

Pronominal Possessors and Syntactic Functions in the Hungarian Possessive Noun Phrase

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Abstract

In this paper we develop an LFG analysis of the binding relations of Hungarian anaphors when they occur within possessive DPs. The reflexive is subject to the Minimal Complete Nucleus Condition, and the reciprocal is subject to the Minimal Finite Domain Condition. When either the reflexive or the reciprocal pronoun occurs within a possessive DP, neither of them can be anaphorically bound from outside if this DP contains the definite article (Rákosi 2017, to appear). Our analysis has two crucial aspects. On the one hand, we introduce a new feature: “binding domain delimiter” associated with the lexical form of the definite article. We use this feature as a negative off-path constraint in modelling the relevant binding relations. On the other hand, following Laczkó (2004, 2009), we assume that within Hungarian possessive DPs there are two [-r] grammatical functions available to arguments of complex event nominals: POSS and SUBJ. Both can be overtly realized by either the nominative or the dative possessor constituent, and, in addition, SUBJ can also be PRO. Thus, we create a DP-internal antecedent for the anaphors in a principled manner, which, in turn, can be controlled from outside the DP.

1. Introduction

The Hungarian possessive noun phrase can host a wide range of pronominal possessors: personal pronouns, reflexives, as well as the reciprocal anaphor are each licensed as possessors. Each of these pronominal possessors can form a referential dependency with a clause-mate antecedent.¹

This paper presents an in-depth LFG analysis of the syntax of anaphoric possessor strategies in Hungarian, and it makes two fundamental claims. First, following Rákosi (2017, to appear), we show that the definite article plays a crucial blocking role, inasmuch as bound variable readings between possessor anaphors and clause-mate antecedents are licensed only in the absence of the article. Second, we argue that the proper LFG treatment of these anaphoric dependencies necessitates the postulation of a SUBJ function internal to the possessive noun phrase that co-exists with POSS in the case of nominalization (Laczkó 2004, 2009).

The structure of the paper is as follows. In section 2, we present an overview of the major anaphoric possessor strategies in Hungarian on the basis of Rákosi (2017, to appear), paying special attention to the distribution of the definite article. We also make some remarks on the binding domains that generally characterise reflexive and reciprocal anaphors in Hungarian.

¹ By *possessive noun phrase*, we mean the NP/DP that has a POSS argument within its own f-structure (*the girl's hand*), and we use the term *possessor* to mean the NP/DP that fulfils the POSS GF (*the girl's in the girl's hand*).

We present an LFG analysis of these data in section 3, and conclude the paper with a summary in section 4.

2. The definite article and anaphoric possessors

2.1. A puzzling distribution of the article

The distribution of the definite article across the different Hungarian pronominal possessor constructions appears to be puzzling at first: the article is optional if the possessor is *pro*-dropped (1a), it is obligatory if the personal pronoun possessor is overt (1b), it is also obligatory if the possessor is a reflexive (1c), but it is barely an option if the possessor is the reciprocal anaphor (1d).

- (1) *A tanár-ok_i ismerték*
 the teacher-PL knew.3PL
 ‘The teachers_i knew...’
- a. [_{DP} (*a*) *határ-a-i-k-at*].
 the limit-POSS-PL-3PL-ACC
 ‘...their_{i/j} limits.’
- b. [_{DP} ^{*}(*az*) *ő_{i/j} (kis) határ-a-i-k-at*].
 the (s)he (little) limit-POSS-PL-3PL-ACC
 ‘...their_{i/j} (little) limits.’
- c. [_{DP} ^{*}(*a*) *maguk_{i/*j} határ-a-i-t*].
 the themselves limit-POSS-PL-ACC
 ‘...their_{i/*j} own limits.’
- d. [_{DP} (^{*/??}*az*) *egymás_{i/*j} határ-a-i-t*].
 the each_other_{i/*j} limit-POSS-PL-ACC
 ‘...each other’s limits.’

Pronominal possessors agree with the possessum in Hungarian, and the morphology on the inflected head noun shows an intricate complexity. In (1a), for example, the *possessedness* morpheme *-a-* follows the head, then the plural marker *-i-* is used to pluralize the possessum. It is followed by the 3PL agreement marker *-k-*, which incorporates the 3PL pronominal possessor; and the accusative case marker *-t* comes last in the sequence. Since this morphology identifies pronominal possessors, these are regularly dropped, as in (1a). The overt possessor pronouns in (1b) shows no number agreement with the inflected 3PL head in third person, and it is spelt out as a 3SG

possessor (this pattern is known as *anti-agreement* in Hungarian grammars). The reflexive (1c) and the reciprocal (1d) possessors show no agreement with the head.²

The most puzzling fact about the distribution of the definite article across the constructions in (1) is that the reflexive possessor (1c) and the pronominal possessor (1b) pattern up in requiring the definite article, whereas the reciprocal possessor cannot take it. Rákosi (2017, to appear) argues that this intricate pattern is in fact predictable if we assume that the definite article plays a role in delimiting the respective binding domains. The pertinent literature makes two claims that we may utilize as vantage points in spelling out an adequate account.

First, both É. Kiss (1987: 197-202) and Marác (1989: 391-398) argue that the Hungarian possessive noun phrase is a binding domain. This, É. Kiss notes, renders the reflexive possessor strategy in (1c) a “marked pattern”, placing the reflexive possessor “outside of the domain of binding theory, into the periphery of grammar” (1987: 198). As we briefly show below, the reflexive here is indeed an exempt anaphor in the sense of Pollard & Sag (1992), and it has logophoric properties. It is “marked” in the sense that logophoric pronouns have a marked character: they always require a supporting discourse context wherein the perspective holder that can be construed as an antecedent is available.³ The reciprocal possessor does not need such a supportive discourse context, all it requires in the usual case is an available antecedent within the clause. Second, Marác (1989) notes the lack of the article in the case of the reciprocal (1d), which leads him to conclude that for reciprocals, the embedding clause acts as a binding domain. For the construction represented by (1d), we will make the same assumption.⁴

2.2. Two notes on the binding domains

Since our goal is a unified analysis of reflexive and reciprocal anaphors (strictly distinguishing these in the lexicon from the corresponding logophoric entries, which we treat as exempt elements), it is useful to add two comments on the binding domains that they are constrained by. Note, first of all, that both anaphors figure in predicative PPs taking the clausal

² For a detailed LFG-specific discussion of the grammar of the Hungarian possessive noun phrase, see Laczkó (1995).

³ The lack of the definite article with reflexive possessors leads to ungrammaticality, and its presence still leaves the reflexive possessor here a less frequent alternative to the *pro*-drop construction in (1a), other things being equal.

⁴ Marác (1989) assumes that the definite article is never compatible with reciprocal possessors. We point out below that this assumption is not warranted, as there are cases when a reciprocal possessor is compatible with the definite article. In nominalizations, where the search for an antecedent may terminate inside the possessive noun phrase, the article becomes an option.

subject as their antecedents. This entails that the binding domain is not the coargument domain for either.⁵

- (2) a. *A fiúk látták ez-t maguk mellett / *melletük.*
 the boys saw.3PL this-ACC themselves next.to next.to.3PL
 ‘The boys saw this next to them.’
- b. *A fiúk látták valami-t egymás mellett.*
 the boys saw.3PL something-ACC each.other next.to
 ‘The boys saw something next to each other.’

An interesting contrast emerges between reflexive and reciprocal anaphors in infinitival constructions. Compare the following two sentences:

- (3) a. *A fiúk_i látták a lányok-at_k lerajzol-ni maguk-at_{*i/k}.*
 the boys saw.3PL the girls-ACC draw-INF themselves-ACC
 ‘The boys saw the girls draw (a picture of) themselves.’
- b. *A fiúk_i látták a lányok-at_k lerajzol-ni egymás-t_{i/k}.*
 the boys saw.3PL the girls-ACC draw-INF each.other-ACC
 ‘The boys saw the girls draw (a picture of) each other.’

If the reflexive is the object argument of the infinitive, it has to be bound by the subject of the infinitive. Since (3) is a raising construction, the infinitival subject is controlled by the matrix object.⁶ Consequently, the reflexive anaphor picks the girls in (3a), and the matrix subject is not a potential antecedent. But for the reciprocal, it is: the anaphor in (3b) can either be about the girls or the boys. We conclude therefore that reflexive anaphors are subject to the Minimal Complete Nucleus Condition in Hungarian, but the reciprocal can find an antecedent within the Minimal Finite Domain.⁷

Note nevertheless that this difference, by itself, does not account for the observations we made in 2.1 above. Most importantly, it makes no predictions with respect to the observed distribution of the definite article in possessive phrases. In the next subsection, we now turn to a more detailed

⁵ Whereas the default choice is the pronoun in English in such configurations (see the translation of (2a)), the reflexive is the usual and often the only grammatical choice in Hungarian. See Rákosi (2010) for an LFG-specific discussion of these so-called *snake sentences* in Hungarian.

⁶ This is an ordinary case of a “subject-to-object raising” construction. The infinitival constituent has the customary XCOMP function, and its covert subject is functionally controlled by the (formal) object of the matrix verb. Thus, the “immediate” binder of the reflexive object in the infinitival construction is the covert subject.

⁷ See Dalrymple (2001) for an overview and a definition of the binding domains that are employed in LFG grammars.

discussion of this distribution and its relevance in licensing referential dependencies between anaphoric possessors and their antecedents.

2.3. More about anaphoric possessors

A recent line of research has found a strong typological correlation between the availability of *dedicated possessive reflexives* and the way languages code definiteness (see Reuland 2007, 2011, Despić 2011, 2015, Marelj 2011). Such dedicated possessive reflexives are only available in languages which do not employ pronominal definite articles (i.e., only in languages with postnominal definiteness marking or with no definiteness marking at all, see Despić 2015: 203 for a representative list). Latin and Italian form a minimal pair in this respect: Latin has no definite article and it has the dedicated possessive reflexive *suus*, but Italian has a definite article and it has only an English-type pronominal possessor. Compare (4a) and (4b) below for illustration. The Latin possessive phrase does not act as a binding domain, which results in the classical complementarity between the two types of pronominal possessors, but the Italian possessive phrase, armoured with the definite article, is a binding domain. As a result, Italian has only one type of possessive pronoun, and the contrast that Latin entertains has been lost.

- (4) a. Latin (Bertocchi & Casadio: 1980, 26)
*Ioannes_i sororem suam_{i/*k} / eius_{*i/k} vidit.*
 Ioannes sister.ACC self's his saw
 ‘Ioannes saw his sister.’
- b. Italian (Reuland 2011: 168)
Gianni_i ama le sue_{i/k} due macchine.
 Gianni loves the his two cars
 ‘Gianni loves his two cars.’

Rákosi (2017, to appear) argues that Hungarian instantiates, as it were, both of these universal scenarios. The reciprocal possessor can be a true anaphor bound by the clausal subject in the absence of the definite article (1d), and when the definite article is there (1a-c), the dependency between the anaphoric possessor and the main-clause antecedent is essentially a long distance dependency.

This is straightforward for personal pronoun possessors, which, as expected, should co-occur with the definite article if the article indeed spells out the left edge of a binding domain.⁸ It is reflexive possessors that do not

⁸ In fact, overt personal pronoun possessors always require the presence of the definite article in Hungarian, irrespective of whether they have a clause-mate antecedent or not. When they do have a clause-mate antecedent, the usual strategy is

appear to be well-behaved at first, since they require the presence of the definite article (1c). In fact, as Rákosi (to appear) argues in detail, reflexive possessors in Hungarian are discourse sensitive, exempt anaphors. This is most obvious when they do not have a clause-mate antecedent, as in the following example below (source: *Hungarian National Corpus*).

- (5) *Elég nagy így is a magam terh-e!*
 quite big even so the myself burden-POSS.3SG
 ‘My own burden is quite big even so.’

We will consequently treat these reflexive possessors as special, discourse sensitive pronominal elements, which may not even have linguistically expressed antecedents at all.

Reciprocal possessors, on the other hand, are well-behaving anaphors, and the definite article has a complex distribution in their case which is fully compatible with this assumption. Consider the following sentences for illustration, each of which represents a different reciprocal possessor construction.

to *pro*-drop the possessor, and spelling it out is a marked option in most contexts. The insertion of the speaker-oriented modifier *kis* ‘little’ is one strategy that makes the use of an overt pronoun more natural in the presence of clause-mate antecedents, that is why we added this adjective in (1b).

The definite article can sometimes be absent if the pronominal possessor is *pro*-dropped. The conditions licensing such article-drop are complex, but it is best if the possessive phrase has a salient referent in the discourse. Compare these two examples:

- (i) *Szeretem [#](az) ablak-om-at.*
 love.1SG the window-POSS.1SG-ACC
 ‘I love my window.’
- (ii) *Szeretem (az) anyá-m-at.*
 love.1SG the mother-POSS.1SG-ACC
 ‘I love my mother.’

Unlike in Italian, the omission of the article is not determined solely by choice of the noun head (though this is a primary factor), but it may be subject to contextual parameters. We do not discuss these here, as our main concern in this paper is a study of reflexive and reciprocal possessors. But note that the article is always grammatical with either overt or *pro*-dropped pronoun possessors, and that it can be sometimes omitted in the latter case is not relevant for our analysis to be presented in Section 3.

- (6) a. *Jól ismerjük* [DP (*^{/?}az) *egymás* *baj-á-t*].
 well know.1PL the each_other problem-POSS.3SG-ACC
 ‘We know each other’s problems well.’
- b. *Egymás-nak jól ismerjük* [DP *(a) *baj-á-t*].
 each_other-DAT well know.1PL the problem-POSS.3SG-ACC
 ‘We know each other’s problems well.’
- c. *A fiúk_i díjazzák* [DP (az) *egymás_i* *lefest-és-é-t*].
 the boys appreciate.3PL the each_other paint-DEV-POSS.3SG-ACC
 ‘The boys appreciate the painting of each other.’

(6a) represents a canonical transitive structure where the article is not acceptable, as we have also seen for (1d) above. When the possessor is extracted (and receives dative case), the spellout of the article is compulsory (6b). Notice that in this case the reciprocal is outside of the possessive phrase, and its local antecedent is the (*pro*-dropped) 1SG subject. Finally, (6c) contains a possessive phrase where the possessum is a deverbal nominal. At least when the understood subject of this nominalization is coreferential with the matrix subject, the definite article becomes optional for most native speakers, see Rákosi (to appear) for a discussion of pertinent questionnaire data. In this interpretation (when the boys appreciate their own painting of each other) the reciprocal has a syntactically active potential antecedent within the possessive nominalization. It forms an important part of our analysis presented in section 3 that nominalizations may include a SUBJ function internal to the possessive noun phrase. What we have shown in this section is that the definite article is indeed a binding domain delimiter in Hungarian possessive constructions, and this must be captured by any adequate analysis of the data we have surveyed here.

3. An LFG-account

In this section, we set out to develop an analysis for the following empirical generalizations, based on the data and the relevant discussions in section 2.

The primary Hungarian reflexive pronoun can be used either anaphorically or logophorically. In the former case, its binding domain is the minimal constituent containing a subject, i.e. the Minimal Complete Nucleus Condition applies to it. As should be clear from the foregoing discussion, it is the behaviour of reciprocal pronouns that poses a much greater challenge for a theoretical approach, so in this section our main focus will be the development of an adequate account of these reciprocal phenomena. However, at the end of the section we will also show that the analysis of the binding relations of the reflexive pronoun when it occurs in possessive DPs

headed by a complex event nominal can be made more principled (and uniform) if it is cast in the general formal approach developed for reciprocals.

Reciprocal pronouns have been shown to be subject to the Minimal Finite Domain Condition, see the crucial example in (3b), and compare it with (3a) containing a reflexive pronoun. This condition allows reciprocal possessors to search for antecedents either inside or outside of the possessive phrase. However, it is an overall constraint on anaphoric dependencies involving pronominal possessors that the search for the antecedent cannot pass the definite article in the DP cap of the possessive phrase, see the crucial example in (6a), repeated here for convenience. It contains a reciprocal pronoun and an ordinary (non-derived) noun head in the possessive DP. The reciprocal is bound by the pro-dropped subject of the matrix verb. The presence of the definite article blocks binding from outside the DP, and, given that there is no potential binder within the DP, the sentence is ungrammatical.⁹

- (6a) *Jól ismerjük* [DP (*^{/?}az) *egymás baj-át*].
 well know.1PL the each_other problem-POSS.3SG-ACC
 ‘We know each other’s problems well.’

The situation is complicated by the fact that the same construction type is fully acceptable, if the noun head in the possessive DP is a derived (complex event) nominal, see (6c), repeated below for convenience. If there is no definite article in the DP, the matrix subject can bind the reciprocal in the usual way, as in (6a). The presence of the article and the possible coreference of the reciprocal and the matrix subject requires a special treatment.

- (6c) *A fiúk_i díjazzák* [DP (az) *egymás_i lefest-és-ét*].
 the boys appreciate.3PL the each_other paint-DEV-POSS.3SG-ACC
 ‘The boys appreciate the painting of each other.’

Our approach then needs to achieve two goals. On the one hand, it has to formally encode the fact that the definite article, as a rule, marks the boundary of a binding domain for reciprocals, see (6a) above again. On the other hand, it has to capture the fact that the binding of the reciprocal is legitimate within a possessive DP even in the presence of the definite article when the nominal head is a complex event nominal.

⁹ Recall that a reflexive pronoun is felicitous within the very same environment, which is due to the fact that this pronoun is used logophorically here, cf. (6a) and (i).

- (i) *Jól ismerjük* [DP *a magunk baj-át*].
 well know.1PL the ourselves.NOM problem-POSS.3SG-ACC
 ‘We know our own problem well.’

3.1. Encoding the binding domain for reciprocals

As regards the first goal, the crucial aspect of our solution is as follows. We encode the blocking function of the definite article by introducing a special feature: “binding domain delimiter”: BDD. We associate this feature with the lexical form of the article in case it occurs in a possessive DP, see (7).

$$(7) \quad a(z): \dots \\
(\uparrow\text{CHECK_POSS-MORPH})=c + \\
(\uparrow\text{BDD})= +$$

This pair of annotations is optionally assigned to the article, and the XLE-style CHECK feature ensures that the article has this binding domain delimiting function only in possessive DPs. This feature is indispensable for the analysis of Hungarian DPs in general. For instance, it is this feature, encoded by possessive morphology, that licenses the presence of the POSS grammatical function in a DP.¹⁰

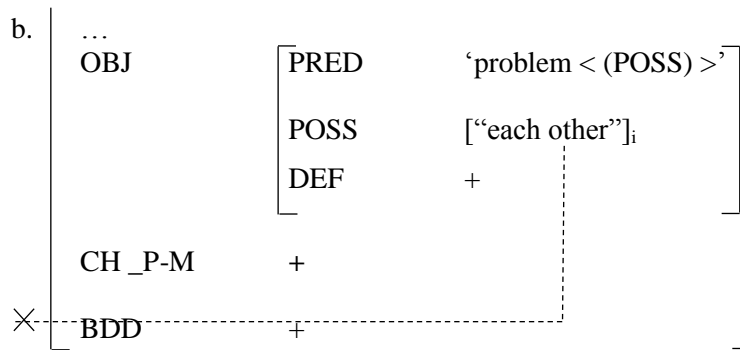
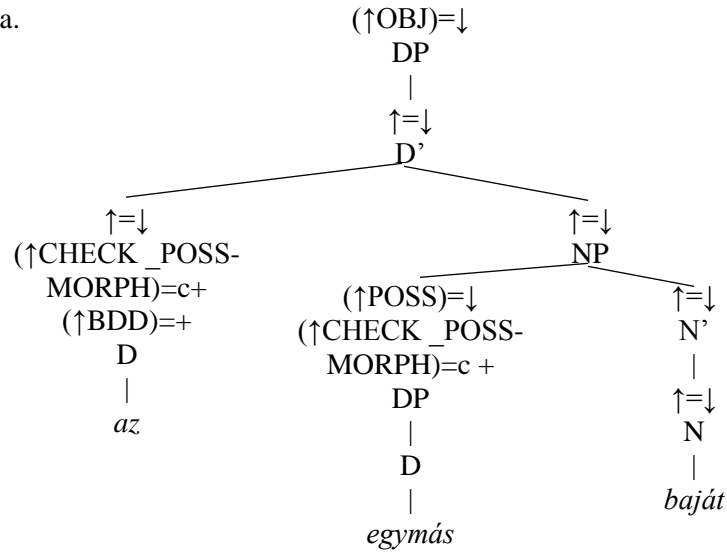
As has been demonstrated in section, Hungarian reciprocals are subject to the Minimal Finite Domain Condition, which must be encoded in their lexical forms. In our analysis this encoding must be coupled with the BDD feature as a negative off-path constraint, see (8). This feature is added as a negative off-path constraint on the domains that involve possessive DPs: the path leading to the anaphor cannot contain this feature. For instance, this renders (6a) ungrammatical in the presence of the article, and the construction is grammatical in the absence of the article.

$$(8) \quad \textit{egymás}: \quad (\text{GF}^* \text{GF}_{\text{pro}}) \\
\sim(\rightarrow \text{TENSE}) \\
\sim(\rightarrow \text{BDD})$$

In this analysis, the c-structure and f-structure representations of the object possessive DP in (6a) with an overt definite article are as shown in (9a) and (9b), respectively.

¹⁰ The primary function of this particular feature is to check whether the noun head has possessive morphology. For discussions of how XLE-style CHECK features work technically and for their use in the analysis of various Hungarian phenomena, see Laczkó & Rákosi (2011) and Laczkó (2014).

(9) a.



3.2. The treatment of reciprocals in possessive event nominals

The analysis as developed so far provides a suitable formal treatment of the facts represented by (6a). However, at this stage its prediction is that the construction type exemplified in (6c) will also be ungrammatical in the presence of the definite article, because the article will have the same blocking effect as in the case (6a), and the binding of the reciprocal by the matrix subject will not be possible, contrary to fact: on the one hand, the construction is grammatical, and, on the other hand, the reciprocal and the matrix subject are coreferential. Our solution, which is the second major aspect of our proposal, is that in the case of this construction type we assume

that there is a (covert) local binder for the reciprocal within the possessive DP itself, and this local binder, in turn, is controlled by the matrix subject.

This account capitalizes on Laczkó's (2004) analysis of control relations in Hungarian possessive DPs headed by complex event nominals. First, Laczkó (2004) offers an assessment of the most important previous LFG treatments of GFs in Hungarian possessive DPs: Laczkó (1995), Komlósy (1998), and Chisarik & Payne (2003), and then he argues for an approach in which there are two [-r] function in these DPs: POSS and SUBJ. In this system both these functions can be realized by either the nominative or the dative possessor (which are in complementary distribution). POSS is always overt, and SUBJ is either overt or covert. In the latter case an LFG-style PRO receives this function. Consider Laczkó's (2004:328-331) analysis of the examples in (10)-(12). In the glosses, DEV stands for "deverbal nominalizing suffix".

- (10) a. *János kiabál-ás-a*
 John.NOM shout-DEV-POSS.3SG
 'John's shouting'
- b. *János-nak a kiabál-ás-a*
 John-DAT the shout-DEV-POSS.3SG
 'John's shouting'

Both the nominative possessor in (10a) and the dative possessor in (10b) are assumed to have the SUBJ function. In (11) the covert agent argument of the nominal is realized by a SUBJ PRO, and Laczkó assumes that it is anaphorically controlled by the matrix subject.¹¹ Compare (11) with (12), in which the complement of the matrix verb is an infinitival construction.¹²

- (11) *János elkezd-t-e a kiabál-ás-t.*
 John.NOM start-PAST-3SG.DEF the shout-DEV-ACC
 'John started the shouting.'
- (12) *János elkezdett kiabál-ni.*
 John.NOM started shout-INF
 'John started to shout.'

Notice that in the case of complex event nominals derived from intransitive verbs it would not be necessary to introduce the SUBJ function,

¹¹ His main argument for the anaphoric control assumption is that the controller can also have an OBL function.

¹² In this construction type the assumption of functional control is the natural choice, given that in Hungarian the controller can only be the matrix SUBJ or OBJ.

in addition to the POSS function. For instance, Laczkó (1995) assumes that in the nominal domain there is a single [-r] function: the “subject-like” POSS. In his analysis of the construction type in (10) the matrix subject controls a POSS PRO. As Laczkó (2004) points out, complications emerge in the case of transitive nominalization. In an “only-POSS” (or an “only-SUBJ”) approach the only [-r] function is assigned to that argument of the nominal predicate which is the DP domain counterpart of the object argument of the input verb, see (13). From this it follows that in this scenario there is no “extra” function available for a PRO in a control configuration, compare (14) and (15).

(13) *a dal énekl-és-e János által*
 the song.NOM sing-DEV-POSS.3SG John by
 ‘the singing of the song by John’

(14) *János elkezdte a dal énekl-és-ét.*
 John.NOM started the song.NOM sing-DEV-POSS.3SG-ACC
 ‘John started the singing of the song.’

(15) *János elkezdte énekel-ni a dal-t.*
 John.NOM started sing-INF the song-ACC
 ‘John started to sing the song.’

By contrast, on a SUBJ & POSS account all analytical details fall into place. The overt possessor constituent, whether in the nominative or in the dative, can be assumed to have the POSS function and the (anaphorically) controlled PRO can naturally get the SUBJ function, see (14), in which the possessor constituent is in the nominative. And the same SUBJ PRO control can be assumed in the case of intransitive nominalization, see (10).¹³

Laczkó (2019) points out that there is independent support for the POSS and SUBJ duality in DPs coming from Russian. Smirnova and Jackendoff (2017) report in a footnote that, in addition to the absolutely productive pattern of expressing the possessor argument as a noun phrase in genitive case, there is a “semiproductive” alternative strategy available that is limited to pronominal arguments, proper names, some kinship terms and some words for professions. Compare their examples in (16)-(18). (16) demonstrates the productive pattern of transitive nominalization. The patient is realized by a genitive constituent, while the agent is expressed as a constituent in

¹³ Laczkó’s (2004) explanation for why always only one of the two [-r] functions can be overtly realized in Hungarian possessive DPs is that Hungarian possessive DPs obligatorily employ the head-marking strategy, and the inflectional traits of Hungarian nouns are such that they only accommodate a single overt possessormarking. For the details of the LMT mapping of arguments onto these grammatical functions, see Laczkó (2004).

instrumental case. In the semiproductive pattern, by contrast, the patient has the same realization, while the agent is expressed by a prehead argument with possessive morphology, see (17). This is not a pattern generally available to all kinds of possessors, as the contrast between (17) and (18) shows.

- (16) *ispolneni-e* *Ravelj-a* *pianist-om*
 performance-NOM Ravel-GEN pianist-INST
 ‘the performance of Ravel by the pianist’
- (17) *Pet-in-o* *ispolneni-e* *Ravelj-a*
 Peter-POSS-NOM performance-NOM Ravel-GEN
 ‘Peter’s performance of Ravel’
- (18) **pianist-in-o* *ispolneni-e* *Ravelj-a*
 pianist-POSS-NOM performance-NOM Ravel-GEN
 ‘the pianist’s performance of Ravel’

Smirnova and Jackendoff (2017) leave it to future research to explore how this special pattern can be accommodated in their analysis of argument realization in Russian nominals, which is a special system of overt case assignment to arguments. Laczkó (2019) claims that a GF-based approach of the SUBJ-and-POSS type can naturally accommodate these Russian facts, because for the treatment of the construction type exemplified in (17) the two arguments we need two core GFs. In addition to the standard genitive realization of one of the two central arguments, the other constituent (the external argument) also has possessive morphological marking, as opposed to the standard oblique realization illustrated in (16).

Our analysis of the binding relations in Hungarian DP is cast in the standard LFG theory of anaphora, see Dalrymple (2001). The syntactic constraints on these relations are expressed in terms of f-structural properties. Following Laczkó (2009), we assume the hierarchy of GFs in (19) for the purpose of capturing the relevant anaphoric relations (this is the joint ranking of GFs from the verbal and the nominal domains).

- (19) SUBJ > OBJ > OBJ_θ > POSS > OBL > ADJUNCT

For instance, the DPs in (20) and (21) are analyzed in our system along the following lines.

- (20) *a* *fiú-k* *lefest-és-e* *egymás* *által*
 the boy-PL.NOM paint-DEV-POSS.3SG each_other by
 ‘the painting of the boys by each other’

- (21) **egymás lefest-és-e a fiú-k által*
 each_other paint-DEV-POSS.3SG the boy-PL.NOM by
 ‘*each other’s painting by the boys’

In both (20) and (21), the two arguments of the nominal are co-arguments, and the reason why (20) is grammatical is that the possessor, which has the SUBJ GF in our system, functionally outranks the OBL argument. By contrast, the (lower-ranked) OBL in (21) cannot bind the reciprocal SUBJ.

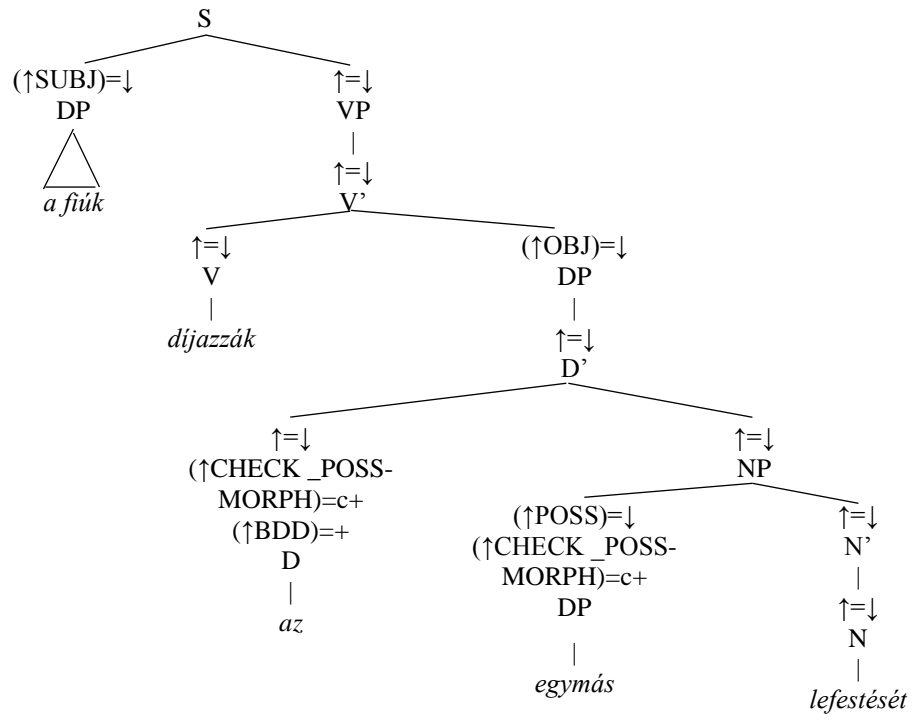
Consider (22) next. Here we assume that the reciprocal anaphor has the POSS function, and it is bound by the higher-ranked SUBJ PRO, which, without any controller in this sentence, has the PROarb interpretation. Notice that without this SUBJ PRO binder the reciprocal could not be treated in an unmarked fashion in LFG’s binding theory.

- (22) *Fontos (az) egymás lefest-és-e.*
 important the each_other.NOM paint-DEV-POSS.3SG
 ‘Painting each other is important.’

Now let us turn to our crucial example in (6c). In (23) we show our c-structure analysis of the version of this sentence that contains the definite article. In (24) we present the considerably simplified f-structure, where CH_P-M stands for CHECK_POSS-MORPH, and the indices indicate the binding relations.

- (6c) *A fiúk_i díjazzák [DP az egymás_i lefest-és-é-t].*
 the boys appreciate.3PL the each_other paint-DEV-POSS.3SG-ACC
 ‘The boys appreciate the painting of each other.’

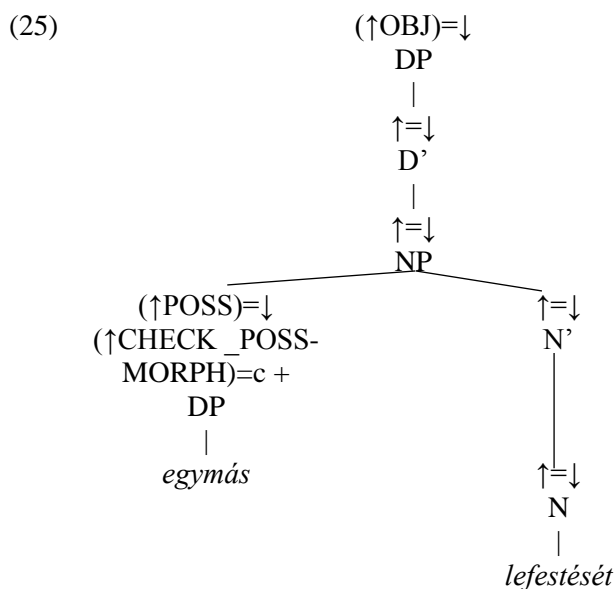
(23)



(24)

PRED	'appreciate < (SUBJ) (OBJ) >'						
SUBJ	["the boys"] _i						
OBJ	<table border="1"><tr><td>PRED</td><td>'painting < (SUBJ) (POSS) >'</td></tr><tr><td>SUBJ</td><td>["pro"]_i</td></tr><tr><td>POSS</td><td>["each other"]_i</td></tr></table>	PRED	'painting < (SUBJ) (POSS) >'	SUBJ	["pro"] _i	POSS	["each other"] _i
PRED	'painting < (SUBJ) (POSS) >'						
SUBJ	["pro"] _i						
POSS	["each other"] _i						
CH_P-M	+						
BDD	+						

When (6c) does not contain the definite article, the c-structure representation of the possessive DP is as shown in (25).



The f-structure is the same as in (24), the only difference being that it does not contain the (BDD) feature.

It is important to note that (6c), again, strictly in the presence of the definite article, has another possible interpretation, see (6c'). On this reading the boys appreciate that some other people paint each other.¹⁴ In more technical terms, the antecedent of the reciprocal is different from (i.e. noncoreferential with) the matrix subject. We claim that the crucial aspect of the analysis of this example is the same as that of the analysis of (22): there is a SUBJ PRO antecedent for the reciprocal within the possessive DP.

(6c') *A fiúk_i díjazzák [DP az egymás_k lefest-és-é-t].*
 the boys appreciate.3PL the each_other paint-DEV-POSS.3SG-ACC
 'The boys appreciate the painting of each other.'

It is also interesting to take a look at an example that illustrates a case when both control and binding are involved, see (26).

(26) *A fiúk_i elkezdték [DP az egymás_i lefest-és-é-t].*
 the boys started the each_other paint-DEV-POSS.3SG-ACC
 'The boys started the painting of each other.'

¹⁴ See Szűcs (2019) for pertinent discussion.

The f-structure representation of this example is exactly the same as that of (6c) in (24). The only technical difference is that the relationship between the matrix subject and the SUBJ PRO in the case of (6c) is binding, while here it is anaphoric control.

3.3. A note on reflexives

Consider the following example, which is a control construction involving a reflexive in the possessive DP.

- (27) *A fiúk_i elkezdték [DP a maguk_i lefest-és-é-t].*
 the boys started the themselves paint-DEV-POSS.3SG-ACC
 ‘The boys started the painting of themselves.’

Our empirical generalization about Hungarian reflexives above was that, on the one hand, they are subject to Minimal Complete Nucleus Condition, and, on the other hand, they can also be used logophorically. In the case of constructions like (27), it would not at all be appropriate to assume that the coreference between the possessor reflexive and the matrix subject is logophoric in nature, because the covert subject of the derived nominal head is obligatorily controlled by the matrix subject, and it, in turn, obligatorily binds the possessor reflexive. Consequently, if the logophoric analysis is not plausible then the remaining option is the anaphoric treatment. However, in that case the binding domain delimiting function of the definite article, which we assume to hold generally, would block this binding relation. From this it directly follows that even for the treatment of the behaviour of reflexive pronouns in such constructions our approach provides the suitable formal framework: the possessive DP contains a SUBJ PRO, which binds the reflexive, and, in turn, it is controlled by the matrix subject.

4. Summary

In this paper we have dealt with anaphoric pronouns. Partially on the basis of novel data, we have made the following empirical generalizations. The primary reflexive can be used either anaphorically or logophorically, and in its anaphoric use it is subject to the Minimal Complete Nucleus Condition. The reciprocal can only be used anaphorically, and the Minimal Finite Domain Condition applies to it. When either the reflexive or the reciprocal pronoun occurs within a possessive DP, neither of them can be anaphorically bound from outside if this DP contains the definite article, i.e. the article always creates a boundary for the relevant binding domain.

We have developed an LFG analysis of these facts that has two crucial aspects to it. On the one hand, we employ a new feature: BDD (“binding

domain delimiter”). We associate this feature with the lexical form of the definite article, and we use it as a negative off-path constraint in modelling the relevant binding relations. On the other hand, following Laczkó (2004, 2009), we assume that within Hungarian possessive DPs there are two [–r] grammatical functions available to arguments of complex event nominals: POSS and SUBJ. Both can be overtly realized by either the nominative or the dative possessor constituent, and, in addition, SUBJ can also be PRO. Thus, we create a DP-internal antecedent for the anaphors in a principled manner, which, in turn, can be controlled from outside the DP. As a result, the binding domain delimiting function of the definite article is still endorsed, and, at the same time, coreference across the article is made possible by the anaphoric control of the SUBJ PRO within the DP.

The postulation of POSS and SUBJ in DPs is necessary for an adequate treatment of control relations, see Laczkó (2004), and it is also necessary for an adequate treatment of binding, see our analysis in this paper. Thus, two phenomena, control and binding, independently and mutually necessitate and support the POSS and SUBJ approach. Furthermore, on the basis of Smirnova & Jackendoff (2017), we have shown that certain data from Russian noun phrases can also be argued to call for the use of both these functions in the nominal domain.

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