Agreement in Maasai and the Syntax of Possessive DPs (II)[*]

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1. Introduction

Possessives are ``complex" DPs: they involve two distinct nominal expressions as components.[1] In this paper I address the issue of characterizing the nature of the syntactic relation holding between these two nominal expressions in possessives whose possessum is arguably not a syntactic argument-taking category. This task can be divided into two parts: (i) providing an account of what licenses the insertion of the possessor in the derivation of possessive DPs and (ii) accounting for any further steps in the syntactic derivation which lead to the structure which undergoes Spell-Out. With respect to (i), I argue in favor of den Dikken's (1998) proposal that in possessive DPs of the type considered here the possessor is licensed as complement of an empty preposition in the PP predicate of a small clause whose subject is the possessum. I provide some empirical support for this position using agreement data from Maasai. With respect to (ii), I depart from den Dikken's proposal. I argue that prenominal possessors in English are not derived by DP-internal Predicate Inversion and outline two alternative analyses for the derivation of possessives in languages with prenominal possessors. Finally, I address the issue whether the postnominal position of possessors in Maasai is the product of further movement operations preceding Spell-Out or rather reflects the absence of overt syntactic derivation.

2. Two Issues in the Syntax of Possessive DPs

2.1 Licensing of Possessors

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[1] I use the term possessive DPs (or possessives) to refer to DPs like *the city's destruction*, *a friend of John's*, *John's dog*, etc. which are sometimes referred to as genitives. With possessum I indicate the nominal component which determines the sortal properties of a possessive DP, e.g., *dog* in *John's dog*. I use possessor to indicate the other nominal component in a possessive DP, e.g., *John* in *John's dog*.

It has long been pointed out in the literature that possessives most likely do not constitute a syntactically unitary category.[2] In some possessive DPs the possessum noun can be argued to be a syntactic argument-taking category. For example, Grimshaw (1990) argues that in possessives like *the city's destruction* the possessum noun *destruction*--a deverbal *process nominal* in Grimshaw's terminology--is a syntactic argument-taking category, i.e., a category which, like verbal heads, projects an argument structure. Accounting for the insertion of the possessor in the syntactic derivation of possessives of this kind is quite unproblematic: the possessor DP is selected as the syntactic argument of the possessum noun in a structural configuration like (1).

(1)   NP
          ╱‾‾‾‾╲
       N   DP
       │   ╱‾‾╲
   destruction   the city
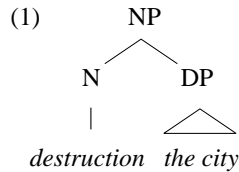
On the other hand, in many possessive DPs the possessum noun is arguably not a syntactic argument-taking category. For example, the noun *dog* which constitutes the possessum in a DP like *John's dog* does not project an argument structure under standard analyses. The licensing of the possessor in DPs of this kind cannot be accounted for along the lines proposed for the first class of possessive DPs: the semantic relation holding between possessor and possessum must be encoded in the syntax in a structural configuration different from (1).[3]

Minimally, an analysis of possessive DPs of this second type should account for the fact that the possessor in these DPs is semantically interpreted as a restrictive modifier of the possessum. Intuitively, the meaning of a DP like *John's dog* is not built by applying the meaning of the (phonologically empty) definite determiner to the meaning of the predicate `dog' and then predicating that the relevant entity stands in some (possessive) relation to John. Rather, it is the meaning of the definite determiner to be applied to the set of dogs which stand in some relation to John, a set which is derived by applying the restriction imposed by the possessor to the denotation of the predicate contributed by the possessum. *John's dog* denotes the unique entity which satisfies the predicate `dog that belongs to John' rather than the unique entity which satisfies the predicate `dog' and happens to satisfy the predicate `belong to John' as well.

2.2 Word Order in Possessive DPs

However, once it is assumed that possessive DPs do not constitute a syntactically unitary class the fact that, by and large, the surface form of possessive DPs seems to be quite uniform in each language must be explained. That is, the fact that in languages like English the Saxon Genitive form is available for possessives of both types distinguished above suggests that some formal

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[2] A syntactic analysis of possessive DPs like *a friend of John's* in English (sometimes called *double genitives* in the literature) is outside the scope of this paper. For some discussion see Storto (2001)

[3] The case of possessive DPs whose possessum noun denotes a *semantic* argument-taking category but is commonly assumed not to project a *syntactic* argument structure---e.g., deverbal *result nominals* (Grimshaw 1990) and *relational nouns*---is left aside for future investigation.}
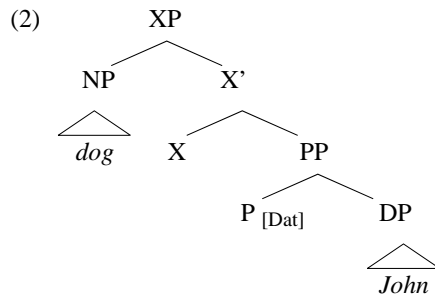
requirements trigger further syntactic derivation for both kinds of possessive DPs, which end up having a similar structure at Spell-Out. These formal requirements should be properly identified in order to account for the syntactic derivation of possessives.

A related issue is that of accounting for the crosslinguistic variation in the form of possessive DPs. On the assumption that the mechanism licensing the insertion of the possessor in the derivation of possessive DPs is the same in typologically different languages, the task is to identify the point at which the syntactic derivations of possessives in languages like e.g.~English and Italian diverge, with the result that in general possessors appear in prenominal position in the first language and in postnominal position in the second language.

3.   Den Dikken's (1998) Proposal

3.1 DP-internal Small-clause Predication

Den Dikken (1998) proposes that the structure underlying possessive DPs like *John's dog* is a small clause encoding a predication relation between the NP projected by the possessum noun and a PP predicate containing the possessum DP.[4] The basic syntactic configuration which combines the possessum and the possessor in possessives of this kind is as sketched in (2).

(2)
```
                    XP
                   /  \
                 NP    X'
                /\    /  \
              dog   X    PP
                        /  \
                   P [Dat]  DP
                            /\
                          John
```
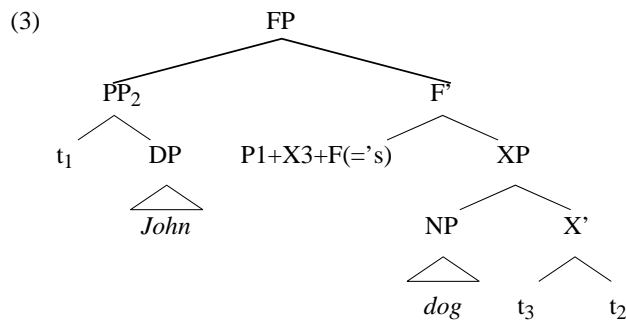
In the structure proposed by den Dikken the possessor is the syntactic argument of an empty Dative preposition within the predicate PP which modifies the NP headed by the possessum noun. The insertion of the possessor DP in the derivation is thus not licensed directly by the possessum noun as in the case of possessives like t*he city's destruction*, which is consistent with the different syntactic properties of the possessum noun in the two cases. Furthermore, the structure in (2) is conceptually adequate in that it accounts for the interpretation of the possessor in DPs like *John's dog* in a straightforward way. The possessor DP behaves like a modifier of the possessum because it is part of the PP predicate which applies to the NP projected by the possessum. And the *restrictive* nature of the modification follows from the fact that the modified category is smaller than a full DP.[5]

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[4] In this paper I cannot review other influential analyses of possessive DPs proposed in the literature, e.g., Chomsky (1970, 1986), Kayne (1994). In my opinion none of these analyses provides a satisfactory account for the licensing of possessors and the derivation of the kind of possessives discussed in the text.

[5] In (2) this category is assumed to be a NP, but it is quite likely that the subject of the small clause is a bigger functional category which includes the possessum NP.

3.2 DP-internal Predicate Inversion

Den Dikken (1998) argues that the prenominal position of possessors in English Saxon Genitives derives from successive-cyclic raising of the PP predicate containing the possessor in (2) across the subject of the small clause to the Spec of a higher functional head within DP. This is an instance of DP-internal *Predicate Inversion*, a movement operation restricted in its application to predicates of small clauses. Movement of the predicate across the subject constitutes a violation of the *Minimal Link Condition* (MLC, Chomsky 1995: Ch.3) unless the head X of the small clause incorporates into the first functional head (F) which dominates the small clause. In this case the minimal domain of the predicate is *extended* and the position of the subject and Spec,FP (the intermediate target for movement of the predicate) are rendered *equidistant* from the extraction site. The resulting complex head is spelled out as *'s* in English possessive DPs. The relevant step in the derivation of the DP *John's dog* is depicted in (3).

(3)

$$
\begin{array}{c}
\text{FP} \\
\diagup \qquad \diagdown \\
\text{PP}_2 \qquad\qquad \text{F'} \\
\diagup\diagdown \qquad\qquad \diagup\diagdown \\
t_1 \quad \text{DP} \quad \text{P1+X3+F(='s)} \quad \text{XP} \\
\triangle \qquad\qquad\qquad \diagup\diagdown \\
\textit{John} \qquad\qquad \text{NP} \qquad \text{X'} \\
\qquad\qquad \triangle \qquad \diagup\diagdown \\
\qquad\qquad \textit{dog} \quad t_3 \quad t_2
\end{array}
$$

3.3 A Summary

Den Dikken's (1998) analysis of possessive DPs proposes the following answers to the two issues pointed out in §1: (i) the possessor can be inserted in the syntactic derivation as complement of a phonologically-empty preposition in a PP predicate which modifies the NP headed by the possessum noun in a small-clause configuration; (ii) further syntactic derivation of possessive DPs involves DP-internal Predicate Inversion, which displaces the PP predicate to a higher position within the possessive DP.

In §2.1 I argued that the structure in (2) is conceptually adequate in that it accounts for the semantic role of possessors in possessive DPs in a very straightforward way: the possessor behaves like a restrictive modifier of the possessum because it is part of a PP which is predicated of the possessum NP. In the next section I argue that den Dikken's proposal for the licensing of possessors (i) is empirically supported as well. In particular, I present some agreement facts from Maasai, a Nilotic language spoken in Kenya and Tanzania,[6] and argue that the common agreement patterns within possessive DPs and PPs in that language follow naturally on the assumption that the basic structure of possessive DPs is (2).

4.   Evidence from Maasai

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[6] The data I present are from the Kisongo dialect, which is spoken in Tanzania.

4.1 Aspects of the Morphosyntax of Maasai DPs

Before getting to the relevant data, some notes on the general features of Maasai DP morphosyntax are in order. In general modifiers follow the noun in the surface word order in Maasai DPs (4) and determiners[7] cannot be separated from the noun by intervening material.

(4)   a.   **EmEsa›sidaI**
            En– mEsa›sidai
            DET $_{sg.f}$ –table nice$_{sg}$
            'the/a nice table'
    b.   **EmEsa›nadɕ**
            En– mEsa nadɕ
            DET $_{sg.f}$ –table red$_f$
            'the/a red table'

Maasai nouns are morphologically inflected for gender and number and for Case. The two Case forms---the form of subjects of transitive verbs *Nominative* and the form of direct objects of transitive verbs *Accusative*---are marked through tonal morphology.[8] In general DPs display a very rich array of agreement phenomena between their constituents. For example, determiners agree with their complement noun in both gender and number (5), and modifiers agree with the noun they modify (4).[9]

(5)   a.   **EmEsa›**
            En– mEsa
            DET $_{sg.f}$ –table
            'the/a nice table'
    b.   **mìnEsaĬ**
            in– mEsa›–í
            DET $_{pl.f}$ –table- $_{pl}$
            'the/some tables'
    c.   **oɬdía›**
            oɬ– día
            DET $_{sg.m}$ –dog
            'the/a dog'

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[7] I call morphemes like en, in, ol, and il (the vowel in these morphemes undergoes changes due to a general process of ATR harmony) *determiners* because they appear in complementary distribution with demonstratives. But these morphemes appear on predicate nominals too (see (i) in fn.15), which seems to indicate that their presence does not entail a full DP structure. Furthermore, these morphemes do not specify the definiteness value of the DP on which they appear (as shown by the glosses in (4)-(5); in glossing other examples I consider only the definite interpretation of the relevant DPs).

[8] Unless otherwise specified, when discussing DPs in isolation I give them inflected for Accusative, which is used as the citation form by native speakers.

[9] ``True'' adjectives in Maasai display only Case and number agreement. Modifiers which display gender agreement. Modifiers which display gender agreement (e.g., (n)**adɕ** in (4b) and (11)) are derived from relative clauses (tucker and Mpaayei 1955).

d. **ildíaín**
   il– día›– ín
   DET pl.m –dog- pl

4.2 Agreement in Maasai Possessive DPs

Let's turn to the relevant agreement data in possessives now. Full-DP possessors in Maasai[10] follow the possessum and are preceded by a complex morpheme which marks agreement in gender with the possessum and agreement in number with the possessor:[11]

(6) a. **EmEsá/mmEsaí ENgitók/çlEE›**
        En– mEsa›   /   in– mEsa– í   E›–   en– kikók /
        DET$_{sg.f}$–table / DET$_{pl.f}$–table-pl POSS$_{sg.f}$-DET$_{sg.f}$-woman$_{ACC}$/
        E›– çl– lEE›
        POSS$_{sg.f}$-DET$_{sg.m}$-man$_{ACC}$
        'the woman's/the man's table/tables'
     b. **oldía/ildíaín lENgitók/lçlEE›**
        ol– día›   ✓il– día–   ín lE›– en kitók /
        DET$_{sg.m}$-dog/ DET$_{pl.m}$–dog pl POSS$_{sg.m}$-DET$_{sg.f}$-woman$_{ACC}$
        lE›– çl– lEE›
        POSS$_{pl.m}$-DET$_{sg.m}$-man$_{ACC}$
        'the woman's/the man's dog/dogs'
     c. **EmEsá/mmEsaí ççNgitúak/ççlEwa›**
        En– mEsa›   /   in– mEsa– í çç›–   in– kitúaók /
        DET$_{sg.f}$–table / DET$_{pl.f}$–table-pl POSS$_{pl.f}$-DET$_{pl.f}$-woman$_{ACC}$ /
        çç›– çl– lEE›
        POSS$_{pl.f}$-DET$_{pl.m}$-man$_{ACC}$
        'the women's/the men's table/tables'
     d. **oldía/ildíaín ççNgítúak/lççlEwa›**
        ol– día›   ✓il– día–   ín lE›– en kitók /
        DET$_{sg.m}$-dog/ DET$_{pl.m}$–dog pl POSS$_{pl.m}$-DET$_{pl.f}$-woman$_{ACC}$ /
        lE›– çl– lEE
        POSS$_{pl.m}$-DET$_{pl.m}$-men$_{ACC}$
        'the women's/the men's dog/dogs'

	Feminine possessum	Masculine possessum
singular possessor	E›-	lE›-
plural possessor	çç-́	lçç-́

TABLE 1. Shape of the possessive agreement morpheme in Maasai.

3.3 A Simple Account of the Maasai Facts

Of the two components of the complex possessive agreement morpheme only the part which marks gender agreement with the possessum seems to be peculiar to possessive DPs. That is, whereas (the presence vs.~absence of) the morpheme *l-* as a marker of gender agreement occurs only in possessives, the alternation between the morphemes Ɛ- and ´ʏ- to mark number agreement occurs in other Maasai syntactic constructions. In particular, the alternation between the morphemes and occurs within Maasai PPs to mark number agreement between the preposition[12] and its complement DP.
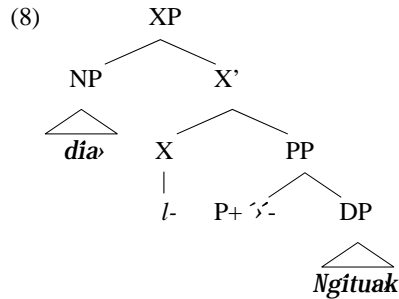
(7)   a.   **tƐNgítok**
                tƐ- en- kítok
                P_{sg}-$DET_{sg.f}$ -woman$_{NOM}$
                'with/to/by/for/…the woman'
        b.   **tçḉNgítuak**
                tçḉ- in- kítuak
                P_{pl}-$DET_{pl.f}$ -woman$_{NOM}$
                'with/to/by/for/…the women'

This state of affairs is easily accounted for under den Dikken's (1998) proposal for the licensing of possessors. Number agreement with the possessor in Maasai possessive DPs is an instance of the more general phenomenon of number agreement between a preposition and its complement: the agreement relation is established within the predicate PP in the small clause in (2). Since the gender agreement alternation ∅/l- is peculiar to possessive DPs, it seems correct to assume that gender agreement with the possessum is determined within the small clause encoding possession as well. A plausible hypothesis is that the relevant agreement relation is established on the head X of the small clause through the Spec-Head relation it bears to the possessum NP sitting in Spec,XP.[13] The basic structure of possessive DPs in Maasai would then be roughly as in (8).[14]

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[12] This is the only preposition in Maasai; obviously its semantics is quite ``bleached."

[13] Noam Chomsky (MIT lectures, Spring 2001) argues that agreement cannot be determined in a Spec-Head relation because heads can entertain syntactic relations only with nodes which are lower in the tree. I do not have much to contribute to this debate at the moment, but I want to point out that my argument in favor of den Dikken's proposal is independent from the theoretical stance one holds about the syntactic correlates of morphological agreement. Given a structure like (8), any account of number agreement within Maasai PPs provides an account for number agreement in possessives.

[14] A structure like (8) predicts (Sandra Chung, p.c.) that Maasai should license possessive DPs of the form [DP DET [XP [NP possessum1 AND DET possessum2] AGR possessor]] rather than possessives of the form [DP DET possessum1 AND DET possessum2]. I have not elicited data which could test this prediction, but it is unlikely that these would be conclusive. I have already pointed out 9fn.7) that Maasai ``determiners" do not necessarily indicate a full-DP structure. Furthermore, even in English *the* can appear on both NPs in a conjunction even if it seems to apply only once to the conjunction of the two NPs in the semantics (e.g., in *the man and the woman who met at the party*; I owe this observation to Rajesh Bhatt).

(8)   XP
           /   \
         NP   X'
         /\   /   \
       _/___   X   PP
       dìa› | /   \
              l- P+ *´-*   DP
                           /\
                         _/___
                        Ngìtuak

To summarize, both the number agreement morphology and the gender agreement morphology which occur in Maasai possessive DPs can be accounted for in a very straightforward way within the basic structure suggested by den Dikken (1998) for the licensing of possessors in possessives like the English *John's dog*. In particular, the parallel occurrence of the same number agreement morphology within PPs to mark agreement between the preposition and its complement DP provides empirical support for the proposal that possessors can be projected as complements of an empty preposition in a PP predicate which modifies the possessum NP.

5.   The Derivation of Possessive DPs

5.1 The Case of English

The surface word order of possessive DPs in Maasai is compatible with the assumption that the structure in (8) undergoes very little (if any) further syntactic derivation. On the other hand, for the case of English it must be assumed that, if possessors are projected in a small-clause structure like that proposed in (2), some movement operation applies to the possessor DP (or a phrase containing it): possessors in English appear in pre-nominal position. One could try to account for English possessives in terms of the presence of an EPP-like feature on some functional head above XP which triggers overt movement of the possessor DP (or a phrase containing it) into its Spec. This is essentially the proposal in den Dikken (1998).

However, in Storto (to appear) I argue that den Dikken's proposal does not account for the fact that raising of the possessor DP is obligatory, and not an alternative to the raising of the possessum NP to the Spec of the relevant functional projection. Den Dikken's proposal crucially relies on the fact that the subject of the small clause in (2) constitutes an intervener which blocks movement of the predicate. But this---on the reasonable assumption that only attracted categories count as interveners---seems to predict the option, unattested in English, of raising the possessum instead. Thus movement of the possessor DP must be triggered by some syntactic feature that distinguishes between DP and NP, attracting only the former.

One such feature might be Case: following standard assumptions, DPs need to receive Case whereas NPs do not. Raising of the possessor DP in English could be movement to a Case position. The possessor DP would then not be licensed for Case within the predicate PP where it is inserted, but in the Spec of a higher Case-assigning head. A suggestive fact in this light is that in Maasai the parallelism between possessor DPs and complements of the overt preposition *t-* breaks down with respect to their Case morphology. DPs in Maasai PPs are always inflected for

Nominative (7), whereas possessors are always inflected for Accusative (6), even when the whole possessive DP in which they appear is inflected for Nominative.[15]

On the other hand, an analysis of prenominal possessors in terms of Case movement does not seem able to account for DPs like *yesterday's concert*, in which the prenominal possessor is an adverbial expression which most likely does not need to be licensed for Case. An alternative analysis would instead postulate the existence of some syntactic feature different from EPP[16] on a DP-internal functional head which attracts the possessor DP (or possibly the PP in which it is licensed in (2)) to its Spec. As argued above, this feature should not be ``blind'' to the nature of the categories it attracts in its Spec. It should distinguish between DP (or the relevant category containing the possessor) and NP, since the possessum NP, which occurs between the target of movement and the possessum DP in (2), does not block raising of the latter. The nature of this syntactic feature should be carefully investigated, if this account is to be pursued.

Either way, it should be clear that both alternatives can accommodate the fact, pointed out in §2.2, that the Saxon Genitive form is available for all types of possessive DPs in English, and in particular for possessives whose possessum is a syntactic argument-taking category too. Under the first approach the complement of a process nominal would raise to the Spec of the DP-internal Case-assigning head in order to be licensed for Case. Under the second approach raising of the possessor would be triggered by the checking requirement on the relevant syntactic feature on a DP-internal functional head. The details of the analysis should be spelled out, but the general program seems capable of accounting for the uniformity in the surface form of the two types of possessive DPs in English even if they are derived from different basic structures like those given in (1)--(2).

5.2 Another Look at Maasai

For the moment, I prefer not to commit myself to a choice between the two analytic options sketched above for prenominal possessors in English possessive DPs. But I want to address a related question concerning the syntax of possessives in Maasai and the more general issue of the crosslinguistic difference between languages with prenominal possessors like English and languages with postnominal possessors like Maasai. That is, let's assume that in both English and

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[15] The relevance of this fact is undermined by the observation that Accusative seems to be the default Case morphology for nominals in Maasai: it is not only used as the citation form by native speakers, but it appears on predicate nominals as well.

    i.   **aldákĭtárĭ ɛlɛ lɛɛ̀**

            çl– dákĭtárĭ ɛlɛ lɛɛ̀

            $DET_{sg.m}$-doctor$_{ACC}$ this$_m$ man$_{NOM}$

            'This man is a doctor.'

[16] As a matter of fact, it is not so clear to me whether the EPP feature which is normally assumed to be located on the head of TP is ``blind'' to the nature of the category it attracts to its Spec as I implicitly assume in the text. If this is not the case the relevant feature in the derivation of English possessives might be the DP-internal correspondent of EPP, after all. Notice however that even in this case the specific account proposed by den Dikken (1998) for the derivation of prenominal possessors in English cannot be maintained because it requires that the possessum NP be an intervener for raising of the possessor DP.

Maasai possessors are licensed in the structure in (2) and that prenominal possessors in English are the result of raising of the possessor DP triggered by Case or some formal requirement on aDP-internal functional head. The question then is where the syntax of possessives in Maasai differs from English with the result that possessors surface in postnominal position.

As I pointed out before, the surface form of Maasai possessive DPs is consistent with the assumption that little or no movement takes place in Maasai, and in particular no raising of the possessor to some higher DP-internal position occurs. Under this hypothesis the typological difference between English and Maasai reduces to the fact that Maasai possessors can be licensed for Case *in situ* or to the fact that the counterpart of the feature which triggers overt raising of the possessor in English can be checked by covert movement in Maasai, depending on the analysis adopted for prenominal possessors in English. Alternatively, though, it could be maintained that the same raising of the possessor postulated for English occurs in Maasai possessives too, and that the postnominal position of possessors in this language derives from the occurrence of further overt syntactic movement. This movement, so to speak, restores the basic order in which thepossessor follows the possessum once the syntactic requirement which triggers raising of the possessor is satisfied. The typological difference between English and Maasai would then reduce to the occurrence of this further overt movement in Maasai.

In principle, both movement of the possessum N and movement of a phrasal category containing the possessum NP to a position higher than the target of movement of the possessor can account for the word order in Maasai possessives. Thus, three alternative accounts for the postnominal position of possessors in Maasai can be explored: (i) no raising ofpossessors, (ii) raising of possessors plus further raising of the possessum N, and (iii) raising of possessors plus further raising of a phrasal category containing the possessum NP.

At a first glance, the option in (ii) seems quite promising. The data in (4) concerning the position of modifiers in Maasai seem to suggest that Maasai nouns raise to a high position within DP. On the other hand English nouns are usually assumed to undergo little, if any, N-raising. Despite the appeal of (ii) in the light of this independent typological difference between English and Maasai, I think that the typological difference concerning the position of possessors in the two languages cannot be reduced to the absence of (long) N-raising in English. The relative order of possessors and other modifiers of NP seems to exclude the possibility of reducing the postnominal position of possessors in Maasai to movement of the possessum noun alone. As shown in (6), Maasai full-DP possessors appear in postnominal position as other modifiers do. But, interestingly, the order between full-DP possessors and other modifiers is fixed. Possessors in Maasai must appear after all modifiers of the possessum noun. The only way to translate *Resoi's red table* in Maasai is (9a). The DP in (9b) only has the odd meaning according to which the modifier *red* modifies the possessor *Resoi*, rather than the possessum.

(9)   a.   **EmEsa›nadɕ ErEsɕi**
            En- mEsa›nadɕ E– rEsɕi
            DET$_{pl.f}$–table red POSS$_{sg.f}$–Resoi
            'Resoi's red table'
       b.   #**EmEsa›ErEsɕi nadɕ**
            En– mEsa›E–rEsɕi nadɕ
            DET$_{pl.f}$–table POSS$_{sg.f}$–Resoi red

The contrast in (9) argues against the analysis proposed in (ii). On the assumption that modifiers are left-adjoined to the possessum NP in (8) (and/or possibly to XP), this ordering restriction is expected if the possessor DP does not raise at all as proposed in (i). And this restriction can be accommodated even within an analysis like (iii), which proposes that the derivation of Maasai possessives involves phrasal movement of a category containing the possessum NP after the possessor DP raises out of XP. On the other hand, on the assumption that the Maasai word order in possessive DPs is the result of raising of the possessor DP out of XP and N-raising alone (ii), it is not clear how the ungrammaticality of (9b) would be derived: the unattested word order should be licensed when modifiers are left-adjoined to NP.[17]

5.3 Choosing between (i) and (iii)?

We are then left with the two alternatives in (i) and (iii) and with the question whether we have any reason(s) to prefer one to the other. The analysis in (i) seems to have a conceptual edge in that it postulates movement only in the case of English, where it is clearly needed to derive the attested word order in possessive DPs. Furthermore, this analysis immediately accounts for the order restrictions between full-DP possessors and other modifiers of the possessum in Maasai: the possessor DP is inserted in a position below the position of the possessum NP, and thus it must follow all other modifiers of this NP. Instead, the analysis in (iii) must argue, in order to account for the ungrammaticality of (9b), that the phrasal category containing the possessum NP which moves past the possessor contains all the modifiers of the possessum NP as well. Nevertheless, I would like to conclude this paper presenting some additional Maasai data which apparently support the analysis proposed in (iii) over the alternative in (i).

	1.sg	2.sg	3.sg	1.pl	2.pl	3.pl
singular possessum						
plural possessum						

TABLE 2. Maasai pronominal possessors.

The relevant data concern pronominal possessors in Maasai possessive DPs. Pronominal possessors in Maasai differ in various respects from full-DP possessors. A first difference is that pronominal possessors display both gender and number agreement with the possessum.[18] Gender agreement is marked by the same morpheme *l-* which appears with full-DP possessors, which seems to suggest that the basic structure of possessives with pronominal possessors involves a small-clause predication between the possessum NP and the possessor DP like in the case of full-DP possessors (8). On the other hand, the fact that pronominal possessors agree in number with the possessum noun suggests the alternative hypothesis that they are adjectives. It is a general property of adjectives in Maasai that they agree in number with the noun they modify (see fn.9). And this hypothesis is supported by two other properties of Maasai pronominal possessors which distinguish them from full-DP possessors. Pronominal possessors, like adjectives, display agreement in Case with the noun they modify (10), whereas full-DP possessors are always

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[17] The ambiguity of possessive DPs like *John's little elephant* argues that modifiers can apply to the denotation of the possessum NP before this becomes the subject of the small clause in (2).

[18] As shown in Table 2, only singular possessive pronouns display different morphology according to the number of the possessum. I will nevertheless assume that this gap in the paradigm is accidental.

inflected for Accusative in Maasai (6). Furthermore, pronominal possessors do not seem to besubject to the ordering restrictions exemplified by the contrast in (9) which hold for full-DP possessors. Pronominal possessors appear *before* other modifiers of the possessum NP (11); this is expected if they are ``high'' adjectives, rather than DPs.
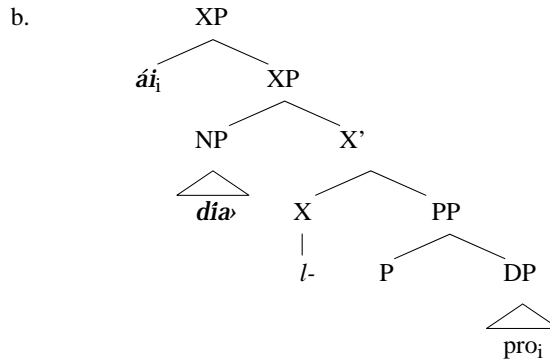
(10)   a.   **átádúa›eŊgíné ái**
            á– tá– dú– a›eN– kíné ái
            1.sg-past-see$_{(past)}$ –past DET$_{sg.f}$-goat$_{ACC}$ my$_{sg.f}$
            'I saw my goat.'
       b.   **Etánápáki›eŊgíne›ai**
            E– tá– náp– á– ki›en– kíne›ai
            3-past-carry-past-pass DET$_{sg.f}$- goat$_{NOM}$ my$_{sg.f}$
            'My goat was carried.'

(11)   **oldía›lái adȼ**
       ol– día›lái adȼ
       DET$_{sg.m}$-dog my$_{sg.m}$ red$_m$
       'my red dog'

The peculiar properties of pronominal possessors lead to the conclusion that they are adjectives rather than DPs. But if this is the case the presence of the morpheme *l-* as marker of (masculine) gender agreement with the possessum is unexpected: the only Maasai ``adjectives'' which display gender agreement mark feminine with the prefix *n-* (see fn.9). I would like to suggest that these apparently contradictory facts can be accommodated if pronominal possessors in Maasai are ``thematic'' adjectives that relate to an empty category which is projected within the PP predicate in the small clause in (2). Gender agreement on Maasai pronominal possessors is marked by the same morpheme *l-* which appears with non-pronominal possessors. The null hypothesis is that in both cases gender agreement is contributed by the possessive construction, and this leads to the conclusion that even possessives with pronominal possessors involve a small-clause structure which encodes the relation between possessor and possessum. In the case of pronominal possessors, however, the possessor slot is filled by an empty category which is e.g.~coindexed with the possessive adjective which is adjoined to NP or XP (12).

(12)   a.

b.

```
              XP
            /    \
        ái_i      XP
                /    \
              NP      X'
             /\      /  \
           dia»    X      PP
                   |     /  \
                   l-   P     DP
                              /\
                            pro_i
```

      If either of the structures in (12) correctly represents the basic structural configuration for the DP \emph{my dog} in Maasai, then it is not clear to me how the analysis in (i), which postulates very little movement in the derivation of Maasai possessives, would obtain the result that the gender agreement morpheme *l-*, which marks an agreement relation established in X, surfaces between the possessum and the possessive adjective. I do not claim that these facts follow immediately from the analysis in (iii), but it can be hoped that the movement operations postulated in this analysis eventually provide an account for the position of the possessive gender agreement morpheme in DPs like (11). This issue is left open for future research.

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