MODELLING POSSESSOR CONSTRUCTIONS IN LFG: ENGLISH AND HUNGARIAN

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Abstract

English and Hungarian are languages with more than one structurally distinct possessor construction. In this paper, it is argued that noun phrases in such languages require the postulation of two unrestricted argument functions: SUBJ and NCOMP. The SUBJ function in noun phrases parallels the sentential SUBJ function, but NCOMP is special to noun phrases and distinct from the sentential OBJ function, not least in the range of semantic roles it encompasses. For example, NCOMP like SUBJ but unlike OBJ permits agent roles. In English, as in Hungarian, a single unrestricted argument of an appropriate role can in principle map either to SUBJ or to NCOMP. The two functions however stand in a hierarchical relation. In both languages, the structurally higher possessor construction maps onto SUBJ and the structurally lower construction maps onto NCOMP. Also, given a thematic hierarchy for noun phrase arguments analogous to that required for clauses, when two unrestricted arguments are present, there is an asymmetry in that the higher role must map to SUBJ and the lower to NCOMP.

1 Introduction

English and Hungarian are examples of languages with more than one basic possessor construction, as illustrated in [1] and [2]:[1]

[1] a. [**the king's**] daughter [genitive]
b. the daughter [**of the king**] [*of*-oblique]

[2] a. [**a király-nak**] a lány-a [dative]
ART king-DAT ART daughter-SUBJ[3]
'the king's daughter'

b. [**a király**] lány-a [genitive]
ART king daughter-NCOMP[3]
'the king's daughter'

We will refer to the English constructions in [1a] and [1b] as the genitive and the *of*-oblique respectively. In the genitive construction, the possessor is an NP in the genitive case which is a pre-head dependent and which simultaneously functions as a definite determiner. In the *of*-oblique, the possessor is a PP headed by the preposition *of* which is a post-head dependent and lacks any determiner function.

The Hungarian constructions in [2a] and [2b] are standardly known as the dative possessor construction and the nominative possessor construction (e.g. Szabolcsi 1994, Laczkó 2000). In the dative construction, the possessor is a dative-marked NP which is structurally a predeterminer, preceding for example the definite article in [2a]. The definite article can be replaced by other determiners, for example the indefinite article in *[**a király-nak**] egy lány-a* (ART king-DAT a daughter-SUBJ[3]) 'a daughter of the king'. By contrast, somewhat like the English genitive, the so-called nominative possessor in [2b] is in complementary distribution with the definite article and, in the absence of any specific indication of the indefiniteness of the noun phrase, functions as a definite determiner. In both constructions, the possessum formally agrees with the possessor.

In a recent paper (Payne & Chisarik 2001), we have argued that the case of the possessor in [2b] is strictly not to be analysed as nominative, but rather as a new genitive resulting from reanalysis of the definite article *a*/*az* as a case prefix. Possessive pronouns, for example, have a distinct genitive paradigm:

[3] a. az-én lány-om
GEN-I daughter-NCOMP[1SG]
'my daughter'

b. a-mi lány-unk
GEN-we daughter-NCOMP[1PL]
'our daughter'

c. a-te lány-od
GEN-you daughter-NCOMP[2SG]
'your(sg) daughter'

d. a-ti lány-otok
GEN-you daughter-NCOMP[2PL]
'your(pl) daughter'

e. az-Ő lány-a
GEN-he/she daughter-NCOMP[3SG]
'his/her daughter'

f. az-Ő lány-uk
GEN-they daughter-NCOMP[3PL]
'their daughter'

Compare nominative *én* 'I', *te* 'you(sg)', *Ő* 'he/she', *mi* 'we', *ti* 'you(pl)', *Ők* 'they' with their corresponding genitive forms in [3]. Especially notable is the third-person plural, which is identical to the third-person singular in the genitive, but has the distinctive plural marking *–k* in the nominative. In this analysis, personal proper names such as *Mari* also optionally and with dialectal variation have a distinct genitive form: *a-Mari lány-a* or *Mari lány-a* (GEN-Mari daughter-NCOMP[3]) 'Mari's daughter'. One indication that reanalysis of the article has taken place is the compatibility of these genitive forms with indefiniteness of the noun phrase. In an example like [4], the new genitive is compatible with the indefinite determiner *egyik* 'a/one':[2]

[4] az-én egyik lány-om
GEN-I a daughter-NCOMP[1SG]
'a daughter of mine'

We will therefore refer to this construction henceforth as the genitive construction.

2 Grammatical functions

What grammatical function or functions should be associated with the possessor constructions in [1] and [2]? A fairly standard view in LFG is that possessors are linked to a distinct POSS function (e.g. Laczkó 1995, 2000; Sadler 2000, Bresnan 2000, Falk 2001). In some works (e.g. Sadler 2000), the POSS function is explicitly stated to be a subspecies of the SUBJ function, i.e. unrestricted and discourse-oriented. The goal of this paper is to show that this is not the whole story. It is indeed necessary to postulate an unrestricted and discourse-related function associated with possessors. Because of the close parallels with clause structure we will identify this function with SUBJ, rather than employing the term POSS. This is the function associated with the structurally higher genitive possessor in English and the structurally higher dative possessor in Hungarian.

The lower *of*-oblique possessor in English and the genitive possessor in Hungarian cannot however be associated with the same function: we will argue that the function required is unrestricted, but not discourse-oriented. It cannot be the unrestricted object function OBJ, firstly because nouns are generally barred from taking object complements, and secondly because of the semantic range it encompasses. This range includes inter alia agent-like roles, which standard mapping principles for clause structure naturally prevent from mapping to OBJ. An English noun phrase in which the *of*-oblique has an agent role would be *the bad performance of the team in yesterday's match*, where *the team* has the same role as the clausal subject in *the team performed badly in yesterday's match*. Also, as we will show in section 5, the range of semantic roles permitted by the required function is, taking the evidence of English and Hungarian, in principle even wider than that permitted by the SUBJ function. It would not seem desirable therefore to identify this function in LFG terms as a restricted oblique function (the solution essentially proposed by Rappaport 1983). We argue that what is needed is a new complement function which we will term NCOMP.

If the basic argument functions are decomposed not just in terms of [±r] (restricted) and [±o] (objective) (Bresnan 2000: 308), but also in terms of [±d] (discourse-related), and SUBJ is the

only [+d] function, then NCOMP naturally fills the [–r, –o] slot in the set of [–d] functions. The range of permitted argument functions is then shown in table [5]:

[5]

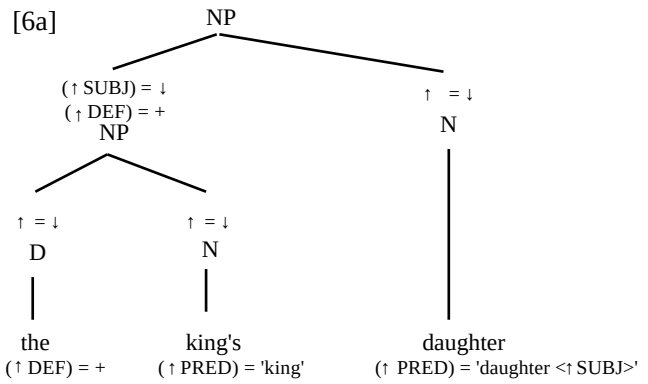
	+d	–d	
	–r	–r	+r
–o	SUBJ	NCOMP	OBL_θ
+o		OBJ	OBJ_θ

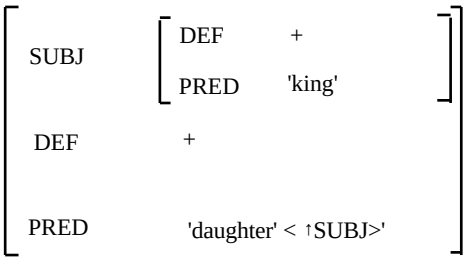
The [+o] functions are excluded from noun phrases, and NCOMP is excluded from clauses, where only a single [–r, –o] function (SUBJ) is permitted. The peculiarity of NCOMP is that it has a semantic range covering roles in noun phrase structure which match those of both SUBJ and OBJ in clause structure, but when it co-occurs with SUBJ, NCOMP is hierarchically subordinate to SUBJ.

3 Syntax (English)

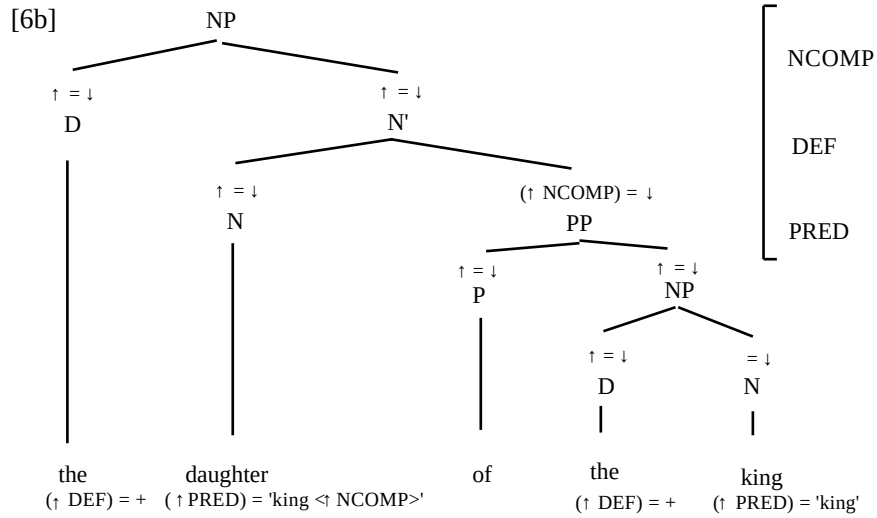
The analysis of the English examples [1a] and [1b] is then straightforward. We assume an NP analysis rather than a DP analysis, but the arguments for this are orthogonal to the analysis of possessor constructions and we will not rehearse them here. For a full discussion of the issues as they relate to English, though not in an LFG framework, see Payne & Huddleston (to appear, 2002). Consider the c-structures and corresponding f-structures in [6a] and [6b]:

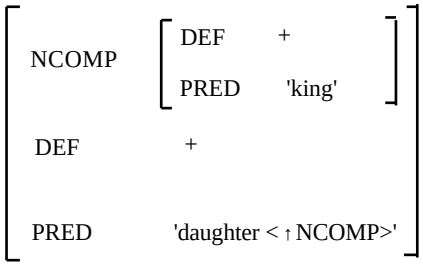
[6a]





[6b]





The genitive NP *the king's* in [6a] acts as a definite determiner: the definiteness of the matrix NP follows from the (↑DEF) = + annotation on the genitive NP. Through its (↑SUBJ) = ↓ annotation, the genitive NP maps straightforwardly to the SUBJ function in f-structure. The semantic role here is one of kin relationship. The same semantic role of kin relationship is also associated with the NCOMP function in [6b], where *of the king* is an *of*-oblique. Here we take the (↑NCOMP) = ↓ annotation to be associated with the PP node. Note that the preposition *of* in [6b] is then treated as having no f-structure annotation itself, and consequently contributes nothing to the f-structure representation. This reflects the longstanding idea that the preposition *of* in these constructions has no semantic value and serves merely to create a syntactically oblique PP complement for the head noun. The analysis of the preposition *of* in the NCOMP construction would then contrast with the analysis of prepositions heading PPs which map to semantically restricted OBL_θ functions, the value of θ being individually supplied by the preposition concerned.

A number of factors are involved in the selection of the SUBJ rather than the NCOMP function. The syntactic and pragmatic factors include the following (Jucker 1993; Payne & Huddleston (to appear, 2002)):

Pronoun vs Non-Pronoun

Pronouns are strongly preferred as SUBJ rather than NCOMP:

[7] a her car a' ??the car of her
b. her only portrait b'.the only portrait of her

It is tempting and plausible to relate this preference to the discourse-oriented nature of SUBJ: the unmarked role of an overt pronoun in English is to function as a topic, and pronouns gravitate to the discourse-related function within NP. In [7a], for example, it is typically necessary to identify the possessor from the discourse before we can identify the car. But this is not an absolute constraint: in [7b] the pronoun can equally be an NCOMP. Semantic factors are involved in this example: *her* in [7b'] is likely to be relatively low on the thematic hierarchy, i.e. the person depicted in the portrait, but in [7b] it can also be a creator or owner.

Weight

Other things being equal, relatively short, head-final NPs favour the SUBJ function and relatively long NPs with post-head dependents favour the NCOMP function. This is clearly related to the pre-head position of SUBJ and the post-head position of NCOMP in English rather than any deep property of the functions themselves. Compare the examples in [8]:

[8] a. John's speech
a' ?the speech of John

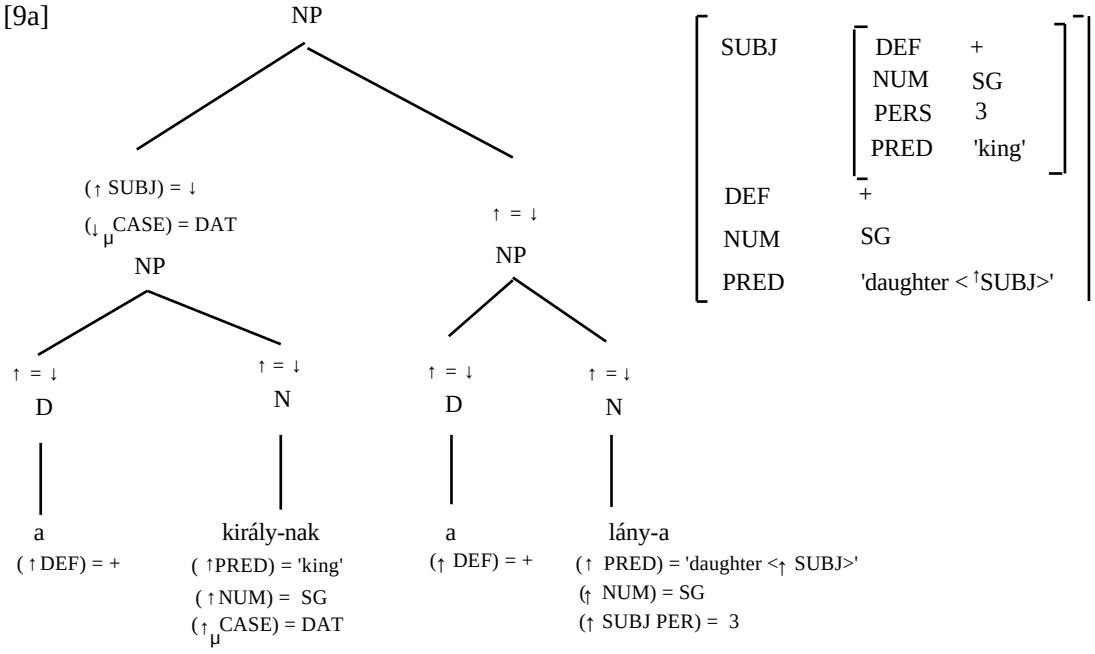
b. ?the delegate from the Republic of Chad's speech
b'. the speech of the delegate from the Republic of Chad

The possessor in [8a] is the short, head-final NP *John*, and the pre-head SUBJ position is preferred to the post-head NCOMP position in [8a']. By contrast, NCOMP position is preferred for the relatively long NP *the delegate from the Republic of Chad*, which itself contains a post-head dependent *from the Republic of Chad*. It can be noted that [8b'] is preferable to [8a'] even when the semantic role involved, that of agent, is high on the thematic hierarchy.

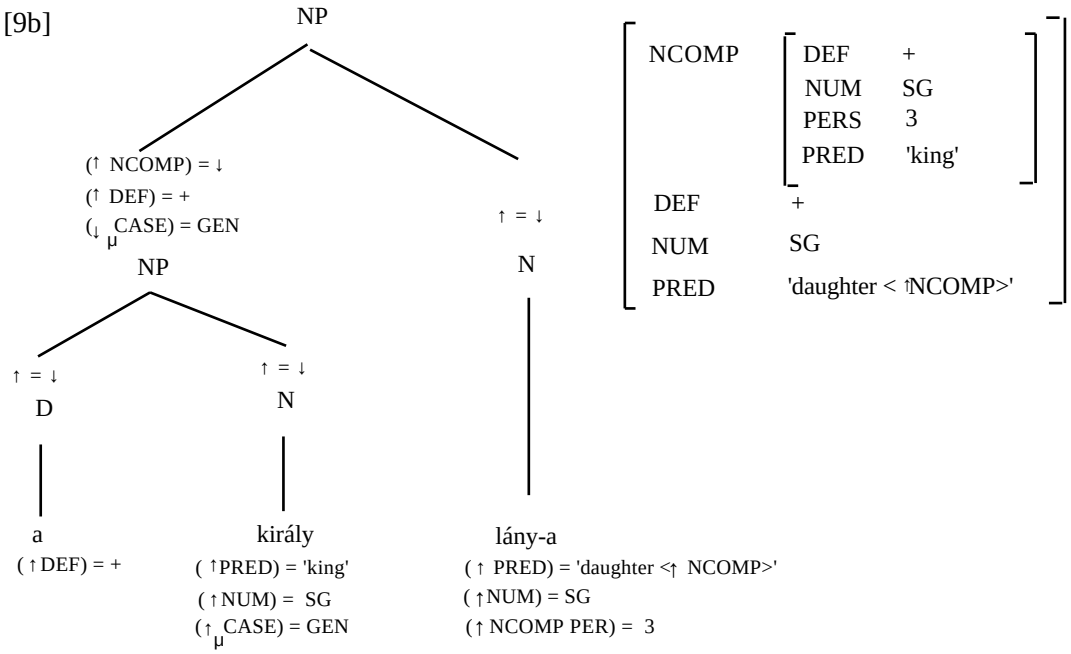
4 Syntax (Hungarian)

The representation of the Hungarian examples [2a] and [2b] is similar to the representation of the English noun phrases in [6a] and [6b] , but it is also necessary to take into account the agreement of the possessum:[3]

[9a]



[9b]



In [9a], the dative possessor is analysed as a predeterminer, forming a new NP-level constituent from an NP which already contains the definite article *a*. It is therefore the article rather than the possessor which is annotated with the (↑ DEF) = + equation and determines the definiteness of the matrix NP. Evidence for the constituent structure assumed here comes from coordinate constructions: a single possessor can act as predeterminer to conjoined NPs, as shown in [10]:

[10] a **király-nak** [$_{NP}$ [a fi-a] és [a lány-a]]
ART king DAT ART son-SUBJ[3] and ART daughter-SUBJ[3]
'the king's son and daughter'

By contrast, in [9b] the genitive possessor stands in complementary distribution with the definite article and acts, as in English, as a definite determiner. The genitive NP itself therefore bears the (↑DEF) = + equation. Although the dative possessor and genitive possessor cannot co-occur, the fact that the dative possessor is invariably a predeterminer rather than a determiner suggests that it is structurally higher than the genitive possessor. This is reflected in the mapping of the dative possessor to the SUBJ function in f-structure, and the mapping of the genitive possessor to NCOMP. It should be noted that, from a universal point of view, these mappings do not depend on the particular cases employed, or whether there is exponence through adpositions or cases. The case called genitive in English maps to SUBJ, while the case called genitive in Hungarian maps to NCOMP. The exponence of NCOMP in English is prepositional, but in Hungarian it involves morphological case. These are purely surface phenomena: the mapping of the possessor NP to SUBJ or NCOMP is rather determined by the hierarchical syntactic and semantic relationships involved, and by the discourse-related nature of SUBJ.

The agreement of the head noun with the possessor in Hungarian is straightforwardly handled by the annotations ↑SUBJ PERS = 3 and ↑NCOMP PERS = 3 on the agreeing head nouns in [9a] and [9b] respectively. It should be noted that the possessum *lány-a* 'daughter' in examples [9a] and [9b] requires only that the possessor NP be third person: there is no specification of number. The same form in *-a*, which is identical to the form which shows agreement with singular third-person pronouns as shown in example [3a], co-occurs both with singular and plural possessors if these are headed by non-pronouns.

There is however a small but significant difference in agreement between the SUBJ and NCOMP functions: plural NCOMPs are incompatible with a possessum distinctively marked for a plural possessor, but SUBJs are not. Compare [11a-d]:

[11] a. a lány-ok macská-ja
ART girl-PL cat-NCOMP[3]
'the girls' cat'

b. *a lány-ok macská-juk
ART girl-PL cat-NCOMP[3PL]

c a lány-ok-nak a macská-ja
ART girl-PL-DAT cat-SUBJ[3]

d. a lány-ok-nak a macská-juk
ART girl-PL-DAT ART cat-SUBJ[3PL]

Example [11a], with a plural NCOMP and general third-person agreement in *–a*, is grammatical, but [11b], with distinctively plural third-person agreement in *–juk*, is excluded. Both forms of agreement are however permitted with a plural SUBJ as in [11c] and [11d]. A full treatment of the agreement system requires firstly that a proper distinction be made between pronoun incorporation and agreement, and secondly that agreement with pronouns and non-pronouns is differentially treated, perhaps invoking binding features along the lines of Bresnan (2000: 146). The point made here is simply that, although the agreement paradigms of head nouns with SUBJ and NCOMP arguments largely overlap, they are not completely identical. It is therefore an advantage rather than a defect of the present analysis that the lexicon must contain two representations of head nouns such as *lány-a* 'daughter' in [9a] and [9b], one with the annotation (↑PRED) = 'daughter <↑SUBJ>' and one with the annotation (↑PRED) =

'daughter <↑NCOMP>'. The fact that the paradigms overlap can be handled by lexical redundancy rules.

As in English, the two constructions display syntactic and pragmatic differences. These include:

Syntactic type

A number of NP types cannot appear in the NCOMP construction, for example NPs containing demonstratives:

[12] *[ez a lány] ruhá-ja
this.*GEN ART girl.GEN dress-SG.NCOMP[3]
'this girl's dress'

b. [en-nek a lány-nak] a ruhá-ja
this-DAT ART girl-DAT ART dress-SG.SUBJ[3]
'this girl's dress'

In Payne & Chisarik (2001), we handle such restrictions by assuming a paradigm gap. The demonstrative, which agrees in case with the NP, has a dative but not a genitive form.

Prodrop

The possessum forms can occur on their own, with pro-drop. For example, *a lány-om* (ART daughter-SUBJ[1SG]) is the unmarked form for 'my daughter'. Not only are overt topic pronouns omitted in the SUBJ function, but it is actually ungrammatical to insert them: **nekem a lány-om* (I-DAT ART daughter-SUBJ[1SG]).[4] This can be straightforwardly handled using the mechanism proposed by Bresnan (2000: 146), viz *lány-om* is lexically specified as follows:

[13] *lány-om*: ↑PRED = 'daughter <↑ SUBJ>
↑NUM = SG
↑NCOMP PRED = 'PRO'
↑NCOMP NUCL = –
↑NCOMP PERS = 1
↑NCOMP NUM = SG

When the annotation ↑NCOMP PRED = 'PRO' is present, the form *lány-om* itself creates a predicate with the value 'PRO' in f-structure and this is incompatible with an overt pronoun.

By contrast, overt pronouns do occur in the NCOMP function, in which case the pronoun is focussed: *az-én lány-om* (GEN-I daughter-NCOMP[1SG] = 'MY daughter'. In this case, *lány-om* must be lexically specified as follows:

[14] *lány-om*: ↑PRED = 'daughter <↑ NCOMP>
↑NUM = SG
↑NCOMP NUCL = –
↑NCOMP PERS = 1
↑NCOMP NUM = SG

Here the absence of the annotation ↑NCOMP PRED = 'PRO' will require the form *lány-om* to co-occur with an NCOMP whose predicate value is independently specified, and the remaining annotations will force this to be a first person singular non-reflexive pronoun.

The distribution of prodrop and overt pronoun forms here is not accidental. Prodrop is naturally compatible with a topic discourse-orientation of the subject function, while, in Hungarian at

least, focus is not. Focussing through the use of stressed pronominal forms is compatible with any non-subject argument function, including NCOMP.

5 Semantic roles

The formation of the possessum of an ordinary, non-relational noun is a lexical process:

[15] macska: N, ↑PRED = 'cat', λy[*cat*(y)]

macská-ja: N, ↑PRED = 'cat <' ↑NCOMP>', λxλy[π(x,y) & *cat*(y)]
↑NCOMP PERS = 3

Semantically, this process forms a 2-place predicate from a 1-place predicate, introducing an arbitrary relation π from the set of possible relations Π between possessor x and possessum y Barker (1995). The new two place predicate will combine with a suitable argument (e.g. *Mari*) to form a construction (e.g. *Mari macská-ja)* which again has the semantics of a 1-place predicate. In the case of relational nouns, e.g. *lány* 'daughter', we can think of the relation involved directly as a member of Π: *lány-a* translates as λxλy[*daughter*(x,y)]. The lexical mapping rules then simply associate a [–r, –o] function with the argument x, and this can freely map either onto SUBJ or onto NCOMP for most relations π.

If we consider the set of possible relations Π, abstracting away from the syntactic and pragmatic differences between the SUBJ and NCOMP constructions in English and Hungarian, the range of semantic relations permitted by each construction is strikingly similar in the two languages. Natural subgroups for the SUBJ function are (adapted from Payne & Huddleston (to appear, 2002)):

[16]

English SUBJ	Hungarian SUBJ	Relation[5]	
Mary's back	Mari-nak a hát-a		BODYPART
Mary's older sister Mary's boss Mary's friend	Mari-nak a nŒvér-e Mari-nak a fŒnök-e Mari-nak a barát-ja	*KIN* *SUPERIOR* *EQUAL*	RELATION
Mary's team	Mari-nak a csapat-a		MEMBER
Mary's debut Mary's book	Mari-nak a bemutatkozás-a Mari-nak a könyv-e	*PERFORMER* *CREATOR*	AGENT
Mary's new house	Mari-nak az új ház-a		OWNER
Mary's honour	Mari-nak a becsület-e		CHARACTER
Mary's anger	Mari-nak a harag-ja		EXPERIENCER
Mary's letter	Mari-nak a level-e		RECIPIENT
Mary's biography Mary's surgery	Mari-nak az életrajz-a Mari-nak a rendelŒ-je	*DESCRIPTUM* *UNDERGOER*	THEME
the sun's rays the conflict's origin	a nap-nak a sugar-ai a viszály-nak a forrás-a	*EMITTER* *ORIGIN*	SOURCE
the flood's consequence	az árvíz-nek a következmény-e		RESULT
the cathedral's spire	a templom-nak a torny-a		PART

All these types of relation are equally possible for the NCOMP function, straightforwardly in Hungarian, and with sufficiently heavy NPs in English, e.g.

[17] a. the green eyes of the girl sitting opposite me — BODYPART
b. the sister ot the man who had been arrested — RELATION
the debut of the young flautist from Abergavenny — AGENT
c. the new house of the Vice-Chancellor elect — OWNER

The sheer range of semantic relations involved, encompassing for example both agent and theme, leads us to treat the NCOMP function as an unrestricted function.[6] What is more, there are some further relations which in both languages are available to the NCOMP function but ungrammatical in the SUBJ function. These include relations of quality and apposition (for further possible examples see Chisarik 1999):

[18] a. a boldogság perc-ei
ART happiness.GEN minute-PL.NCOMP [3]
'the minutes of happiness'

b. *a boldogság-nak a perc-ei
art happiness-dat ART minute-PL.SUBJ[3]

[19] a. Budapest város-a
Budapest city-NCOMP[3]
'the city of Budapest'

b. *Budapest-nek a város-a
Budapest-DAT ART city-SUBJ[3]

The situation is analogous to that in English, where similar relationships are excluded from the genitive construction: **happiness's minutes*/**Budapest's city*.

The SUBJ relations in both languages are therefore a subset of the NCOMP relations in both languages, and the two functions, although both unrestricted, are not semantically equivalent. It remains of course an open question whether this pattern has any universal validity.[7]

6 Multiple possessors

The SUBJ and NCOMP functions are distinct, and therefore in principle not incompatible. Semantically, it is possible to iterate the function which forms two-place relations, giving possessum nouns with both functions. In English, this process occurs quite straightforwardly:

[20] photo: N, ↑PRED = 'photo',
$\lambda y[photo(y)]$

photo: N, ↑PRED = 'photo <'↑NCOMP>',
$\lambda x[\lambda y[\pi(x,y) \,\&\, photo(y)]]$

photo: N ↑PRED = 'photo <↑SUBJ, ↑NCOMP>',
$\lambda x[\lambda z[\lambda y[\pi_2(z,y) \,\&\, \pi_1(x,y) \,\&\, photo(y)]]]$

In the case of the noun *photo*, the relation π_2 will typically be OWNER or CREATOR, and π_1 will be DEPICTUM:

[21] Mary's photo of Bill

The lexical mapping rules in English associate a [–r, –o] function both with the z argument (NCOMP) and the x argument (SUBJ). Clearly there is a hierarchical correspondence between the order in which the arguments are combined (π_2 higher than π_1) and some version of the

thematic hierarchy. The thematic hierarchy for argument mapping in clause structure is assumed to be as in [22] (Bresnan 2000: 307):

[22] *agent > beneficiary > experiencer/goal > instrument > patient/theme > locative*

From [21] we have OWNER < DEPICTUM (a subspecies of theme), and AGENT < DEPICTUM. A full analysis of multiple possessor constructions in English and other languages which permit SUBJ and NCOMP to co-occur will therefore require that the hierarchy be augmented with typical NP roles such as OWNER.

Hungarian now presents an interesting puzzle: it is impossible to have both a genitive and a dative possessor in the same noun phrase. As shown by Laczkó (1995, 2000), event nominalizations require the theme argument to be expressed as either a dative or a genitive possessor, but the agent must be treated as an adjectivalised postpositional modifier:

[23] a. a váza Edit által-i összetör-és-e
ART vase.GEN Edith by-ADJ smash-NOM-NCOMP[3]
'the smashing of the vase by Edith'

b. *Edit-nek a váza összetör-és-e
Edith-DAT ART vase.GEN smash-NOM-NCOMP[3]

There is therefore no mapping in Hungarian equivalent to the mapping involved in the English *Edith's smashing of the vase*.

On the basis of their incompatibility and similarity in function, analyses in the Government and Binding framework (Szabolcsi 1994, É.Kiss 1999 etc.) treat the two possessor constructions in Hungarian as related by movement. The LFG analysis of Laczkó (1995, 2000) naturally eschews this movement analysis, but treats the two possessor positions as functionally equivalent and subsumed under a single function POSS: it is then natural to account for the incompatibilty of the two types of possessor using the principle of coherence (e.g. Bresnan 2000). However, we have argued that SUBJ and NCOMP are distinct functions, and coherence cannot therefore be used to account for this language-specific incompatibility. The difference between English and Hungarian requires an alternative explanation.

Two possible solutions suggest themselves: Firstly, we might assume that there is a paradigm gap: no lexical form can realise a lexical entry annotated ↑PRED = '<↑SUBJ, ↑NCOMP>'. This however seems seems arbitrary, since such lexical entries are required for the multiple possessor constructions of English. Nor does it seem plausible to relate such a paradigm gap to agreement: there seems to be no reason why a form which agreed both with SUBJ and NCOMP would be needed. After all, in transitive clauses it is typical for a verb to agree with SUBJ and not OBJ.

The second solution, which we prefer, is to suggest that two [–r] arguments are blocked in Hungarian noun phrases by an extension of the asymmetrical object parameter of Bresnan and Moshi (1990). We will call this the asymmetrical possessor parameter to reflect its applicability to noun phrases:

[24] *Asymmetrical Possessor Parameter*

*θ	θ
½	½
–r	–r

In the case of nominalisation, all unrestricted arguments automatically acquire the value [–o]. The nominalisation of a verb with a [–o] agent and a [–r] theme will then have its agent mapped in noun phrase structure to either [–o, –r] or [–o, +r], and its theme to [–o, –r]. In a language such as Hungarian which does not permit two [–o, –r] arguments, there is no alternative but to

express the theme as SUBJ or NCOMP, and to treat the agent as an oblique. In English, which does permit two [–o, –r] arguments, the higher role will map to SUBJ and the lower to NCOMP.

7 Conclusion

In this paper, we have argued that the existence of structurally distinct possessor constructions in languages such as English and Hungarian necessitates the postulation of more than one possessor function. We identify the structurally higher position of the possessor with the SUBJ function and postulate a new function NCOMP for the structurally lower position. The SUBJ function has topic-like discourse properties, whereas NCOMP does not. We also argue that NCOMP is an unrestricted function, since the range of semantic roles it encompasses in both languages is at least as broad as that of SUBJ. English and Hungarian differ in that SUBJ and NCOMP can co-occur in English, but are mutually exclusive in Hungarian. We account for this by an asymmetrical possessor parameter, an extension to noun phrases of the asymmetrical object parameter. When SUBJ and NCOMP co-occur, as in English, the superordinate nature of SUBJ is, it seems, reflected in the operation of a thematic hierarchy.

The analysis we have given is of course a fragment based on English and Hungarian. It remains a subject for further research to see how the analysis might apply to other languages with multiple possessor constructions, and indeed to languages with a single possessor construction. We have treated SUBJ and NCOMP as unrestricted, but the evidence of the *a friend of Mary's* construction in English hints that the possibility of restricted possessor constructions should not be excluded.

Notes

[1] In [2] we anticipate the assignment of the dative possessor to the SUBJ function and the so-called nominative possessor to the NCOMP function.

[2] Note that the determiner *egyik* 'a/one' in example [4] is not the same as the indefinite article *egy* 'a', though it is clearly related to it morphologically. The genitive possessor is in complementary distribution with the indefinite article as it is with the definite article.

[3] While the agreement features of person and number naturally feed into the f-structure representation, we have made the decision that the case of the possessor NP is an arbitrary property of each construction and itself makes no contribution to f-structure. Some feature percolation mechanism is then needed to ensure that the syntactic case of the possessor NP matches the case of the head noun where this case has its exponence, and there are no obvious mechanisms within the existing LFG framework for achieving this. One possible move is to employ m-structure representations along the lines of Butt et al (1996), and this is what lies behind the representation of case in [9a] and [9b]. We employ this representation simply to avoid the presence of case in f-structure: whether the use of m-structures is ultimately the appropriate mechanism for achieving this is a question we will leave open.

[4] Although *nekem a lány-om* (I-DAT ART daughter-SUBJ[1SG]) with a dative pronoun is considered ungrammatical by most speakers, some speakers do use it. For these speakers, the annotation (↑NCOMP PRED) = 'PRO' in [13] is optional.

[5] In table [16], *PERFORMER* and *CREATOR* are taken to be subspecies of the more general AGENT relation, and so on.

[6] Unrestricted functions naturally permit expletive elements which have no semantic value (Bresnan 2000: 308). It is well-known that expletives are excluded from English NPs: compare the expletive *it* in *It is thought that the universe will expand forever* with **its thought that the universe will expand forever*. In Hungarian, as pointed out by Kenesei (1994:319) expletives are permitted: *annak a gondolat-a, hogy a fogorvos-hoz kell mennie* (that.DAT ART thought-SUBJ[3], that ART dentist-ALL must go) 'the thought that he had to go to the dentist'. The expletive is the distal demonstrative, and since demonstratives in general lack genitive case, expletives only occur in the SUBJ function.

[7] We do not of course exclude the possibility that further functions beyond SUBJ and NCOMP may be needed to capture the full range of possessor constructions in the world's languages. English for example has a third possessor construction, the genitive oblique construction illustrated by NPs like *a friend of Mary's*. The range of semantic relations permitted by this construction is somewhat restricted compared with those permitted by the SUBJ and NCOMP constructions (it basically encompasses RELATION, OWNER and AGENT), and therefore the use of restricted oblique functions might indeed be more appropriate in this case.

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