flected verb (they can be dropped in modern Breton and only remain interpretable by the consonant mutation they trigger on the following verb). They have to be distinguished from matrix particles (Prt) that trigger V1 orders (Jouitteau in preparation).

3. The term 'direct case' refers to nominative and accusative in contrast to the various 'oblique cases'.

4. The prepositional alternative in (12) is a recent innovation in the language. Kervella (1947: §428) refers to the inflected preposition as "very long, heavy and ugly" in comparison with the cliticization option. However, the prepositional alternative is now the most common form.

5. As pointed out to me by Thomas Leu and an anonymous reviewer, Swiss German, English or French show overt case morphology on pronouns, but not on lexical DPs. It is also possible that pronouns receive case in a manner different from lexical DPs. If so, the last argument is vacuous.

6. There are similar alternations in both Scottish Gaelic and Irish (Adger 1996; Doyle 2002).

7. This section is based on collaborative work with Milan Rezac (Jouitteau & Rezac forthcoming).

8. I am setting aside pre-negation subjects, which co-occur with full agreement. See Schafer (1995) or Jouitteau (forthcoming) for an explanation of agreement with pre-negation subjects.

9. See Jouitteau (forthcoming), Rezac (2003) for analyses of movement in Breton to the pre-verbal position.

10. Notice, however, that this analysis does not mean that the Breton verb is a noun or verbal noun, as it is traditionally described. The structure proposed is not that of a DP; all the nominal behaviors of the verbal structure have been reduced to the interpretability of a [D] feature the vP structure. The fact that the [D] feature on the v head is interpretable in this language does not change the ability of v to select an external argument, nor does it imply that its internal argument should be an NP as opposed to a VP. In this, I follow Stephens (1982), McCloskey (1983) and Sproat (1985) observing among other things that external arguments are obligatory with the verbs but not within real nominals, and that the possessive of real derived nominals can be either logical subject or object.

On the parallelism of DPs and clauses

Evidence from Kisongo Maasai*

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Maasai is a VSO order language with strong parallels between DPs and CPs. Starting from the idea that Maasai DPs are relative clause structures [D CP] (Koopman 2000), this paper evaluates the claim that the parallelism is due to the shared CP structure and derivations. This paper maps out several areas of the syntax of Maasai, and compares these in nominal and clausal environments. Differences between clauses and DPs will be shown to follow from other independently motivated causes.

1. Introduction

There are well-known typological word order correlations between clauses and DPs, with clausal VS(O) order correlating with nominal NS(O) order (and – less strongly – with NA order).[1] These correlations can be illustrated for Kisongo Maasai, an Eastern Nilotic language with strict VSO and Dem N Num A word order:

(1) ɛitíakitá ilpáyaní alayénì mɛkwéta.
3.tell.APPL.PL.PAST PL.MASC.men.NOM MASC.SG.boy.ACC 3SUBJ.run
"The men told the boy to run."

(2) oldíá láàlayôk
dog.MASC.SG.NOM PL.MASC.boy.ACC
"The boys' dog", "a dog of the boys", "a dog of some boys."

(3) kùndâ mésai àré sìdân
PL.FEM.that table.FEM.PL.ACC FEM.PL.TWO.ACC nice.PL.ACC
"those two nice tables"

Within the standard view of verb initial languages, these correlations are supposed to be captured by the fact that head movement of V and N targets landing sites higher than the subject or the possessor within the appropriate CP or DP projec-

tions (Valois 1991, among others). However, the correlations do not in fact follow from the theory. For example, there is no theory internal reason as to why the presence of an EPP feature on C should correlate with the presence of an EPP feature on D. This view therefore leads to the conclusion either that the correlations must be accidental, or if they are not, that they must follow from some theoretical principle that at this point remains to be understood.

In this paper, I pursue the idea that these strong correlations can indeed find some principled theoretical explanation, given a proper understanding of the structure and derivations of DPs. More specifically, I claim that DPs and CPs share identical substructure. In Koopman (forthcoming a, 2003), I argued that DPs in Maasai (and universally) are relative clauses.[2] This proposal generalizes Kayne's (1994) proposal for relative clauses and post nominal possessor constructions to all DPs. Koopman (forthcoming a, 2003) further provides a unified account of linear order, agreement patterns, surface constituencies of various kinds of DPs. This analysis puts the DP/CP parallelism in a quite different light. Indeed, since every DP contains a CP structure, the parallelism may be due simply to the shared CP structure. Where the parallelism breaks down, those parts of the structure must vary independently. This paper takes a first step towards the evaluation of this hypothesis for Kisongo Maasai, which will lead to an investigation of a number of properties of the clausal syntax of Kisongo Maasai.

2. Maasai DPs headed by a common noun are relative clauses

In Koopman (forthcoming a, 2003), I propose that DPs headed by a common noun in Maasai are never [D NP] structures but instead are always relative clauses, i.e. [D CP] structures, containing a small clause nominal predicate. This analysis was initially inspired by the morphosyntax of the Maasai noun, and the complex asymmetric agreement patterns found within the Maasai DP. In a nutshell, it appears that the Maasai "noun" spells out both the nominal predicate and the subject of the small clause (i.e. the external argument of the nominal predicate – which in English corresponds to a silent category). The nominal predicate and the subject of the small clause distribute as two independent syntactic constituents, thus providing particular insight into the structural make-up of DPs and DP internal derivations. The remainder of this section provides some relevant background information, spelling out the basic structure of DPs and discussing the DP internal derivations for DPs headed by common nouns.

Maasai common nouns, *alayéni* 'boy', *ilayóok* 'boys', *oldíà* 'dog', or *énkerái* 'child', contain four "overt" segments, as well as a tonal melody that spells out Case (nominative versus non-nominative). What superficially looks like a morphological complex noun consists of at least two separate syntactic constituents. The leftmost part, which I will refer to as *ol*,[3] shows a complex agreement pattern with the structural part that carries the number suffix and the case morphology.

(4)

o	l
NUM.GEN	GEN

ayé	ni
[$_{Case}$ N	NUM]

The two parts are separated by demonstrative roots, a set of adverbs that occur both in clauses and DPs and the quantifier 'other'.[4]

(5) ol (Dem) (Adv) (other) [ayé-ni]

The set of adverbs is listed (6):

(6) náají 'mentioned a few hours ago' (Tucker & Mpaayei 1955: 18)
òʃí 'usual'
dúó 'mentioned this morning'
ŋólé 'yesterday'
naári 'sometime ago'
ápá 'long time ago, then'

These adverbs play an important role throughout this paper, since they occur in similar positions in both CPs and DPs. All other dependents of the N must follow the nominal predicate *ayeni*.

In Koopman (forthcoming a, 2003), I argue that *ol* originates deep inside the noun phrase and raises into the CP and DP region. More specifically, the form in (4) derives from a relative clause structure which contains a nominal predicate *ayeni* 'boy' and its external argument *ol*,[5] embedded under a (silent) copula, *be*. For the purpose of this paper, it is sufficient to think of *ol* as some kind of A-bar pronoun that agrees with the nominal predicate ("which a boy is / who is a boy"):

(7) [$_{DP}$ D [$_{CP}$ C [$_{IP}$ I [$_{beP}$ *be* [*ol* [ayeni]]

Since *ol* spells-out a basic part of every nominal small clause, we can understand a curious fact about the distribution of *ol*: It must occur in a wide variety of DPs headed by common nouns (citation forms, predicative forms, generics, indefinites, definites, synthetic compounds). As (7) illustrates, *be* projects *beP*, a projection that has the characteristics of *be*, except it lacks the category feature V, and a phonological matrix.[6] *BeP* itself is embedded in an IP and a CP, which is the complement of D, and which attracts *ol* and the *beP*.

The surface constituency in (5) is derived as follows: Predicate inversion (Moro 1997) moves the nominal predicate into specifier of *be* (8a). The predicate NP will be attracted by Case or the EPP and raise to the specifier of IP (8b), raising through the specifier positions of Numeral phrases and AdjPs if they are present.

As a consequence of this derivation, these line up in the merged hierarchical order Num>AdjP (Cinque 2000). Since the NP has passed through the relevant specifiers, it triggers agreement on these Num and Adj elements. Next, the remnant *be*P fronts into the CP region (8c).[7] Depending on the type of D, the constituent containing *ol* possibly moves from CP to the specifier of DP (8d). Adverbs occur between the landing site for the fronted predicate and the IP internal subject (8d).

(8) a. [$_{beP}$ *be* [$_{SC}$ ol ayeni]]

b. [$_{IP}$ Infl … ([$_{NumP}$ … [$_{AdjP}$ …)[$_{beP}$ ayeni$_i$ *be* [$_{SC}$ ol t$_i$]]]

c. [$_{CP}$ C [$_{IP}$ ayeni$_i$ Infl [[$_{beP}$ t$_i$ *be* [$_{SC}$ ol t$_i$]]]] *Remnant Fronting*

d. [$_{DP}$ D [$_{CP}$ [[$_{beP}$ t$_i$ *be* [$_{SC}$ ol t$_i$]]$_j$ C [$_{IP}$ ayeni$_i$ Infl t$_j$]]

the location of adverbs

(9) PF: /olayeni/ → alayeni
LF: ~ which is a boy, the x such that x is a boy

Note that these derivations do not involve any head movement; head movement simply has no role to play at any point in these particular derivations.

As we can see in this derivation, both the *be*P containing *ol* and the NP *ayeni* end up in separate positions high within the DP. This is empirically supported by the fact that *be*P is separated from the NP *ayeni* the adverbial material listed in (6).

Differences between types of DPs follow from the type of predicate the IP contains. DPs headed by common nouns contain a nominal small clause, possessor constructions a possessive small clause, relative clauses a full verbal projection. For reasons of space, I will not be able to show this in the present article and refer the reader to Koopman (2003) where a unified analysis of 'simple' DPs, possessive DPs and relative clauses is presented, and where I show the empirical inadequacy of a more traditional head movement account for Maasai.[8]

3. On the expected parallelism of DPs and clauses

Given the analysis of DPs outlined in the previous section, we might expect to find parallels with clauses where we have the same type of predicate and internal CP structure. That is, we expect predicate fronting to the CP region to take place in clauses, yielding basic predicate initial order, with the predicate preceding adverbs. We expect to find general parallelism with respect to NP movement: if NP movement is obligatory in nominal IPs for case theoretical reasons, it should hold true for clauses as well. Furthermore, predicate inversion is expected to apply in the presence of *be*. Finally, the strongest parallelism should obtain with cases that are structurally the closest, i.e. clauses that contain predicate nominals. First we introduce some general properties of Maasai clauses; then we go on to consider those parallels.

3.1 Maasai clauses

Let us first examine some broad properties of the clausal structure of Maasai. Maasai is a rigid VSO word order language:

(10) med^{j}ókì résóɪ alayéni mɛkwétà.
NEG.3SG.say.APPL Resoi.NOM OL-boy.ACC SUBJ-3SG-run
"Resoi will not tell the boy to run."

(11) aad^{j}ókì (résóɪ) (nanʊ) makwétà.
3SG.1OBJ.tell.APPL Resoi.NOM me SUBJ.1SG.run
"Resoi tells/will tell me to run."

What is referred to as 'V' in the VSO order turns out to be a highly complex structure. It consists minimally of a subject clitic (or fused subject/object clitic), a verbal root, augmented with the appropriate prefixes and suffixes which are dependent on verb class, tense and aspect, argument structure, voice, and features of the subject. The complex is preceded by negation, and forms a phonological domain for the purposes of ATR vowel harmony.[9] See Tucker and Mpaayei (1955) and Rasmussen (2002) for a recent description of the template for the verbal morphology. Lexical and pronominal DPs may double subject or object clitics, and may be dropped. DPs are marked for Case. Case shows up on the constituent in the specifier of IP and is expressed as tonal morphemes (Tucker & Mpaayei 1955).[10] The subject of a tensed clause carries nominative case, as do objects of the only preposition in Maasai (*t-*). The latter is immediately followed by an agreement morpheme that agrees with the prepositional object in number and gender (12a & b).

(12) a. tɛndìtó
t- ɛ- ɛndito
for- AGR.SG- SG.FEM.girl.NOM
"for the girl"

b. tòóndóyè
t- oo- indoye
FOR- AGR.PL.NOM- PL.FEM.girl.NOM
"for the girls"

Accusative case appears on citation forms, predicate nominals, indefinite objects, definite objects and possessors. The unmarked word order is VSO+CP/PP. OS order is possible as well, depending on the information structure (Payne, Hamaya & Jacobs 1994). Non-verbal predicates are also initial:

(13) a. sìdâi ɛ̀nâ.
nice.ACC this.NOM
"This is nice."
b. armálímúí nɪ́nɛ̀.
SG.MASC.teacher.ACC he.NOM
"He is a teacher"

Clauses with non-verbal predication cannot contain pronominal clitics, perfective marking, future marking, passive marking, subject agreement, reflexive, middle or directional marking; these elements belong to the verbal spine, so they cannot occur in clauses with non-verbal predicates. This immediately accounts for one major difference between clauses and DPs.[11]

Based on DP internal derivations, the subject is expected to raise at least to the specifier of IP, and the finite verb is expected to raise high into the C domain, to a position where it precedes the high adverbs (6). Nominative subjects in Maasai follow the finite predicate but precede other selected predicates:

(14) áa-ɪtíaka aláyeni mɛ-á-rány
3SG.1OBJ-tell.APPL.PAST SG.MASC.boy.NOM SUBJ-1SG-SING
"The boy told me to sing."

It is not easy to determine where exactly the nominative subject DP is at spell-out. Phonologically, there often seems to be some kind of a phrasal boundary after the predicate. Maasai is a pro-drop language, so pronominal DPs are typically silent although they may be overt with an emphatic reading. In that case, they follow the predicate and carry nominative case. The linear string is compatible with either an analysis where the nominative DP remains in its merged position (i.e. vP/VP internally), or where it would have raised into the TP region. These options are represented below (TP below is used as a shorthand for a much richer TP region):

(15) a. $[_{TP}$ T ... $[_{vP}$ DP_{NOM}...
b. $[_{TP}$ DP_{NOM} T ... $[_{vP}$ ...

(15a) is often the structure that is claimed for VSO languages (Koopman & Sportiche 1991).[12] Which of these options is correct has further consequences for the surface position of the verbal predicate. In particular, if (15b) turns out to be correct, the landing site for the predicate must be higher than TP. Many standard diagnostics for the position of subjects are inconclusive for Maasai. Negation precedes the verbal predicate, and therefore yields no information about the relative height with respect to the position of the subject. Indefinite and definite subjects have the same form, and finer diagnostics that could reveal further distinctions have not been explored at this point. Quantifiers follow the head noun in the DP but it is unclear if quantifiers can float in Maasai. There are very few genuine adverbs in Maasai, and a subset of these must appear between the fronted predicate and the nominative subject; others have a wider distribution. Certain adverbs may intervene between the nominative subject and the complement clause. This is consistent with the fact that the nominative subject can topicalize but by itself not informative about the nominative case position.[13]

Fortunately, if we consider raising predicates, we can construct an argument that shows that subjects must raise from their merged positions, that is, nominative subjects are not vP or VP internal. Many of the heads corresponding to adverbs or bound morphemes in Cinque (1999) show up as verbs in Maasai. Furthermore, they are restructuring predicates, as can be concluded from the fact that clitics 'climb' onto the finite verb (*ki-* in the following example expresses 2nd person singular subject and the first person object of the infinitival verb.)

(16) kisióki (iyé) aanáp.
ki- sioki iye aa- nap
2SG.1OBJ soon you.NOM INF.SG carry
"You will carry me soon."

(17) kɪ́taŋasá áàpwò.
ki-ta-ŋasa aa-pwo
we-PAST-first INF.PL-go
"We first went there (and then we ...)."

(18) áidɪm tórét aatanápa iyé.
aa- idim Toret aa-ta-nap-a iye
3SG.2OBJ be.able toret.NOM INFL.SG-SUBJ.carry.SUBJ you.ACC
"Toret will be able to carry you soon."

Since some of these predicates are clearly raising predicates, we can test if the subject raises from its initial merge position or not by further embedding these structures. As the following examples show,[14] nominative subjects must obligatorily follow the tensed predicate and therefore do not appear to remain in-situ:

(19) ɛ́ɪdìm ɪláyok áɪ̀gíla áàtarany.
3.be.able. PL.MASC.boys.NOM INFL.PL.repeat INF.PL.sing
"The boys will be able to sing again."

(20) kɪ́ndɪ̀m tórét aatasíokí aatanáp.
3SG.2OBJ.be.able Toret INFL.SG.soon INF.SG.carry
"Toret will be able to carry you soon."

While the examples above could be taken to be control structures, the following example clearly involves raising of the subject (replacing the name with an indefinite like *oltugani* "person, someone" does not change the form of the sentence):

(21) áasióki tórét aígila aataranika
3SG.2OBJ.soon Toret INF.SG.repeat INF.SG.SUBJ.sing.APPL
"Toret will soon sing for you again."

Cinque (2001) argues that predicates that induce overt restructuring have been directly merged in the corresponding functional head, and lack argument structure. If this is correct, all restructuring predicates that trigger clitic climbing can be used to show that the nominative subject must raise into the tensed clause, regardless of whether the predicates are raising or control. The data so far show that nominative DPs must raise from their merged positions in Maasai. We still need to determine where exactly the nominative DP occurs. It seems to me that the null hypothesis in the current theory really is that if nominatives are forced to move high into the tensed clause, they must do so because there is a position that has an EPP feature forcing the movement. Otherwise, they should remain lower and satisfy Case through Agree, with intermediate heads showing agreement, as often assumed for Icelandic. Although I have not demonstrated unambiguously that the nominative DP *must* be outside the highest infinitival complement, I conclude that nominative subjects in Maasai are forced to raise to the specifier of TP for case checking. This analysis is furthermore consistent with the existence of expletive clitics and agreement patterns, clitic doubling and topic drop, as discussed in the next section.

In sum then, NP movement to a position higher than adjectives or the functional projections hosting restructuring predicate occurs both in clauses and in DPs. This is consistent with the relative clause analysis of DPs. The following section examines the same problem from a slightly different angle, and reaches the same conclusion: Maasai nominative subjects must raise out of the vP/VP.

3.2 The complex verb, agreement and the nominative subject

In this section, we consider the problem of the distribution of the subject from the following angle: What, if anything, can we learn from the internal structure of the fronted verbal predicate about the distribution of subjects.

Recall that the verbal predicate shows both an obligatory subject clitic (or a fused subject/object clitic) and subject agreement, and forms a phonological constituent with them:

(22) [(NEG) **Subj-cl** Obj-cl [[.. V..] **AgrS**]]] ... **DP**$_{NOM}$

If agreement is strictly triggered in a specifier-head configuration, and Agree is not available (Koopman forthcoming a, 2003), the nominative subject must have raised through a local specifier position triggering Agr on V, and then to a higher clitic position. This leaves the problem how the complex-verb ends up preceding the nominative subject. If right adjunction is disallowed (Kayne 1994), the verbal complex cannot have been formed by head movement, and thus should not show head-like behavior. The verbal complex must therefore have moved as a remnant phrase, which in turn means that the nominative subject must be outside of this phrase. Thus, the DP subject must have raised higher than AgrS and the projection that contains the subject clitic, Subj-cl, presumably to some low Topic position, and the italicized sequence must have moved higher than Topic into the left periphery:[15]

(23) ..... [$_{TopP}$ DP$_i$ [...[(*neg*) [t_i *Subj-cl Obj-cl* [[t_i [[*V*] *AgrS*]]]]]]

(Definite) objects will be forced to move through the object clitic position into the left periphery as well. Movement to the Topic position obeys the order of the hierarchical merger: the linear order must be SO if the "informational" content of both subject and object is the same (the order may differ if they have different informational status). Since the complex verbal predicate precedes the nominative DP, it must have raised beyond it to some position higher than Topics, raising questions about the fine structure of the left periphery, which will be addressed in below. As repeatedly stated, Maasai subjects and objects can be freely dropped, a characteristic property of pronominal argument languages (Jelinek 1984). If nominative and accusative DPs are indeed in a Topic position, probably Rizzi's (1997) low Topic position, subject and object pro-drop in Maasai might be closer to Topic-drop than previously thought. As is well known from the Germanic literature, Topic drop is only possible if the verb raises into the left periphery, which it obviously does in Maasai. Maasai differs from Germanic, however, in that it allows multiple topics and multiple topic drop, regardless of whether the DP is realized as a clitic or not.

In sum, raising of the nominative DP and fronting of the verbal predicate into the left periphery are forced under the theory of agreement adopted here, and can be deduced from a simple examination of the structure of the complex verb. Distributional criteria converge: nominative DPs raise at least to a case checking position in tensed clauses, and can further raise to a low Topic position in the left periphery. High adverbs occur higher than the low Topic position, between the site that hosts the predicate and the topic. The double agreement on the complex verb can be straightforwardly accounted for by the fact that subjects raise to such high positions. All agreement in Maasai is a reflection of an overt specifier-head relation at some point in the derivation.

3.3 The position of the verbal predicate in the left periphery

We have yet to determined the final landing position of verbal predicates. In a series of papers on the fine structure of the left periphery, Rizzi arrives at the following fine structure of the left periphery structure (Mod stands for Modifier, basically a position for fronted adverbs) (Rizzi 1997, 1999, 2004).

(24) Force Top* Int Top* Focus Mod* Top* Fin IP (Rizzi 2004:60)

We take (24) to approximate the structure UG makes available for the left periphery, and use it to guide our exploration of the left periphery in Maasai. If nominatives DPs are in Top, as we argued in the previous section, the verbal predicate cannot be in Fin at spell-out since all potential Topic positions occur to the left of Fin. This is supported by the fact that preposing of the predicate is necessarily independent from finiteness, since it also happens within DPs. There are two potential landing sites for the predicate, assuming neither Top nor Focus are suitable hosts: Force or a slightly lower position that Rizzi (1999) labels as Int (for Interrogative), boldfaced in the example below:

(25) **Force** Top* **Int** Top* Focus Mod* Top* Fin IP

This presupposes that Int is a particular instance of a more general position for clause type (declarative, imperative, interrogative), as argued in Koopman (forthcoming b). Let us call this position Force_2. So far then, the verbal predicate in Maasai could be either in Force_1 or Force_2.[16]

(26) **Force_1** Top* **Force_2** Top* Focus Mod* Top* Fin IP

Our immediate task is to see if there is empirical evidence that bears on this issue. For concreteness, we assume, with Massam (2000a) that the relevant head that attracts the predicate has an EPP feature that does so, though we differ from Massam in locating this head in the left periphery.[17]

If the verbal predicate is in Force_2, and nominative subjects are in the low Topic position, some elements should be able to intervene between Force_2 and the nominative subject in a particular linear order. Furthermore, some elements are predicted to occur to the left of the predicate, namely Force1 and high Topics.

(27) $[_{\text{Force1P}}\ [_{\text{TopP}}\ [_{\text{Force2P}}\ [\text{Pred}]\ [_{\text{Top}}\ [_{\text{FocusP}}\ [_{\text{ModP}}\ [_{\text{TopP}}\ \text{DP}_{\text{NOM}}\ [_{\text{FinP}}\ [_{\text{IP}} \ldots$

The Maasai left periphery turns out to be remarkably consistent with this left periphery. Among the elements intervening between the verbal predicates and the nominative subject, there are prime candidates for Mod, Foc.

The restricted set of adverbs that occur between the predicate and the subject in clauses and DPs alike are good candidates for Rizzi's Mod.

(28) ɛtánápá ápá eŋkèraí.
3SG.PAST.carry long.ago SG.FEM.child.NOM
"The child carried him/her a long time ago."

The focus particle *nìné* 'even' appears only to the right of a fronted predicate. This is also a position where *aki* 'only' and *sii* 'also' appear.

(29) ndìm nìné ye àtàásà.
2SG.can even you INF.SG.AGR.do
"Even you are able to do it".

All examples in my data either have the focus particle immediately to the right of the fronted predicate, or else they are preceded by an adverb that can be analyzed as occupying the higher Topic position. While in languages like English, *wh*-phrases are often analyzed as occurring in the Focus position: in Maasai, *wh*-phrases cannot occur in the post-predicate focus position: rather they must be clefted (cf. Oda's analysis of Irish wh-questions in this volume).

As we have stated several times, the unmarked order in Maasai is SO. However, OS order is possible as well, but only if the object is interpreted as focused, or, as Payne et al. (1994) show, if the object is more prominent in the discourse than the subject. For the latter interpretation, an English passive translation is often volunteered, even though the syntax of the Maasai sentence is clearly active.

(30) ɛ̀tánápá ɛ̀ŋgérái ŋʷɔ̀tɔ̀né
3SG.PAST.carry SG.FEM.child.ACC mother.NOM
"The mother carried *the child*."/ "The child was carried by the mother."

This suggests that the object can cross over the subject only if it reaches a different interpretative region: otherwise minimality will ensure that the subject remains higher than the object.

The data available at this point are entirely consistent with the verbal predicate being at least in Force_2, i.e. the verbal predicate is attracted to a very high position in the left periphery. An examination of the elements that can or cannot appear to the left of the predicate should further determine if the verbal predicate is even higher than Force_2, such as Force_1. In this section, we briefly examine potential candidates for Force_1: complementizers, the particle *k*-, subjunctive and infinitival markers, non-argumental PP and CP topics, and clefted *wh*-questions. Maasai has no overt Cs, except for the verbal complementizer *adjo* 'to say', which seems to selects for Force (see Koopman 1984; and Koopman & Sportiche 1989 for general discussion). A force-like particle *k*- can precede the predicate. *k*- often occurs in yes-no questions and *wh*-questions, but it does not do so exclusively. In particular, it can also occur in affirmative contexts, and appears to be in complementary distribution with Neg. This suggests *k*- spells out Neg/Aff, and pied-pipes

with the verbal predicate to Force. Question interpretation arises if Force is [+Q], affirmative interpretation if Force is declarative. Maasai has a subjunctive marker *m-*, which precedes the [Subj-cl V] string. It harmonizes with the verb, and governs the subjunctive form of the verb. This suggests it merges somewhere lower in the structure, and pied-pipes with the verbal predicate. A final potential candidate for a Force_1 head is the infinitival marker *a*(SG)/*aa*(PL). It precedes the 'tenseless form', and agrees with the subject in number. This again makes it an unlikely candidate for an element merged in Force_1. So far then, potential C candidates do not seem to be merged in Force_1, and therefore do not bear on the question whether the predicate is in Force_1 or Force_2. If the verbal predicate raises to Force_2, Topics should be able to precede the verb.

(31) Force_1 Top* **Force_2** Top* Focus Mod* Top* Fin IP

It is clear that DPs may never occur as the highest topic position. It may be the case that temporal adverbials, PP adjuncts, and CP adjuncts can precede the verb as Topics, but it in fact seems that these elements receive a cleft interpretation when preverbal. Subjects and object DPs can precede the verbal predicate, but again they must appear in a cleft-like construction, carry accusative case, and must be interpreted as focused.

(32) iŋgíʃú etalépo láaṛpàpɨt
cows 3SG.PAST.milk OL.NOM.PL.hairs.NOM
*"The cows, the long haired one he milked (them)"
"It is the cows the long haired one milked."

(33) ìlàyok áànáp èndítò.
OL.boys.PL REL.NUM.PL.carry OL.girl
"It is the boys who will carry the girl."

Wh-phrases also precede the verbal predicate, but must be obligatorily embedded in the (poorly understood) cleft construction:

(34) kaŋái ɛ́nápɨ́ta tóret?
KA.who.ACC 3SG.carry.PROG Toret.NOM
"Who is Toret carrying?"

Informally speaking, clefting seems to provide extra structure to enable the DP to raise out of the CP.[18] As such, then, the data are entirely consistent with attraction of the verbal predicate to the higher Force_1, and this is what we will adopt.

Let us return now to the left periphery of the CP within the DP. In Section 2 we saw the left periphery also contains a position that attracts the nominal predicate, which ends up in a very similar position with respect to the subject. As such I simply label the position that attracts the predicate as "Force", though the exact

label of this position probably needs to be further elucidated and I leave the further question of possible Topic and Focus projections open at this time.

(35) $[_{DP}$ D $[_{ForceP}$ $[_{beP}$ ol$]$ $[_{ModP}$ Adv $[_{IP}$ NP ...

4. Non verbal predication

Thus far, the discussion has concentrated on the situations where the CP contains a verb. Like many other VSO languages, Maasai has clauses with non-verbal predication, a subject that has engendered much recent work on VSO languages (among others, Carnie 1995; Massam 2000a; Adger & Ramchand 2003a; Otsuka this volume; McCloskey this volume).

The schematic distribution of clauses with non-verbal predicates in Maasai is presented in (36a and b):

(36) a. (Neg) AP (Adv) DP_{NOM}
b. (Neg) DP_{indef} (Adv) DP_{NOM}
c. (Neg) [Subj-cl/Obj-cl T-V-AgrS...] (Adv) DP_{NOM}

With third person subjects, APs[19] and indefinite predicate nominals are in complementary distribution with the finite verb suggesting all predicates are attracted to the same position in the left periphery.[20] The contexts in (36a and b) do not support overt tense marking, subject clitics, nor any of the morphemes that co-occur with Vs. This follows from the fact that these clause types do not contain a category V, and hence none of the elements that co-occur with V can be present (cf. Carnie 1995's claim that Irish non-verbal predicates are initial because they bear tense features). I concentrate here on nominal non-verbal predicates.

The distribution of predicate nominals is complex and their analysis challenging. Several factors play a role in the distribution: the features of the argument (1st and 2nd person, versus 3rd person), the definiteness of the predicate, and interactions with A' extraction.

In forms with 3rd person subjects and indefinite predicates, the single argument bears nominative case (37a) and appears after adverbs (37b). These forms are translated as present tense outside of context; in order to clarify what tense is intended, temporal adverbs must be used (37c):

(37) a. arálímúí nɨ́nɛ̀.
SG.MASC.teacher.ACC he.NOM
"He is a teacher."
b. máàrmálímúí ɔ̀jí nɨ́nɛ̀.
NEG.SG.MASC.teacher.ACC usual he.NOM
"He is not usually a teacher."

c. armálímúí ápá nínè.
SG.MASC.teacher.ACC long.ago he.NOM
"He was a teacher a long time ago."

The fact that clauses with non-verbal predication in Maasai cannot support verbal tense, agreement or aspectual marking accounts for the absence of these elements from DPs as well.

The derivation of these forms is straightforward: the subject raises to the specifier of IP and then on to the specifier of TopP (where it can be topic dropped) (38a), and the nominal predicate fronts to Force (38b).

(38) a. [TopP [IP [beP *be* [SC nínè [DP ol malimui]]]]]

b. [ForceP [TopP nínèi [IP ti [beP ti *be* [SC ti [DP ol malimui]]]]]]

The derivation (38) correctly accounts for the fact that dependents of the predicate pied-pipe (39) (although some dependents, like the possessive, may also be stranded). See Massam (2000a), Lee (2000a), Rackowski and Travis (2000), and Carnie (1995) for discussion of similar pied piping in other verb-initial languages.

(39) armálímúí lɔ̀ɔ indóye nínè.
SG.MASC.teacher.ACC MASC.PL.ACC girls.PL.ACC he.NOM
"He is a teacher of girls."

This derivation differs in one important respect from the DP internal ones however: predicate inversion within DPs is *obligatory*, yet it appears not to have applied in (39). I return to this issue below.

With a first or second person argument, a different pattern emerges. First, a subject clitic appears on the verbal base *-ra*. The tense interpretation is fixed as present tense, and incompatible with past adverbs. *ra* thus spells out both the category V and (verbal) present tense. Past and future tense each use different verbal bases, and the form of the morpheme fuses both the category V and a specific tense specification. The [subject-clitic verb] sequence distributes as any tensed verbal predicate, and shows up in initial position, stranding any dependents. The nominal predicate shows up after the nominative subject, as expected, and is compatible with both a definite and an indefinite interpretation (40):

(40) árá òʃiàkí nanú armálímúí
1SG.RA always I.NOM SG.MASC.teacher.ACC
"I am usually the/a teacher."

In Maasai, as in many other languages, first and second person pronouns consistently behave differently from third person pronouns. A third person pronominal

object for example can be silent, but first and second (singular) objects cannot, and must show up as portmanteau clitics preceding the finite verb:[21]

(41)

		Subjects 1	2	3
Objects	1	–	kí	áa
	2	áá	–	kí
	3	á	í	ɛ

I adapt Kayne's (2000: 165) proposal for French pronominal arguments:[22] First and second structurally case marked pronominal arguments in Maasai must be doubled by a clitic.[23] Maasai clitics in turn require the presence of a verbal base.

4.1 The mystery of predicate inversion

The derivation in (38) poses a quite serious problem for the claim that there is a strong parallelism between clauses and DPs. In DPs, as shown in Section 2, *be* always triggers predicate inversion, bringing the predicate closer to the case position than the argument. Yet, in the clausal context discussed above, predicate inversion either fails to apply, or if it does apply, it does not block the movement of the argument to the nominative case position.

In this section, I will try to unravel some of the problems surrounding predicate inversion in clauses in Maasai. The task is to gain insight into the question why predicate inversion cannot occur in certain predicate nominal contexts, why it must apply in others, and why it must always occur in DPs.

As in many other VSO languages (see Carnie 1997 for example), indefinite nominal predicates and definite nominal predicates do not have the same distribution.

(42) a. armálímúí nínè.
SG.MASC.teacher.ACC he.NOM
"He is a teacher."

b. nìné armàlìmuí.
he.ACC teacher.NOM
"He is the teacher."

The definite predicate in (42b) carries nominative case, and shows the distribution of nominative subjects. The fronted argument carries (default) accusative case, and shows up in the left periphery where verbal predicates usually appear. Thus, negation precedes the predicate, and the high adverbs precede the definite nominative predicate.

(43) mê-nɪ̀nɛ́ òʃí armàlìmuí.
NEG-he.ACC usually SG.MASC.teacher.NOM
"He is not usually the teacher."

Predicate inversion and predicate fronting yield the expected structures in (44b), where the predicate is interpreted as definite:

(44) a. [$_{TopP}$ [$_{IP}$ [$_{beP}$ *be* [$_{SC}$ nɪ̀nɛ́ [$_{DP}$ armàlìmuí]]]]]

b. [$_{ForceP}$ [$_{TopP}$ [$_{DP}$ armàlìmuí]$_i$ [$_{IP}$ t$_i$ [[$_{beP}$ t$_i$ *be* [$_{SC}$ nɪ̀nɛ t$_i$]]]]]

The question remains: why must predicate inversion apply when the predicate nominal is definite? A natural hypothesis is that predicate inversion in Maasai is somehow triggered by the definiteness of the predicate. This hypothesis is not empirically supported, however, since there are environments where predicate inversion does not appear to have occurred, and where the predicate can nevertheless be interpreted as definite. As we saw before, 1st and 2nd person pronominal arguments, for example, must be doubled by a clitic, which in turn require the presence of a verbal base. In these environments, predicate inversion fails to occur: the predicate carries accusative case, the external argument carries nominative case, controls agreement, and importantly, the predicate can be interpreted as either indefinite or definite (see (40) above). This holds for all contexts in which a verbal base must appear. For example, embedding (45) within an infinitival complement neutralizes the indefinite/definite distinction.

(45) ɛɛ́kʊ tórét àa armálímúí.
3SG.FUT Toret SG.INF.be SG.MASC.teacher.ACC
"Toret will be a/the teacher."

If definiteness triggered predicate inversion, definite interpretations should not be available in examples such as (45). Most importantly, we would have no explanation for predicate inversion within DPs, where the phenomenon is clearly not related to definiteness.

If we examine the environments where predicate inversion *fails* to apply, a clear generalization emerges: definite predicates may not be in Force at spell-out. This explains the patterns: Predicate inversion must apply in (42b), because otherwise the definite predicate would end up in Force. It fails to apply in (42a), because it does not have to.

This way of looking at predicate inversion offers an interesting possibility: there could be other contexts in which predicate inversion is forced to apply because otherwise the derivation would not converge. This seems to happen in *wh*-movement environments, where *indefinite* predicates appear to be able to undergo

predicate inversion: indefinite predicates, in fact, *must* invert when the argument is *wh*-moved in non-verbal clauses.

(46) káŋaí armàlìmuí tɛ̀né?
who MASC.SG.teacher.NOM here
"Who is a/the teacher here?"

Predicate inversion (47a) satisfies the EPP of IP, and leaves the *wh*-phrase within the small clause predicate. This allows it to extract both as a remnant predicate satisfying the EPP feature of Force, and as a *wh*-phrase, which needs to be promoted into the cleft (47b):

(47) a. [$_{IP}$ [$_{beP}$ *be* [$_{SC}$ káŋaí [$_{DP}$ armàlìmuí]]]]]

b. [$_{ForceP}$ [$_{FocusP}$ [$_{IP}$ [$_{DP}$ armàlìmuí$_i$ [[$_{beP}$ t$_i$ *be* [$_{SC}$ káŋaí t$_i$]]]]]

Notice now that this reveals a surprising parallel with simple DPs and possessive DPs. The derivation above exactly parallels the derivation of simple DPs.

Our initial problem was explaining why predicate inversion is obligatory within DPs, but not in clauses that contain a non-verbal predicate. We now see that predicate inversion must also apply in certain clausal environments, and can understand this as follows: the derivation with predicate inversion must be the only possible derivation if the argument must be A-bar moved in a non-verbal predicate nominal construction. So what rules out the alternative derivation? Suppose that predicate inversion did not apply. This would force the *wh*-argument to move to the nominative position and the remnant predicate to Force, yielding the following snapshot of the derivation:

(48) a. [$_{IP}$ [$_{beP}$ *be* [$_{SC}$ kaŋai [$_{DP}$ armálímúí]]]]]

b. [$_{ForceP}$ [$_{beP}$ t$_i$ *be* armálímúí]... [$_{IP}$ [$_{DP}$ kaŋai.NOM] ...

The *wh*-word is in the nominative subject position. Therefore, this derivation might very well be excluded by whatever explains that-*t* violations. It seems then that Maasai should be added to the list of languages that disallow extraction of nominative subjects. Predicate inversion is one way to save this derivation, enabling extraction from the small clause predicate, both in DPs and in clauses containing a nominal predicate.[24]

In conclusion, we have established the following distributional generalizations governing the quite opaque distribution of predicate inversion of non-verbal predicates in Maasai: (a) definite predicates may not end up in ForceP at spell-out.

(b) A-bar extraction of the argument of a non-verbal nominal predicate forces predicate inversion because the alternative derivation yields a that-*t* violation.

It is important that the derivation of A-bar extraction exactly parallels the DP internal derivations, which also involve A' movement of the external argument. This further strengthens the DP-as-relative-clause hypothesis, and attributes the source of the typological correlations as due to shared structure and hence shared derivations.

5. Conclusion

In previous work, I have argued that Maasai DPs headed by common nouns are relative clauses, i.e. [D CP] structures, and proposed a structure and derivation that accounts for the asymmetric agreement patterns and the linear order. This proposal predicts strong parallelism between DPs and clauses, and presents a different perspective on typological properties: the typological properties of Maasai should simply follow from a shared CP syntax. In this it addresses the apparent "acategoriality" or "nominality" sometimes attributed to verb-initial languages (see for example, Gil, Jouitteau, Massam this volume), from a different perspective, having to do with the shared CP structure. This paper evaluates this claim, and uses it to map different areas of the syntax of Maasai. The overall results are highly encouraging: it allows not only expressing what DPs and CPs have in common, but it also leads to specific proposals as to how they differ. Future research will have to further determine how this hypothesis fares for other languages, but it seems clear how to proceed.

Notes

* Data on Kisongo Maasai (Eastern Nilotic) were collected during the 1999/2000 Field Methods class at UCLA, as well as in fieldwork since then. I would like to thank Saningó Maliary for his help, patience and insights on Kisongo Maasai. The excellent grammars of Hollis (1905) and Tucker and Mpaayei (1955) have been consulted heavily for the purposes of this paper, as have been the papers by Storto (forthcoming), Epstein (2000) and Payne et al. (1994). This paper reflects my current understanding of the syntactic properties of Maasai, and not surprisingly further exploration is often needed. This paper has been presented in various stages of development at MIT 2002, Cornell 2003, UBC 2003, and at the conference on verb-initial languages in Tucson 2003. Thanks to Andrew Carnie, and two anonymous reviewers for extensive comments on a previous, extremely dense version. Support from the COR program of the academic senate at UCLA, and the National Science Foundation is hereby gratefully acknowledged.

1. See Hawkins (1983) for a survey.

2. Following in the footsteps of Bach (1968) and Campbell (1996) among others.

3. I will often refer to this unit as *ol*, thus abstracting away from the different spell-out forms /ɔl, ɨl, ɛn, ɨn/ which further harmonize in ATR, and are subject to vowel deletion and lowering (ɔ → a) (McCrary 2001).

4. It is unclear at this point how exactly this quantifier should be analyzed. It shows an overt morphological distinction between indefinite and definite DPs, where other Maasai DPs do not show any such morphological distinctions.

5. For the purposes of this paper I treat *ol* as the external argument of the noun. See Koopman (forthcoming a, 2003a) for possible further decomposition.

6. *Be*P might be a particular instantiation of the more general projection PredP (cf. Bowers 1993, 2002).

7. In fact, the predicate containing *ol* first undergoes A' movement (relativization), followed by movement to the position where predicates are occurring, followed by further A' movement (see Koopman 2003b). I will ignore these finer movements at this point.

8. I will briefly address one issue though. According to the structure in (9), the NP predicate has the distribution of a structural subject. Usually, we think of the subject of the DP as the possessor, and the question arise if and how these two are compatible. The basic analysis for possessive constructions is sketched below: it will become clear that the possessor indeed ends up in the structural subject position of the DP as well, in accordance with the traditional insight. In a nutshell, possessive constructions have a D CP structure, but differ from DPs headed by a common noun, in that they contain a different type of nominal small clause predicate where the appropriate thematic relations are encoded (Kayne 1994; den Dikken 1998; Storto forthcoming). The possessive example in (i) has the underlying structure in (ii), with Cs boldfaced:

(i) **oldía** **l-** **aá** **(ɨ)layôk**
SG.MASC.dog.ACC MASC.SG.ACC PL.ACC PL.MASC.boy.ACC
"The/some dog of the/some boys."

(ii) [$_{DP}$ [.....] [$_{D}$ **[l]** [$_{CP}$ C [$_{IP}$[[$_{Infl}$ [$_{beP}$ **oo** ... [$_{SC}$ [$_{D/CP}$**oldià**] *to* [$_{D/CP}$**ilayôk**]]]]

As we can see from the boldfaced distribution of *o/il* both the external argument and the small clause predicate are at least D/CPs, with *ol/il* in their left periphery). *l* is the D of the DPs, and *aa* the agreement form of *be* with a plural DP subject. The derivation proceeds in essence as before Predicate inversion raises the predicate to the specifier of *be*, effectively turning it into a structural subject, whence it raises on to the specifier of IP as subjects always do. The raised DP triggers number and gender agreement though specifier/head agreement on *be* which is spelled out as ɛ or ɔ in the singular, or as ɔɔ (aa) in the plural. The argument of the small clause predicate (*oldià*) raises first to the specifier of CP, and then on to the specifier of DP, triggering agreement in gender, number and Case of the D: the remnant predicate (beP), containing the agreeing forms also raises into the left periphery, into some as yet unspecified position to the left of the one for the predicate. We will consider the nature of this position in Section 4.

9. The following descriptive template illustrates the richness of the complex verb.

(i)	NEG- Sub-cl/(Obj-cl)(PERF)-√V	towards	"do"	-FUT/INCEPT	-INST-AgrS-PASS
	(*i*(*n*))	away	MIDDLE		CAUS
	(CAUS)	DAT/BEN	REFL		PERF

10. See Koopman (2001) for a list and a general description.

11. It is unclear at this point why negation is excluded from DPs, while it is possible in cases of non-verbal predication.

12. To be precise, in Koopman and Sportiche (1991), we actually argued that subjects in VSO languages must be immediately c-commanded by T to be assigned Case: this forces raising when there are projections between T and V, as in Welsh.

13. Maasai may also have some kind of ellipsis, but the topic needs to be further explored.

14. At this point, we should point out that stacking of infinitives is quite restricted. The temporal restructuring verbs seem to only combine with activities and certain sequences resist recursion in a manner that recalls "doubl-ing" (Ross 1972) or Dutch preverbal infinitives (Koopman & Szabolcsi 2000; Koopman 2002).

15. Quantified subjects might very well raise to the respective quantifier positions Stowell and Beghelli (1997). I will ignore these positions here, as I have no understanding of the distribution of different types of quantifiers in Maasai.

16. For relevant discussion see Poletto and Pollock (2003).

17. The main argument in Massam (2000a) for fixing the landing site of the remnant VP within IP is the fact that negation intervenes between C and the finite verb. This shows indeed that the verbal predicate must be lower than negation. However the verbal predicate itself could have pied-piped negation to a high landing site in the CP region, as I have shown for Maasai. Under this view, Massam's claims about complementary distribution between predicate fronting languages and DP raising to TP languages no longer follow.

18. This raises the further question why the expected *wh*-position to the right of ForceP is not (and maybe is never) available for *wh*-question formation if the landing site of the predicate is above it.

19. Maasai has two classes of adjectives: 'verbal' adjectives that carry relative clause morphology within DPs and nominal adjectives that carry nominal case and number morphology.

20. McCloskey (this volume) shows that within Irish further categorial distinctions between fronted predicates are necessary.

21. Payne et al. (1994) argue that *ki* and *aa* are inverse morphemes.

22. "Pronominal arguments that are structurally case-marked in French must be doubled by a clitic" (Kayne 2000: 14).

23. That first and second pronominal argument must be doubled by a clitic seems to raise a problem for the following type of structures (Tucker & Mpaayei 1955: 91):

(i) nanu armalimui.
me.ACC OL.teacher.NOM
"It is me.acc (who is) a/the teacher."

Here a first pronominal argument does not have to be doubled, as the absence of a verbal base shows. We might assume that the pronoun is merged as the predicate. This will weaken my general assumption that it is always clear what the predicate and what the argument is. I will assume instead that the first person is generated in TOP-cleft position and the third person raises, as suggested by 'it is me who is/*am a teacher'. This is consistent with the general pattern of *wh*-movement of the argument in this construction.

24. Adding a specialized nominative relative clitic which in turn needs a verbal base is another way to insure convergence:

(i) káŋaí à-ra armálímuí tènɛ?
CLFT.who.ACC REL.SG.NOM-be SG.MASC.teacher.ACC here
"Who is a/the teacher here?"