ON SNAKES AND LOCATIVE BINDING IN HUNGARIAN

György Rákosi

University of Debrecen

Proceedings of the LFG10 Conference

Miriam Butt and Tracy Holloway King
(Editors)

2010

CSLI Publications

http://csli-publications.stanford.edu/

Abstract

The paper investigates the peculiar pattern of reflexivity marking in Hungarian locative and directional PPs. Unlike in English, where both a pronoun and a reflexive can serve this purpose, only the reflexive is grammatical in standard Hungarian in these contexts. For many speakers, however, pronominal coding of reflexivity is also an option in first and second persons in locative PPs. The paper presents an LFG-theoretic analysis that rests on the assumption that this option is only available for speakers who treat the PP as a possessive structure, hence licensing the pronoun in what is essentially a non-local binding dependency.

1. Introduction

Locative and directional PPs represent a well-known context in English where the usual complementarity between reflexives and pronouns breaks down. (1) below is a much-cited example in the pertinent literature.

(1) *John*$_{\text{i}}$ *saw a snake near him*$_{\text{i}}$ */ himself*$_{\text{i}}$.

In general, the pronoun counts as the unmarked choice in these contexts, and there is some disagreement over the status of the reflexive.[1] Nevertheless, it is a fact that both the pronoun and the reflexive are acceptable in (1) and generally in sentences of this kind, which I will be referring to as "snake-sentences" for ease of exposition.

It is also well-known that there is significant variation across languages in how such reflexive dependencies are encoded. This article discusses snake-sentences in Hungarian, a language which shows a particularly interesting distribution of reflexive markers in this construction. In standard Hungarian,

[1] Here are some illustrative quotes on judgements concerning reflexivity marking in locative PPs:

- Faltz (1985: 100) : "With normal intonation, reflexive pronouns are at best odd in these positions, ..."
- Reinhart & Reuland (1993: 687): "The use of the anaphor ... is much more marked ..."
- Huddleston & Pullum (2002: 1489): "There is variation across speakers and particular examples, but for many, the non-reflexive form is preferred ..."

only the reflexive is grammatical in third person and speakers consistently reject the bound reading of the pronominal PP.[2]

(2) *János*$_i$ *látott egy kígyó-t* *maga* *mellett*$_i$ / **mellett-e*$_i$.
John saw a snake-ACC himself beside beside-3SG
'John saw a snake beside him.'

In first and second persons, however, many speakers also accept pronominal coding of reflexivity. Examples (3a) and (3b) represent the judgements of these speakers.

(3) a. *Lát-t-am* *egy* *kígyó-t* *magam mellett* / *mellett-em*
see-PAST-1SG a snake-ACC myself beside beside-1SG
'I saw a snake beside myself/me.'

b. *Lát-t-ál* *egy* *kígyó-t* *magad mellett* / *mellett-ed*
see-PAST-2SG a snake-ACC yourself beside beside-2SG
'You saw a snake beside yourself/you.'

Where snake-sentences are mentioned in the literature on Hungarian, only the reflexive is claimed to be grammatical (cf., for example, É. Kiss 1987 and Marácz 1989). The fact that many speakers also accept the pronominal is only mentioned in passing in den Dikken et al. (2001: 147-48, ft. 9).

My main objective here is to provide an explanation for the Hungarian facts. In Hungarian, pronominal encoding of reflexivity is a marked option in the sense that (i) some speakers accept only reflexives, but not pronouns in these contexts, (ii) even the more permissive speakers tend to experience the reflexive as more natural, and (iii), as we will see, there are no instances of obligatory pronoun marking in snake-sentences, but there are many constructions where even the more permissive speakers accept only the reflexive.

In this article, I seek an answer to the following two questions to explain this distribution. First, when exactly is it possible to use pronominals instead of reflexives to encode reflexivity in snake-sentences in Hungarian? Second, why is it that, unlike in English, the pronominal is a marked choice in locative PPs? I show that in fact the reflexive *must* consistently be used in local contexts, and locative PPs count as the local domain for purposes of binding in Hungarian. Pronominal marking is only licensed when the inflecting postposition acts as the head of a possessive structure, with its (possibly *pro*-dropped) pronominal complement being concomitantly analyzed as a structural possessor. Since now the dependency between the

[2] The grammar of agreement-marked Hungarian postpositions is briefly discussed in Section 3.2.

"possessor" and its antecedent is non-local, pronominal coding of reflexivity becomes an option in snake-sentences − at least for those speakers who allow for the possessive analysis.

The structure of the paper is as follows. In Section 2, I briefly overview the standard LFG approach to locative binding, and comment on the typological picture. In Section 3, I discuss the Hungarian data and pair them up with the corresponding English structures. In Section 4, I provide an analyses of the Hungarian facts paying special attention to why the pronoun is the marked choice. In addition, I also make some tentative comments on the origin of the third person/non-third person difference manifested in (2) and (3) above. Finally, I conclude this paper in Section 5.

2. The standard LFG approach and a typological outlook

The standard LFG account of reflexivity marking in English snake-sentences builds on the core assumption that there is a binding domain asymmetry between reflexives and pronouns (see especially Dalrymple 1993, and Büring 2005). In standard LFG, Reflexives are +NUCLEAR in the sense that they are constrained to find an antecedent within the *minimal complete nucleus*, i.e. the smallest f-structure that contains the f-structure of the reflexive and a SUBJ.[3] Pronouns are −NUCLEAR in the sense that they are constrained to be disjoint from their coarguments. The coargument domain is defined by the PRED feature, and this domain need not include a SUBJ. Therefore locative PPs, being predicative, will constitute a negative binding domain for pronouns, but, lacking a SUBJ, they will not constitute a (positive) binding domain for reflexives.

---

[3] I quote here the formal definition of the *Minimal Nucleus Condition* of Bresnan (2001: 271):

(i) **Minimal Nucleus Condition**

A binding constraint designator ((GFα↑)GF') in a nuclear (respectively, nonnuclear) binding constraint is subject to the minimal nucleus condition if
(i) GF and GF' are argument functions and
(ii) if the attribute string α is nonempty, then setting α=*xa* for some attribute *a* and possibly empty string of attributes *x*, the off-path constraint ¬(→SUBJ) (respectively ¬(→PRED)) holds for every attribute in GF *x*.

Notice that this condition requires the f-structure that contains the bound element (GF) to be an argument function. This may be too restrictive for the purposes of describing locative binding, since the reflexive is licensed both in argument and adjunct PPs (see example 4).

As has been repeatedly observed, locative binding per se is not sensitive to whether the PP is an argument or an adjunct of the main predicate (see Dalrymple 1993 and Lødrup 2005 in the LFG literature, as well as, a.o., Reinhart & Reuland 1993 and Büring 2005). So both (1), repeated here as (4a), and (4b) show the same pattern even though the PP is an adjunct in the former but an argument in the latter.

(4) a. *John*$_i$ *saw a snake near him*$_i$ / *himself*$_i$.

b. *John*$_i$ *placed the snake near him*$_i$ / *himself*$_i$.

The f-structure in (5) represents (4b), and it serves to illustrate the binding proposal sketched above.[4]

(5)

*f*1:	SUBJ	[PRED 'John']$_i$
	PRED	'place <(f_1 SUBJ) (f_1 OBJ) (f_1 OBL$_{loc}$)>'
	TENSE	past
	OBJ	[PRED 'snake']
	OBL$_{loc}$	f_2: [PRED 'near <(f_2 OBJ)>' OBJ [PRED 'him | self']$_i$]

The positive binding domain for *himself* is f_1, since this is the smallest f-structure that contains a SUBJ. The f-structure of the oblique argument, f_2, is a negative binding domain for the pronoun *him*. This is so because f_2 has a PRED feature and that defines a binding theoretically relevant domain for the pronoun within which it cannot be bound. As a result, the relation between the pronoun and the antecedent is non-local at the level of f-structure, and therefore the dependency is licensed.

In many languages, however, reflexives and pronouns *are* in complementary distribution even in snake-sentences. German is one such language, consider the following examples:

(6) a. *Hans*$_i$ *sah eine Schlange neben *ihm*$_i$ / *sich*$_i$.
Hans.NOM saw a snake near him.DAT self.DAT

b. *Ich sah eine Schlange neben mir / *sich.*
I. NOM saw a snake near me. DAT self. DAT

[4] I use the notation "self" simply as the PRED value of the reflexive. Since nothing crucial hinges on a more elaborate semantic representation, here and throughout I use indices on the respective f-structures to represent binding dependencies.

In the third person, the morphologically simple reflexive *sich* must be used, and the pronoun is ungrammatical (6a). In first and second persons only the pronoun is grammatical, and *sich* is out (6b). Notice, however, that the primary reflexive strategy is consistently *sich* in the third person, but in non-third persons the pronoun is used for the same purpose.[5] The following two transitive structures represent this point.

(7) a. *Hans* *sah* **ihn*$_i$ / *sich*$_i$.
Hans. NOM saw him. ACC self. DAT

b. *Ich* *sah* *mich* / **sich*.
I. NOM saw me. ACC sich. ACC

Thus in German snake-sentences represent no special binding context: they show the same complementary distribution of pronominal and anaphoric markers of reflexivity as transitive structures do.

The deeper question is why German differs from English in this respect. Not being aware of a solution in the syntactic literature that predicts this difference in the two languages, I simply point out that it nevertheless complies with the typology that Faltz (1985) makes. Faltz observes that there is a correspondence between the morphological make-up of the primary reflexive of a given language and the coding of reflexivity in snake-sentences. In particular, complex reflexives, like the English *himself*, compete as reflexive markers with pronominals in locative PPs. Morphologically simple reflexives, like the German *sich*, tend to be obligatory markers of reflexivity in snake-sentences.

The German facts can be analyzed in the LFG binding theory by assuming that there is no domain asymmetry between pronouns and reflexives in German. Crucially, this means that predication per se will play no role in determining the (negative or positive) binding domain. Rather, the binding domain is defined with respect to presence of a SUBJ function.[6] Thus, for example, *ihn* 'him' cannot be bound within an f-structure that contains a SUBJ, but the first person pronoun *mich* 'me' can. In the same vein, *sich* must be bound within an f-structure that contains a SUBJ.

In essence, I will argue here that Hungarian is like German as far as the definition of the binding domain is concerned. The relevant binding domain is defined by the presence of a SUBJ. Reflexives must consistently be bound in this domain, but pronominals cannot be. The reason why we can still get

---

[5] The primary reflexive strategy is the strategy that is used in transitive sentences.

[6] This is the more traditional approach to defining binding domains. In the recent LFG literature, Lødrup (2007) makes detailed arguments to show that we need this approach - instead of the predicate-based binding approach of, for example, Dalrymple (1993) and Reinhart & Reuland (1993) - to properly describe the distribution of the Norwegian anaphors *seg* and *seg selv*.

pronominal marking of reflexivity in Hungarian snake-sentences is that in every such case the P-element is reanalyzed and a more complex structure is created than what first meets the eye. I proceed now to give a detailed description of how this happens in the following two sections.

3. Locative binding in Hungarian: the empirical background

3.1. Introduction

The main purpose of this section is to establish the empirical facts that the analysis in Section 4 is intended to cover. I first overview the grammar of P-elements in Hungarian, with special respect to inflecting postpositions, the P-elements that most prominently figure in snake-sentences (3.2). Inflecting Ps developed out of possessive structures, and this history plays a key role in understanding the grammar of locative binding Hungarian. After the descriptive overview of P-grammar, I give a survey of the basic locative binding facts of Hungarian and link them up with the English data (3.3).

3.2. On P-markers in Hungarian

Hungarian has three types of P-elements. The core set, which we typically find in snake-sentences, contains postpositions that Marácz (1989) calls "dressed Ps". These postpositions take nominative complements, and agree with this complement if it is pronominal. Hungarian is a highly inflecting language and agreement markers license *pro*-drop. This typically happens in neutral discourse conditions in PPs headed by dressed Ps:

(8) (*én*) *mellett-em*
(I.NOM) beside-1SG
'beside me'

The construction shows some surface similarities with possessive constructions, compare (8) with (9):

(9) *a*(*z* *én*) *fej-em*
the I.NOM head-1SG
'my head'

The same agreement morphology is utilized in both constructions, but it licences a postpositional complement in one case and a possessor in the other.

The analogy between possessive noun phrases and PPs is not a forced one, nor are the similarities accidental. All Hungarian P-elements come historically from nominal sources. *Mellett* 'beside', for example, is the complex of the noun *mell* 'chest' and the archaic locative marker *-tt*. This origin has become obscure for native speakers, and there are good reasons

not to collapse the grammar of possessive structures and dressed PPs (see Bartos 1999 and Asbury 2008).

I discuss here two arguments supporting a differential analysis. In the case of pronominal possessors, as in (9), the possessive structure must take the definite article, which can never be dropped. A definite article, however, is not licensed in PPs:

(10) (*az) (*én*) *mellett-em*
the (I.NOM) beside-1SG
'beside me'

Second, there is a gap in the agreement paradigm of postpositions: non-pronominal complements do not trigger agreement (11a). This is not so in possessive structures, where the agreement paradigm is full (11b):

(11) a. *János* *mellett*(*-*e*)
John beside-3SG
'beside John'

b. *János fej-**(*e*)
John head-3SG
'John's head'

There are further differences between the two constructions, but (10) and (11) suffice to prove the point.

Accordingly, the agreement markers themselves must have distinct lexical representations, cf.:

(12) a. (*én*) *mellett-em* -(*e*)*m*: [P_]P, ((↑OBJ PRED) = 'pro')
I.NOM beside-1SG (↑OBJ PERS) = 1
'beside me' (↑OBJ NUM) = sg

b. *a*(*z én*) *fej-em* -(*e*)*m*: [N_]N, ((↑POSS PRED) = 'pro')
the I.NOM head-1SG (↑POSS PERS) = 1
'my head' (↑POSS NUM) = sg

The only relevant difference is that possessive morphology combines with nouns and licenses a POSS argument, whereas postpositional agreement markers combine with P-elements and license pronominal OBJ complements.

I will argue below that ultimately it is their historical origin that allows inflecting Ps to be analyzed as possessive structures, at least for some speakers and only as a marked option. What exactly should trigger this analysis is what I discuss in the next subsection.

Before concluding this section, I briefly want to point out that Hungarian has two other types of P-elements. Some locative Ps are in fact suffixal markers which cannot be separated from the noun head (13a). Some others are true postposition that take case-marked complements, and unlike dressed Ps, never agree with them (13b).

(13) a. *Kati-hoz*
John-to
'to John'

b. *Kati-val* *szemben*
Kate-with in.front.of
'in front of Kate'

I do not discuss these two P-markers in this article, and refer the reader to the extensive literature available for details of their grammar.[7]

3.3. A parallel presentation of English and Hungarian data

It is well-known that there are contexts in which the reflexive is obligatory in locative and directional phrases in English, and even if both the reflexive and the pronoun are allowed as reflexive markers, they need not convey the same meaning. Interestingly, a very similar distributional variation is attested in Hungarian locative and directional PPs.

I have already pointed it out that it does not much matter whether the PP is an adjunct or an oblique argument, the binding facts are still the same in English. This is true as long as the P-element is *semantic* in the sense of Butt et al. (1999).[8] If it is selected by the verb and is void semantically, either as a non-semantic case marker or as part of a possibly larger idiom, then normally only the reflexive is grammatical (see, a.o., Reinhart & Reuland 1993 and Büring 2005). Consider the following set of examples:

(14) a. *John*$_i$ *gave the snake to *him*$_i$ */himself*$_i$.

b. *John*$_i$ *looks after *him*$_i$ */himself*$_i$.

c. *John*$_i$ *was beside *him*$_i$ */himself*$_i$ *with rage.*

[7] See, among others, Ackerman (1990), Ackerman & Webelhuth (1998), Asbury (2008), Bartos (1999), É. Kiss (1998, 2002), Marácz (1989), and Surányi (2009a,b).

[8] A semantic P is one which has a PRED feature and introduces a subcat frame of its own. For more detailed LFG-theoretic discussions of differences between semantic and non-semantic Ps, I refer the reader to Bresnan (1982) and Dalrymple (2001). I thank Miriam Butt for useful suggestions to improve the presentation here.

Similarly, the pronominal PPs are consistently out in Hungarian even for the less restrictive speakers if the PP has an idiomatic contribution:

(15) *Ki-tart-ok* **mellett-em* / *magam* *mellett.*
out-hold-1SG beside-1SG myself beside
'I stand by myself.'

(16) a. *Vág-om a fá-t alatt-am.*
cut-1SG the tree-ACC under-1SG
(i) 'I am cutting the tree under me.'
(ii)*'I am cutting my own throat.'

b. *Vág-om a fá-t magam alatt.*
cut-1SG the tree-ACC myself under
(i) 'I am cutting the tree under me.',
(ii)'I am cutting my own throat.'

(15) includes a postposition that is selected by the verb. The sentence in (16) can be interpreted literally or figuratively - this latter option is only licensed, however, by the reflexive PP. As far as I am aware, this is always the case in Hungarian. If the postposition is not interpreted literally, then reflexivity can only be coded via the reflexive even for speakers that otherwise allow for pronominal coding in snake-sentences.

There are certain contexts where even though both pronominal and reflexive PPs are acceptable, they seem to have a distinct meaning contribution. It has been pointed out repeatedly that the reflexive, unlike the pronoun, often triggers body-oriented readings (see Bresnan 2001 and Lødrup 2007 in the LFG literature). Examples (17) and (18) are from Rooryck & Vanden Wyngaerd (2007: 54, 59).[9]

(17) a. *When he*$_i$ *woke up, John*$_i$ *found a rope around him*$_i$.
√*It described a neat circle 4 meters in diameter.*

b. *When he*$_i$ *woke up, John*$_i$ *found a rope around himself*$_i$.
**It described a neat circle 4 meters in diameter.*

(18) a.**The earth*$_i$ *revolves around it*$_i$.
b. *The earth*$_i$ *revolves around itself*$_i$.

[9] Examples of this sort lead Rooryck and Vanden Wyngaerd (2007) to argue against predicate-based binding proposals (see also Lødrup 2007 for similar arguments). While the predicate-based approach (described here in Section 2) does not predict in itself the difference between the (a) and (b) examples above, such data do not necessarily refute it. My analysis of the Hungarian data will not force me to decide on the right analysis of the English facts, and therefore I leave this issue open.

As opposed to the reflexive, the pronoun is used in (17a) and (18a) to refer not to the body of the antecedent's referent, but to a possibly more abstract/extended location identified in relation to him or it.

Such a difference is manifest also in Hungarian, and in fact it seems to me that this effect is stronger in Hungarian than in English. Consider the following two examples, which are essentially analogous to the English ones discussed in the previous paragraph:

(19) a. *Érez-t-em* *a* *kígyó-k-at* *körülött-em.*
feel-PAST-1SG the snake-PL-ACC around-1SG
'I felt the snakes around me.' <body reading is out>

b. *Éreztem* *a* *kígyó-k-at* *magam* *körül.*
feel-PAST-1SG the snake-PL-ACC myself around
'I felt the snakes around myself.' <body reading is ok>

(20) a.**Lassan* *forg-ok* *körülött-em.*
slowly revolve-1SG around-1SG
'*I am slowly revolving around me.'

b. *Lassan* *forg-ok* *magam* *körül.*
slowly revolve-1SG myself around
'I am slowly revolving around myself.'

(20), just like the English (18), is nonsensical when the pronominal PP is used. (19a) is acceptable when the snakes do not touch the speaker's body. When the snakes are directly swirling around the speaker's body, the reflexive must be used (19b).

A further interpretative difference between reflexives and pronouns in snake-sentences is triggered by variation in point-of-view. In particular, it has been argued that reflexives always have a *logophoric* use in an extended sense in these contexts (see especially Reinhart & Reuland 1993 and Rooryck & Vanden Wyngaerd 2007). The contrasting pair in (21) is from Rooryck and Vanden Wyngaerd (2007: 35).

(21) a. *They*$_i$ *placed their guns, as they looked at it,*
*in front of *them*$_i$*/themselves*$_i$.

b. *They*$_i$ *placed their guns, as I looked at it,*
in front of them$_i$*/*themselves*$_i$.

Whether such effects indeed manifest themselves across the board in English or not, contrastive pairs of the sort that (21) represents are difficult to reproduce in Hungarian. This is probably so because the reflexive is overwhelmingly the default choice in snake-sentences even for the more

restrictive speakers, and therefore perspective effects do not seem to have been grammaticalized in a reflexive/pronominal PP opposition.

Discussing the Hungarian data, two facts have arisen here that are in need of explanation. First, pronominal marking of reflexivity is only licensed if the P-element is semantic and has its own subcategorization frame. Where its contribution is non-semantic or idiomatic, speakers only find the reflexive grammatical. Second, there seems to be a distribution of labour between pronominal and reflexive PPs when both are acceptable: the former are used primarily for body-oriented readings, whereas the latter necessarily seem to trigger a reading where the relevant location is an area vaguely construed in relation to the position of the referent of the antecedent. In the next section, I make an attempt at explaining these two facts.

4. Possessive analysis of postpositions and its relevance in binding

4.1. Independent evidence for the possessive analysis

To explain the facts observed in the previous section, I propose here that many speakers can still analyze inflecting postpositions in Hungarian as heads of possessive structures. How that explains the binding data is an issue that I pick up in the next subsection. In this subsection, I present independent evidence that such a possessive analysis is indeed an existing phenomenon in Hungarian and is therefore not an artefact of the current analysis.

As noted in 3.2, inflecting postpositions all go back historically to possessive sources. It is actually the case that some postpositions still have not fully undergone this diachronic change and have retained some possessive traits that are synchronically available. Such a postposition is *számára* ‘for’. Literally the opaque complex of the noun *szám* ‘number’ and the suffix *-ra* ‘onto’, this postposition marks benefactives and certain types of experiencers. (22a) below is an example for this postposition, (22b) is a possessive construction, (22c) is a regular inflecting postposition (with its opaque internal complexity made explicit).

(22) a. (*a*) *szám-om-ra*
the number-1SG-onto
‘for me’

b. *(*a*) *fej-em-re*
the head-1SG-onto
‘onto my head’

c. (**a*) *mell-ett-em*
the chest-LOC-1SG
‘beside me’

There are two important ways in which *számára* 'for him' differs from regular postpositions. As we have seen already in 3.2, regular Ps do not take the definite article (22c), whereas possessive structures with a pro-dropped or overt pronominal possessor must take it (22b). The postposition *számára* 'for him' can still optionally co-occur with the definite article (22a). Second, in the case of regular postpositions, the agreement morphology always comes last (22c), following any possible (obscure) locative morphology. In possessive constructions and in the case of *számára*, agreement morphology precedes locative/directional morphology.

The upshot of this discussion is that there exist inflecting postpositions in the synchronic system which have more possessive-like behaviour than usual and which may provide analogical grounds for a possessive analysis of other, more grammaticalized postpositions. In fact, Surányi (2009b) argues that the assumption of such an analysis may be necessary to explain the data in (23).

(23) a. *Kati-nak ellopt-ák a bicikli-jé-t.*
Kate-DAT stole-3PL the bike-POSS.3SG-ACC
'They stole Kate's bike.'

b. *Mögé-dobt-am a kígyó-t Kati-nak.*
to.behind.3SG-threw-1SG the snake.ACC Kate-DAT
'I threw the snake behind Kate.'

(23a) is possessive construction with the possessor having been extracted. When that happens, the possessor receives dative case. In (23b), the directional inflecting postposition forms a complex predicate with the verb (see Forst, King & Laczkó (this volume) on particle-verb complex predicate formation in Hungarian). The complement of the incorporated postposition may appear further away from the complex, and just like extracted possessors, it receives dative case. Surányi takes this to be an instance of possessor extraction, and then (23a) and (23b) are analogous in this respect. It is important to note that not every speaker finds the construction in (23b) perfectly acceptable. Crucially, it implies that the possessive analysis of postpositions is a marked option, and this is in fact what I claim here.

4.2. Accounting for the binding facts

Recall that the primary target of this article is to explain the contrast between (24a) and (24b). Many speakers do not like (24a), and even those who do, prefer (24b) if the constraints discussed in 3.3 do not intervene.

(24) a. *Lát-t-am egy kígyó-t mellett-em.*
see-PAST-1SG a snake-ACC beside-1SG
'I saw a snake beside me.'

b *Lát-t-am* *egy* *kígyó-t* *magam* *mellett*.
see-PAST-1SG a snake-ACC myself beside
'I saw a snake beside myself.'

Pronominal coding of reflexivity is thus a marked option in Hungarian snake-sentences. Why is this so?

What I propose here is that inflecting postpositions have two lexical entries, and that creates an important, binding-theoretically relevant structural difference between (24a) and (24b). The two lexical entries are as follows:

(25) a. *mellett-em*$_1$: P, (↑PRED) = 'BESIDE <(OBJ)>'
((↑OBJ PRED) = 'pro')
(↑OBJ PERS) = 1
(↑OBJ NUM) = sg

b. *mellett-em*$_2$: P, (↑PRED) = 'BESIDE <(OBJ)>'
(↑OBJ PRED) ='PLACE<(POSS)>'
((↑OBJ POSS PRED) = 'pro')
(↑OBJ POSS PERS) = 1
(↑OBJ POSS NUM) = sg

Mellettem$_1$ is a run-of-the-mill inflecting postposition, and this is the lexical entry that occurs in (24b). *Mellettem*$_2$ is a possessively analyzed variety of *mellettem*$_1$.[10] Not every speaker possess this lexical entry, and those who do are the ones that find (24a) acceptable, for (24a) contains this entry.

Essentially, (25a) means 'beside me', whereas (25b) means something like 'beside my place'. In other words, a silent PLACE predicate is introduced into the lexical representation of the possessively analyzed postposition. That may sound a marked feature of the analysis in a theory that generally prefers not employ silent elements. Note nevertheless that Bresnan (1994: 110) makes use of the same device to explain why locative PPs may occupy positions typically reserved for noun phrases in English (26). Her analysis is in (27).

(26) a. *Is* [*under the bed*] *a good place to hide*?

b. [*Under the bed*] *is a good place to hide, isn't it*?

(27) [NP (*a place*) [PP under the bed]]

[10] I refer the reader to Laczkó (1995, 1997, and 2001) for a more detailed LFG-theoretic analysis of possessive constructions in Hungarian.

One difference is that whereas I assume that the silent predicate is introduced in the lexicon, Bresnan argues that it is a missing nominal head that is "contextually interpreted as an instance of ellipsis".

Let me now illustrate how this analysis explains our binding data. I start with (24b) repeated as (28), whose f-structure is in (29). This f-structure contains the lexical entry *mellett-em*$_1$.

(28) *Lát-t-am* *egy* *kígyó-t* *magam* *mellett*.
see-PAST-1SG a snake-ACC myself beside
'I saw a snake beside myself.'

(29)
$$\begin{bmatrix} \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'pro'} \\ \text{NUM} & \text{sg} \\ \text{PERS} & 1 \end{bmatrix}_i \\ \text{PRED} & \text{'see <(SUBJ) (OBJ)>'} \\ \text{TENSE} & \text{PAST} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'snake'} \\ \text{DEF} & - \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'beside <(OBJ)>'} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'self'} \\ \text{NUM} & \text{sg} \\ \text{PERS} & 1 \end{bmatrix}_i \end{bmatrix} \right\} \end{bmatrix}$$

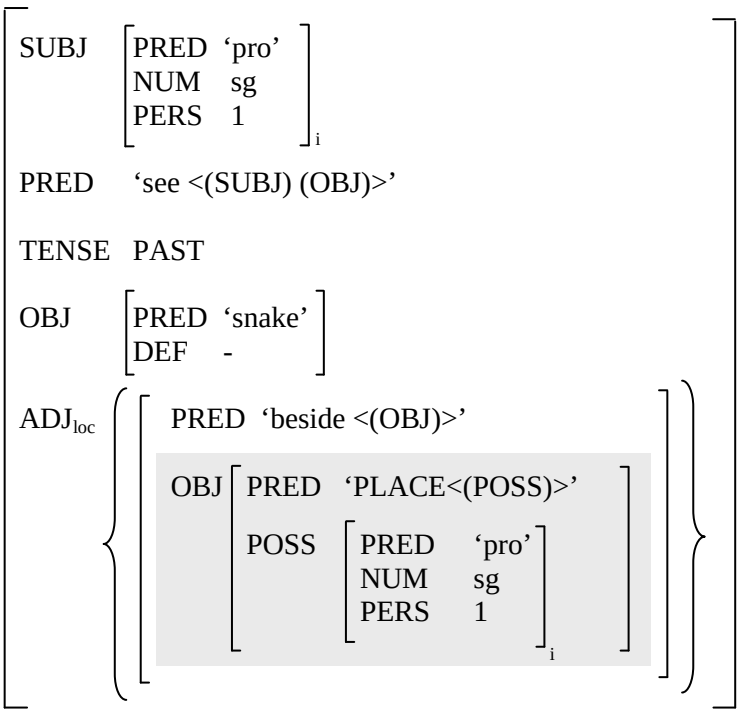
Nothing special needs to be said about (29): it includes the regular inflecting postposition, and its complement, the reflexive finds its antecedent in the smallest f-structure that includes a SUBJ. That f-structure is the f-structure of the clause.

Sentence (24a) is repeated below as (30), and its f-structure is in (31) on the next page.

(30) *Lát-t-am* *egy* *kígyó-t* *mellett-em*.
see-PAST-1SG a snake-ACC beside-1SG
'I saw a snake beside me.'

(30) includes the possessively analyzed entry *mellett-em*$_2$. I claim that only those speakers accept (30) who have this entry. The result is an f-structure that is richer than (28), because it includes an extra possessive layer.

(31)



The object of the postposition, which includes the extra possessive layer, is marked by grey shading in the f-structure in (31).

This analysis explains the Hungarian facts in the following way. Pronominal marking of locative coreference is a marked option in Hungarian, because it includes an extra structural layer otherwise not present in snake-sentences by default. Furthermore, this extra layer is projected by a possessively analyzed lexical entry of the postposition, and since not every speaker stores this entry in his/her lexicon, not every speaker will accept pronouns in snake-contexts. [11]

What triggers the use of the possessive postpositional structure is the distribution of labour between pronominals and reflexives that we observed to exist in snake-sentences (section 3.3). The reflexive is preferred in body-

[11] Following Laczkó (1995, 1997) and Bresnan (2001: 254), I assume that POSS is a SUBJ-like function and thus it defines a negative binding domain for pronouns. That this is so is evident in the case of regular possessives:

(i) *Lát-t-am* *egy* *kígyó-t* *a* *hely-em-en*.
see-PAST-1SG a snake-ACC the place-1SG-at
'I saw a snake at my place.'

oriented readings. The pronominal PP is used consistently when we make reference to the extended location around the referent of the P-object. This semantics follows now from the possessive semantics of the P-element itself and the silent PLACE predicate that is introduced. Finally, pronominal PPs have been found to be grammatical markers of reflexivity only if the P-element is literally interpreted. If the current analysis is on the right track, this requirement is in fact a prerequisite for the possessive analysis. Only semantic Ps can be analyzed meaningfully as possessive structures along the lines of (31).

4.3. On the third person constraint

Remember that every speaker rejects pronominal marking of reflexivity in snake-contexts if the antecedent is third person. This judgement is very strong when the antecedent is a lexical noun. I repeat (2) as (32) to illustrate.

(32) *János*$_i$ *látott egy kígyó-t maga mellett*$_i$ / **mellett-e*$_i$.
John saw a snake-ACC himself beside beside-3SG
'John saw a snake beside him.'

The sentence actually gets better if the antecedent is a pronoun (33a), and it is best, but still not fully grammatical, if the pronoun is dropped (33b). The question marks represent the judgements of the speakers of the less restrictive dialect. Other speakers may find these sentences completely ungrammatical.

(33) a. ??*Ő*$_i$ *lát-ott egy kígyó-t mellett-e*$_i$.
he see-PAST.3SG a snake-ACC beside-3SG
'He saw a snake beside him.'

b. ?*Lát-ott*$_i$ *egy kígyó-t mellett-e*$_i$.
see-PAST.3SG a snake-ACC beside-3SG
'(He) saw a snake beside him.'

I do not have a full account of why we have this particular difference between third person and non-third person. Notice nevertheless that under the current analysis, the non-acceptability of the pronominal form implies that the postposition cannot be analyzed here as a possessive head. Why should this be so?

It is interesting to note once again that inflecting postpositions only agree with pronominal complements, and not with lexical ones. I repeat (11a) as (34a), and compare it to (34b)

(34) a. *János mellett*(**-e*)
John beside-3SG
'beside John'

b. *ő-* *mellett-*(*e*)
he beside-3SG
'beside him'

Possibly, the fact that the possessive analysis of inflecting postpositions is blocked in the presence of lexical antecedents (32) is related to the fact that such non-pronominal noun phrases do not otherwise trigger agreement with the postposition (34a). Similarly, the fact that pronominal antecedents fare a bit better (33) might be related to the fact that pronominal complements must agree with the inflecting postposition (34b). In other words, it might be that the facts of (34) influence the pattern in (32-33) on analogical grounds.[12]

There also exists a more general functionalist account for the binding theoretically relevant divide between third and non-third persons (see, for example, Faltz 1985 and Reuland 2008). Unlike the interpretation of third person pronominals, the interpretation of non-third person pronominals is kept constant per reportive domain. First and second person pronouns are normally not ambiguous referentially in a given context of use. The reference of third person pronominals may switch from one individual to another even in the same discourse. For this reason, languages often employ special reflexive forms in third person which cannot be interpreted ambiguously. In first and second persons, there is no necessary drive to employ reflexive markers. Thus in German first and second person pronouns are used to encode local reflexive dependencies (Section 2). Standard Hungarian uses a reflexive in snake-sentences in first and second persons, but pronominals can also be used for the same purpose since their use does not trigger referential ambiguities anyway.

5. Conclusion

I have shown here that locative and directional PPs are a special context in Hungarian as well as in English as far as the encoding of reflexive dependencies is concerned. The similarities between the two languages are the following:

- Pronominal marking of reflexivity is only an option in snake-sentences if the P-element is semantic and is literally interpreted.
- Reflexives in these positions often trigger body-oriented readings, whereas the pronoun is used when the relevant location is an area vaguely construed in relation to the position of the referent of the antecedent.

[12] This possibility has been suggested to me by Miriam Butt.

I have also shown that the Hungarian pattern differs from the English one in the following two respects:

- The default coreference marker is always the reflexive in Hungarian in snake-sentences, and pronominal coding is a marked option, available only for a subset of speakers.
- There is a divide between third and non-third persons: pronominal marking of coreference is only acceptable in the latter case.

I presented an account of these facts which relies on the independently motivated assumption that inflecting Ps can be analyzed as heads of possessive constructions. The possessive construction creates an extra layer of embedding, which can license a non-local coreference relation between the "possessor" pronoun and the subject antecedent. In this account, there is no domain asymmetry between pronouns and reflexives in Hungarian: the local context that is a negative binding domain for the pronoun and a positive binding domain for the reflexive is the smallest domain that includes a SUBJ or a POSS function.

Acknowledgements

I gratefully acknowledge that the research reported here has been supported in part by OTKA (*Hungarian Scientific Research Fund*), grant number: K 72983. I also acknowledge the support of the TÁMOP 4.2.1-08/1-2008-003 project, which is implemented through the New Hungary Development Plan co-financed by the European Social Fund, and the European Regional Development Fund.

I thank the LFG10 reviewers and the audience of the Ottawa conference for useful comments and discussions. I also thank the editors of this volume for their assistance, and I am especially grateful to Miriam Butt for extensive comments on the first draft. Any errors that remain are solely mine.

Bibliography

Ackerman, Farrell. 1990. The morphological blocking principle and oblique pronominal incorporation in Hungarian. In K. Dziwirek et. al. eds. *Grammatical Relations: A Cross-Theoretical Perspective*. Stanford: CSLI Publications. 1-19.

Ackerman, Farrell & Gert Webelhuth. 1998. The composition of (dis)continuous predicates: lexical or syntactic? *Acta Linguistica Hungarica* 44. 317-340.

Asbury, Anna. 2008. *The morphosyntax of case and adpositions*. PhD dissertation. University of Utrecht.

Bartos, Huba. 1999. *Morfoszintaxis és interpretáció: A magyar inflexiós jelenségek szintaktikai háttere*. [Morphosyntax and interpretation: The syntactic background of inflectional phenomena in Hungarian.] PhD dissertation. Budapest: ELTE.

Bresnan, Joan ed. 1982. *The Mental Representation of Grammar*. Cambridge, MA: The MIT Press.

Bresnan, Joan. 1994. Locative inversion and universal grammar. *Language* 70 (1). 72-131.

Bresnan, Joan. 2001. *Lexical-Functional Syntax*. Oxford: Blackwell.

Büring, Daniel. 2005. *Binding Theory*. Cambridge: Cambridge University Press.

Dalrymple, Mary. 1993. *The Syntax of Anaphoric Binding*. Stanford: CSLI Publications.

Dalrymple, Mary. 2001. *Lexical Functional Grammar*. San Diego: Academic Press.

den Dikken, Marcel; Lipták, Anikó & Zvolenszky, Zsófia. 2001. On inclusive reference anaphora: new perspectives from Hungarian. In K. Megerdoomian & L. Bar-el eds. *WCCFL 20 Proceedings.* Somerville, MA: Cascadilla Press. 137-149.

Faltz, Leonard. 1985. *Reflexivisation: A study in universal syntax*. New York: Garland.

Forst, Martin; King, Tracy Holloway & Laczkó, Tibor. 2010. Particle verbs in computational LFGs: Issues from English, German and Hungarian. *This volume*.

Huddleston, Rodney & Pullum, Geoffrey K. eds. 2002. *The Cambridge grammar of the English language*. Cambridge: Cambridge University Press.

É. Kiss, Katalin. 1987. *Configurationality in Hungarian*. Dordrecht: Reidel.

É. Kiss, Katalin. 1998. Verbal prefixes or postpositions? Postpositional aspectualizers in Hungarian. In C. de Groot & I. Kenesei eds. *Approaches to Hungarian 6*. Szeged: JATE.

É. Kiss, Katalin 2002. *The Syntax of Hungarian*. Cambridge: Cambridge University Press.

Laczkó, Tibor. 1995. *The syntax of Hungarian noun phrases. A Lexical-Functional Approach*. Frankfurt am Main: Peter Lang.

Laczkó, Tibor. 1997. Action nominalization and the possessor function within Hungarian and English noun phrases. *Acta Linguistica Hungarica* 44. 413-475.

Laczkó, Tibor. 2001. A magyar birtokos DP inflexiós morfológiájáról lexikai-funkcionális megközelítésben. [On the inflectional morphology of the Hungarian possessive DP in a Lexical-Functional approach.] In: M. Bakró-Nagy et al. eds. *Újabb tanulmányok a strukturális magyar nyelvtan és a nyelvtörténet köréből. Kiefer Ferenc tiszteletére barátai és tanítványai*. Budapest: Osiris Kiadó. 59–77.

Lødrup, Helge. 2007. A new account of simple and complex reflexives in Norwegian. *The Journal of Comparative Germanic Linguistics* 10 (3). 183-201.

Marácz, László. 1989. *Asymmetries in Hungarian*. PhD dissertation. Rijskuniversiteit Groningen.

Reuland, Eric. 2008. Anaphoric dependencies: How are they encoded? Towards a derivation-based typology. In E. König & V. Gast eds. *Reciprocals and Reflexives. Theoretical and Typological Explorations. Trends in Lingusitics 192*. Berlin/New York: Mouton de Gruyter. 499-556.

Rooryck, Johan & Vanden Wyngaerd, Guido. 2007. The syntax of spatial anaphora. In M. Bašić et al. eds. *Tromsø Working Papers on Language and Linguistics: Nordlyd 34.2*. Tromsø: CASTL. 33-85.

Surányi, Balázs. 2009a. Locative particle and adverbial interpretation at the interfaces. In K. É. Kiss ed. *Adverbs and adverbial adjuncts at the interfaces*. Berlin: Mouton de Gruyter. 39-74.

Surányi, Balázs. 2009b. Adpositional preverbs, chain reduction and phases. In M. den Dikken & R. Vago eds. A*pproaches to Hungarian 9. Papers from the 2007 New York Conference*. Amsterdam/Philadelphia: John Benjamins. 217-250.