives are encoded by case-marking rather than a preposition, so the possessive NPs in question can be viewed as specifiers of ApplP:



Russian does not allow for such an analysis:

- the "possessee" locative is a "possessive" PP: the semantics of possession would not be coming from Appl<sup>0</sup>
- the putative sister of Appl<sup>0</sup> is a PP: wrong semantics

## 7.2. Potential alternative 2: possessor raising

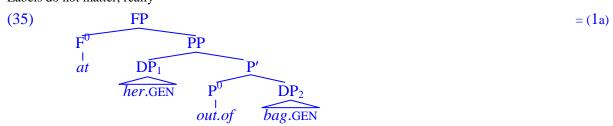
Widely entertained for the dative variant, as in (1d), by analogy with a number of languages

Grashchenkov and Markman 2008, Tsedryk 2008, 2017 and Pshekhotskaya 2012, building on Pylkkänen 2002: possessor-raising to [Spec, ApplP]

Problems for *u*-PPs:

- > movement to a non-c-commanding position
- (in some frameworks) movement to a theta-position (AFFECTED interpretation)

Potential solution, suggested by a reviewer: a more complex structure for the unambiguously locative PP (given the possibilities provided by den Dikken 2003, 2010): Labels do not matter, really



 $DP_1$  could be base-generated in [Spec, PP] or moved there from some lower position ([Spec,  $DP_2$ ], for instance, if it is base-generated as a possessor, or the specifier inside a small-clause structure)

Problem: a *u*-PP is a constituent

Problem: *u*-PPs incorrectly predicted to **always** appear in a complex PP structure, sometimes with a phonologically null PP<sub>2</sub> (evidence against in (19))

Important: the possessive PP complex requires an animate  $NP_1$  (cf. also Jakobson 1936/1971, Rakhilina 2010 on the preference of datives for animates). Not a property of the prepositions themselves

Problem: no possible possessor with a pure locative:

- (36) a. Idëm ko mne domoj.
  go.IMP.1PL towards me home.DIR
  Let's go to my place.
  - b. Idëm v moj dom. go.IMP.1PL in my house/home.ACC Let's go into my house.

Moreover, an overt possessive is not always felicitous, though yields no obvious difference in truth-conditions, with one exception:

- (37) a. Idëm k Saše v bol'nicu. go.IMP.1PL towards Sasha in hospital.ACC Let's go visit Sasha at the hospital.
  - b. Idëm v Sašinu bol'nicu. go.IMP.1PL in Sasha hospital.ACC Let's go to Sasha's hospital.

**Locational weak definites** (see Carlson and Sussman 2005, Baldwin, Beavers, van der Beek, Bond, Flickinger and Sag 2006, Aguilar Guevara and Zwarts 2010, 2013, Aguilar Guevara 2014) disallow overt possessors, for obvious reasons.

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