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LINKERS AND THE INTERNAL STRUCTURE OF vP *

Abstract: In a variety of languages a particle, which we call the linker, appears between the direct object and a secondary object or nominal adpositional phrase. We compare the syntax of this linker particle in Kinande (Niger-Congo) to its syntax in two Khoisan languages, Ju|’hoansi and Hoan. We propose an account of the properties that linkers in these languages share, including the linkers’ word order properties and Case-theoretic contributions. We then go on to explore the range of variation that the linker construction tolerates, with respect to what phrases can move into the linker’s specifier, and whether or not the linker manifests

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agreement with its specifier. In so doing, we uncover both the principles and the parameters relevant to these linker constructions. Finally, we point to some evidence that the linker category even exists in Chichewa (and other Bantu languages) in which it is not spelled out overtly. Our analysis provides striking support for the existence of vP-internal functional projections. The data in this paper also lead us to the surprising conclusion that the Minimal Link Condition can be parameterized.

1. Introduction

A striking property of Kinande which appears to distinguish it from most other Bantu languages is that an intriguing particle appears obligatorily between the two objects of a double object construction. An example is given in (1).¹

¹ Most of the data on Jul'hoansi and Hoan in this paper comes from fieldwork done by Chris Collins; most of the data on Kinande comes from fieldwork done by Mark Baker. Sentences that do not come from our fieldwork are explicitly noted. Abbreviations used in the glosses include: 1sS (1st person singular subject), Aff (Affirmation prefix), Appl (applicative suffix), Assoc (associative particle), Aug (augment vowel), Caus (causative suffix), Dem (demonstrative), Dim (Diminutive), Ext (extended aspect suffix), Foc (Focus), Fut (future tense), Fv (final vowel), Gen (Genitive), Loc (locative), Neg (negative prefix), OM (object marker), Pass (Passive), Past (Past tense), Perf (perfective), Pres (present tense), Prog (progressive), S (subject), T (tense (past, unspecified)), Trans (transitivity suffix). Roman numerals between 1 and 19 refer to Bantu noun classes (combinations of number and idiosyncratic noun class).

(1) Mo-n-a-h-ere omukali y'- eritunda. (Kinande)

Aff-1sS-T-give-Ext woman.1 Lk.1- fruit.5

I gave a fruit to a woman.

We will refer to this particle as the *linker*, and gloss it Lk. Whereas most other Bantu languages do not have such a particle (at least overtly, see section 6), genetically unrelated Khoisan languages such as Ju|'hoansi do. An example is given in (2).

(2) Besa komm ||'ama-|'an Oba ko tcisi (Ju|'hoansi)

Besa Emph buy give Oba Lk things

Besa bought Oba some things.

In addition to its use in standard double object constructions, linkers also appear in certain other sentences with two or more predicate-internal phrases. For example, linkers come between a theme and a locative phrase, and between a theme and an instrumental phrase in Kinande:

(3) a. Omukali mo-a-gul-ire amatunda w'- omo-soko (Kinande)

woman.1 Aff-1S-buy-Ext fruits.6 Lk.6 Loc.18-market

The woman bought fruits in the market.

b. Kambale mo-a-seny-ir' olukwi lw'- omo-mbasa. (Kinande)

Kambale Aff-1S/T-chop-Ext wood.11 Lk.11 loc.18-axe.9

Kambale chopped wood with an axe.

In this respect, too, Kinande is similar to Ju|’hoansi:

- (4) a. Uto dchuun-a |Kaece ko n!ama n!ang (Ju|’hoansi)
car hit-Trans |Kaece Lk road in
A car hit |Kaece in the road.
- b. Mi ba ||ohm-a !aihn ko |’ai (Ju|’hoansi)
my father chop-Trans tree Lk axe (Dickens 1992: 21)
My father chopped the tree with (by means of) an axe.

This shows that the linker is not a narrow peculiarity of double object constructions. Indeed, it is also found in applicative constructions of various kinds, and causative constructions, as shown below. Thus, the phenomenon seems to play a role in verb phrase structure quite generally.

There have been a few isolated studies of the linker in Kinande (see Mutaka 1986, Schneider-Zioga 1995, and Hualde 1989), but no definitive analysis. Collins (2003a) has, however, given a detailed formal analysis of these particles in two Khoisan languages, Ju|’hoansi and Hoan (see also Dickens 1992: 20, and Snyman 1970: 181 on Ju|’hoansi, Collins 2005 on N|uu, and Hastings 2001 on |Xam and !Xoo).² In this paper, we extend Collins’ basic analysis to Kinande, making this the first study of the linker as a phenomenon

² See also Larson 2002 on linkers in the Niger-Congo language Baule.

of Universal Grammar not limited to one particular language or a pair of closely related languages. This project of unification is significant because it allows us to see what is generally valid about such structures, and what varies. In some cases, language particular properties of Kinande allow us to construct new arguments in favor of the general approach presented by Collins, replicating his results. In other respects, Kinande shows systematic differences from Ju|'hoansi, revealing something of the range of parametrization that constructions involving the linker allow. We believe that our study (and related work by Collins) documents the overt manifestation of a functional category made available by Universal Grammar that plays an important role in vP-internal structure—a category that various researchers have proposed for theoretical reasons but has not been directly observed.

Sections 2 and 3 explore the basic syntax of the linker construction. Developing ideas of Collins (2003a), we argue in section 2 that the linker morpheme heads a vP internal functional projection, the specifier of which can be used as the target of movement (compare Travis 1991, Koizumi 1995, Lasnik 1995, and Collins and Thráinsson 1996, where vP internal functional projections are discussed). This creates a degree of free word order internal to the vP in Kinande. In section 3, we argue that the primary function of Lk is to facilitate Case-licensing of the nominals inside vP. Such particles are needed in Kinande, as in the Khoisan languages, because locative and instrumental expressions are nominal and thus have Case features that need to be checked. We claim that the linker makes two distinct Case-theoretic contributions. First, it is able to check the Case feature of a following DP. Second, it provides a landing site for DP movement that makes the DP accessible to a higher Case checking head.

Sections 4 and 5 explore the two major parameters of variation in linker constructions. Section 4 shows that movement into the specifier of a linker phrase is freer in Kinande and

Ju|’hoansi than it is in Hoan, another Khoisan language. To account for this, we postulate that the Minimal Link Condition (MLC) is parameterized. In some languages, movement to Spec LkP is subject to the MLC, and in others it is not. As a result, Kinande and Ju|’hoansi have relatively free word order inside the verb phrase, whereas word order in Hoan is more restricted. Section 5 then takes up the fact that the linker bears overt agreement in Kinande, but not in the Khoisan languages. Certain other differences follow from this basic difference in agreement. For example, Kinande does not appear to use linkers with intransitive verbs, and it is limited to one linker per clause, differing from Ju|’hoansi and Hoan in these respects.

Finally, in section 6 we consider the idea that if UG permits such an element as the linker, then it is possible that the same element exists in other languages too, but covertly, just as complementizers and determiners can be covert. We speculate that linkers exist also in Bantu languages like Chichewa and Kichaga, making it possible for these languages to have a cluster of properties, including nominal locative expressions, a rich array of multiple complement constructions, and a degree of free word order inside the verb phrase. If so, then the overt linkers in (1)-(4) are not just minor quirks of the particular languages cited, but valuable clues into the structure of verb phrases more generally.

2. The position of the linker in phrase structure

We begin by arguing that the linker is a vP-internal functional category, the specifier of which can be the target of movement. Consider the following range of examples from Kinande, all of which involve a transitive verb, a locative expression, and the linker element. (Note that the

form of the linker changes between (5a) and (5b), agreeing in noun class with the nominal that precedes it. We return to this agreement at length below, see (12).³⁾

(5) a. Mo-n-a-hir-ire okugulu k'- omo-kihuna. (Kinande)

Aff-1sS-T-put-Ext leg.15 Lk.15 Loc.18-hole.7

I put the leg in the hole.

b. Mo-n-a-hir-ire omo-kihuna m'- okugulu.

Aff-1sS-T-put-Ext Loc.18-hole.7 Lk.18 leg.15

I put the leg in the hole.

c. *Mo-n-a-hir-ire k'/m' okugulu omo-kihuna.

Aff-1sS-T-put-Ext Lk.15/18 leg.15 loc.18-hole.7

I put the leg in the hole.

d. *Mo-n-a-hir-ire okugulu omo-kihuna ko/mo.

Aff-1sS-T-put-Ext leg.15 loc.18-hole.7 Lk.15/18

I put the leg in the hole.

³Note that before a consonant-initial DP or in isolation, Kinande's linker consists of two parts, the agreeing class marker and the fixed element *-o*. When the DP/NP following the linker is vowel-initial (the usual case), the *-o* is absent and the agreement part surfaces as a proclitic on the following noun. We assume that the Lk head in Kinande has no phonological content of its own, but it does bear agreement; *-o* is inserted at PF whenever the agreement marker cannot otherwise be syllabified.

These data show that exactly one phrase must appear before the linker; the other must appear after it. However, it does not matter which phrase appears where: (5a) has the theme-location order that is familiar from English and that respects the usual thematic hierarchy (Larson 1988); (5b) has what we call the inverted order of locative-theme.⁴

This pattern is also valid for other constructions containing the linker. (6) is an example in which the verb takes a theme and an instrumental. This time we give only the grammatical orders, in which the linker comes between the two noun phrases; other orders are impossible.

(6) a. Kambale mo-a-seny-ire olukwi l'- omo-mbasa.(Kinande)

Kambale Aff-1S/T-chop-Ext wood.11 Lk.11 Loc.18-axe.9

Kambale chopped wood with an axe.

b. Kambale mo-a-seny-ire omo-mbasa m'- olukwi.

Kambale Aff-1S/T-chop-Ext Loc.18-axe.9 Lk.18 wood.11

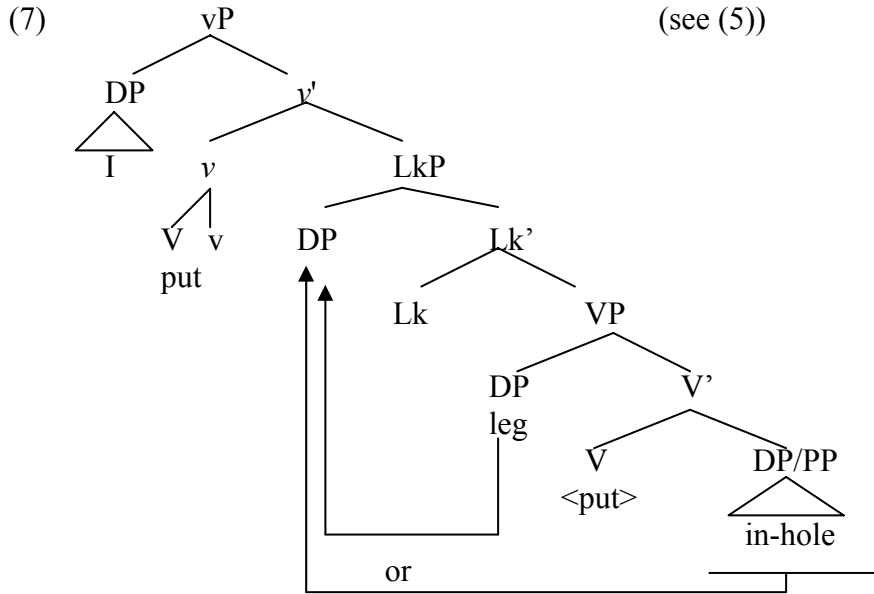
Kambale chopped wood with an axe.

The generalization that is valid for Kinande is that exactly one phrase must appear before the linker whenever there are two VP-internal phrases. In this respect, the Kinande

⁴The word order alternations in (5) and (6) have little or nothing to do with the existence of applicatives in Kinande. Kinande does have a locative applicative suffix, but it does not affect the word order or the presence of the linker in (5): the complements can appear in either order with a linker between them whether or not an applied affix appears on the verb. Kinande does not have instrumental applicatives at all.

facts replicate exactly the Ju|’hoansi facts described in Collins 2003a. This generalization is naturally explained if the linker heads a functional projection and bears an EPP feature (also called an OCC feature in more recent Minimalist work). Then exactly one phrase must move into the specifier of LkP, to satisfy this EPP feature. Since Lk does not assign any theta-role, its specifier is a theta-bar position, and any phrase can in principle move into it (subject, perhaps, to locality conditions on movement; see section 4 for extensive discussion). For example, either the theme argument or the locative argument can move to Spec LkP in (5), just as either the theme argument or the locative argument can move to Spec IP in locative inversion constructions (cf. *A book was put on the table* or *On the table was put a book*; see Collins 1997 for locative inversion in English and Bresnan and Kanerva 1989 for locative inversion in Chichewa—found also in Kinande). Since any VP-internal constituent can move into Spec LkP, the Lk head must be higher than the base positions of all these elements.⁵ The vP structure that this range of data supports is given in (7). (The exact internal structure of VP is not crucial; VPs may well have somewhat different structures depending on which combination of arguments or adjuncts they contain.)

⁵ The verb probably moves no higher than *v* in Ju|’hoansi, since a common order of adverbs in the language is Subject-(Tense/Neg)-Adverb-Verb-Object. In contrast, the verb probably moves on to Infl in Kinande, since subject-adverb-verb orders are not found in this language and verb-subject orders occur when something other than the thematic subject moves to Spec, IP. (See Kinyalolo 1991 for evidence of verb movement to Infl in related Kilega.)



The structure of the instrumental constructions in (6) is identical to the one in (7) if instrumental “adjuncts” are treated as innermost arguments, as advocated by Larson (1988). Alternatively, the instrumental expressions in these cases might be generated as phrases right-adjoined to a projection of V (see (42) below for an instance of such a structure). We leave open which of these is correct in Kinande (the matter should presumably be resolved by word order patterns, c-command tests, and higher-level theoretical considerations).

We assume the verb starts as the head of VP raises over Lk to the higher verb position v , showing its original position (its “trace”) with the $\langle \dots \rangle$ notation. This movement does not violate the Minimal Link Condition, presumably because Lk has no lexical category features that would be attracted by v (cf. Chomsky 1995). Note that we are not assuming that the verb needs to move through the Lk to get to v . In other words, we are not assuming excorporation.

The analysis in (7) is consistent with the binary branching requirement on Merge, but then so are all theories that use Larsonian VP -shells. Our theory goes beyond simply saying

that vP internal structure is binary branching, since we are postulating a specific functional projection internal to the vP, dominating VP (see Travis 1991, Lasnik 1995, Koizumi 1995 and Collins and Thráinsson 1996 for other theories with vP internal functional projections).⁶

This analysis naturally rules out ungrammatical examples like (5c,d). Consider first (5c), repeated as (8a).

- (8) a. *Mo-n-a-hir-ire k'/m' okugulu omo-kihuna.
Aff-1sS-T-put-Ext Lk.15/18 leg.15 loc.18-hole.7
 I put the leg in the hole.
- b. *Mo-n-a-hir-ire okugulu omo-kihuna ko/mo.
Aff-1sS-T-put-Ext leg.15 loc.18-hole.7 Lk.15/18
 I put the leg in the hole.

(8a) is bad because no constituent has raised to Spec LkP, so the EPP feature of Lk is unsatisfied. Consider next (5d), repeated as (8b). This example is ruled out because two phrases have been moved to Spec LkP, while Lk has only one EPP feature, and thus allows only one specifier position.

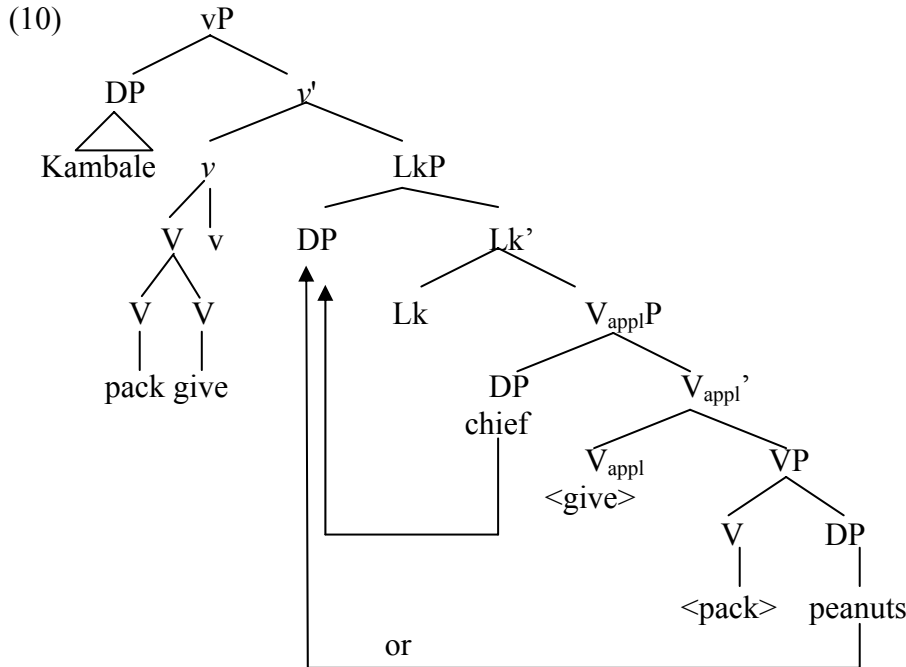
This line of analysis extends readily to more complex verb phrase structures. For example, (9) shows that the linker also appears immediately after exactly one DP in a benefactive applicative construction in Kinande.

⁶An anonymous reviewer points out that our analysis is also distinct from small clause theories of argument structure, in which a pair of VP-internal DP expressions constitutes a small clause constituent, perhaps one that has a distinct head such as “Predication”.

- (9) a. Kambale a-seng-er-a omwami y'- ehilanga. (Kinande)
Kambale 1S/T-pack-Appl-Fv chief.1 Lk.1 peanuts.19
 Kambale packed peanuts for the chief.
- b. Kambale a-seng-er-a ehilanga hy'- omwami.
Kambale 1S/T-pack-Appl-Fv peanuts.19 Lk.19 chief.1
 Kambale packed peanuts for the chief.

Benefactive applicatives are fairly standardly analyzed as consisting of a normal VP constituent containing the base verb and its argument(s), which itself acts as the complement of the applied morpheme (Marantz 1993, Collins 1997, Ura 2000). This applicative head then theta-marks the applied argument—here a benefactive—generated in its specifier position. The base V then moves through the applicative head on its way to v (and perhaps Infl). Like Marantz (1993), we assume that the applicative head is also categorically a V; indeed, it is plausibly a variant of ‘give’ that selects a VP as its theme argument rather than an NP. Thus, ‘pack peanuts for Kambale’ in Kinande more literally ‘give Kambale (an event of) packing peanuts’ (see also Baker 1996: 426-439).⁷ Given these rather standard assumptions, (9) is readily analyzed simply by generating a LkP projection below vP but above the larger applicative VP, as shown in (10).

⁷ It is not infrequent for benefactive applicative morphemes to be cognate with the verb ‘give’ in the language; the compound verb ‘buy-give’ in (2) from Ju|’hoansi is a case in point.

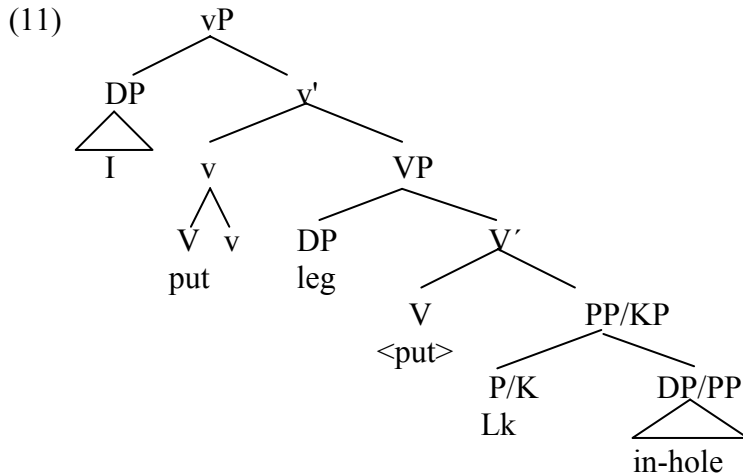


Once again, one and only one DP from the larger VP moves to Spec LkP to satisfy the EPP feature of Lk. The analysis in (10) is identical to that in (7), except that the internal structure of VP is a bit more complex.⁸

⁸ The structure in (10) would also work for the locative applicative in Kinande, mentioned in note 4, with a locative phrase generated in the specifier of the higher VP (and the lexical meaning of the applicative morpheme adjusted accordingly).

For a simple double object construction involving the verb ‘give’ as in (1), two analyses are open to us. The structure could be a simple Larsonian structure like (7), with the goal generated in spec, VP and the theme generated as the complement of V. Or ‘give’ could appear with a null applicative in a structure like (10), the goal being generated in the Spec of the higher V and the theme inside the lower V. The only difference is whether there is one V projection or two, and our data gives no basis for choosing between these alternatives.

The most obvious alternative to the analysis in (7) would be to analyze the linker as some kind of preposition or oblique Case marker (e.g., heading a KP, see Lamontagne and Travis (1987)) that takes the second nominal element as its complement. This would give a structure something like (11).



While this alternative looks reasonable for the uninverted (a) sentences in (5), (6), and (9), it provides no obvious account of the inverted (b) sentences. Presumably, on an analysis such as (11), these would have to be analyzed as a kind of locative alternation, similar to the alternation found with verbs like *spray* and *load* in English (*Chris sprayed paint on the wall* vs. *Chris sprayed the wall with paint*). But inversion in Kinande (like in Ju|'hoansi) is not lexically restricted the way that locative alternations are; rather it is fully productive and semantically innocuous. Furthermore, the linker appears in both alternates, whereas *with* in English appears in one version only. Thus, the analysis in terms of movement to the specifier of a functional head is more attractive.

Additional evidence that the first DP after the verb sits in the specifier of LkP comes from agreement in Kinande. It is striking that Lk agrees with the immediately preceding DP

in Kinande, as seen in the examples above. Such agreement is not at all expected given the structure in (11), since PPs rarely or never agree with the DP they are predicated of (if indeed these PPs are predicates at all; see Baker 1996:ch 9 and Baker 2003: appendix). In contrast, under our proposal in (7), this is a straightforward instance of Spec-head agreement.

Indeed, this agreement falls out as a special case of the pervasive generalization in Bantu that agreement always gives rise to internal Merge (movement). We claim that (12) is characteristic of the agreement-rich Bantu languages:

- (12) Suppose Agree(X, YP), where X contains unvalued phi-features and YP contains the goal. Then X has an EPP feature that is satisfied by movement of YP to Spec X.
 (see Baker and Collins 2003, see also Carstens 2005 for related ideas about agreement)

(12) has widespread ramifications in Bantu. Besides the linker, it also covers the agreement of the focus particle with the focused DP in Kinande, the agreement of tense heads with subjects, and the agreement of associative (genitive) particles with the nominal projection in their specifier. Examples of these are:

- (13) a. Eritunda ry-o n-a-h-a omukali. (Focus)
fruit.5 5-Foc 1sS-T-give-Fv woman.1
 It's a fruit that I gave to a woman.

- b. Eritunda mo-ry-a-h-er-w-e omukali. (Tense)
Fruit.5 Aff-5S-T-give-Ext-Pass-Fv woman
 A fruit was given to the woman.
- c. Mo-n-a-gul-ire [eritunda ry-a Kambale]. (Associative)
Aff-1sS-T-buy-Ext fruit.5 5-Assoc Kambale
 I bought Kambale's fruit.

For Focus/C and Tense, we assume the standard structures: for example, ‘fruit’ in (13a) is in Spec FocP. For (13c), we assume (roughly following Nkemnji (1995)) that the intermediate structure is [Assoc [DP NP]], where the NP expressing the possessed item is attracted to the specifier of AssocP (over the DP possessor) (see Baker and Collins 2003 for details). The agreement on the linker in an example like (14) fits nicely into this pattern given the analysis in (7).⁹

- (14) Mo-n-a-h-ere eritunda ry- omukali (Linker)
Aff-1sS-T-give-Ext fruit.5 Lk.5 woman.1
 I gave a fruit to the woman.

⁹ See also section 5 for examples in which the agreement on the linker licenses pro-drop of its specifier, just as agreement on Infl allows pro-drop of the subject in Kinande and many other languages. Baule seems to be another language in which the linker agrees with the DP in its Spec (Larson 1998a,b, 2002).

There is thus converging evidence that the first DP in a multiple complement construction is in the specifier of LkP (inversion in (7) and agreement).

Kinande provides an additional argument that LkP is generated below vP, as shown in (7). In addition to the little v head that is a target for verb movement, vP contains the theta-position of the external argument. Now the external argument can appear immediately after the verb in the Kinande construction shown in (15a), but the instrument phrase cannot invert with it, as shown in (15b).

- (15) a. ?Olukwi si-lu-li-seny-a bakali (*b'-) omo-mbasa (Kinande)
wood.11 Neg-11S-Pres-chop-Fv women.2 Lk.2- Loc.18-axe.9
 WOMEN do not chop wood with an axe.
- b. *Olukwi si-lu-li-seny-a omo-mbasa (mo) bakali.
wood.11 NEG-11S-Pres-chop-Fv Loc.18-axe Lk.18 women.2
 WOMEN do not chop wood with an axe.

Sentence (15a) is an instance of the subject-object reversal construction found in various Bantu languages, in which the object moves past the in-situ subject to fill the specifier position of IP (see Kimenyi 1980, Kinyalolo 1991, Ndayiragije 1999, Ura 2000). That no linker appears between the two postverbal NPs here could simply follow from the fact that the postverbal subject must be an augmentless (i.e. determinerless, indefinite) NP, and such NPs do not participate in agreement in Kinande (see section 3.2 for discussion). The crucial evidence is that (15b) is also unacceptable. Here the augmentless agent NP is not in Spec LkP, but rather the instrumental phrase is, so there should be no problem triggering

agreement. The unacceptability of (15b) follows from our assumption that the LkP is dominated by vP (and in turn dominates VP). Given that the agent is generated in Spec vP, it is impossible for the locative to precede it as a result of moving into Spec LkP. Nor can the Lk head ever come before the in-situ subject. Note that (15b) contrasts minimally with the equivalent without subject-object reversal in (16); in this sentence, the linker necessarily appears between the object and the instrument.

(16) Abakali mo-ba-seny-ire omo-mbasa m' olukwi. (Kinande)

women.2 Aff-2S/T-chop-Ext loc.18-axe.9 Lk.18 wood.11

The women chopped wood with an axe.

3. The Role of Linkers in Case checking

Now that we have some understanding of the basic syntax of the linker, we need to ask why it is present at all. In this section, we argue that it exists as a language-specific resource for checking the Case features of DPs. Linkers make two related contributions, we claim: First, they themselves are able to check a Case feature. Second, they provide a landing site for movement, which makes a DP accessible for Case checking by an external head.

First, we briefly outline our basic assumptions about Case theory, which are quite standard in the Minimalist Program (see Chomsky 1995, 2000, 2001a,b). We assume that every DP has an uninterpretable Case feature that needs to be checked by LF. Furthermore, we assume that certain heads—prepositions, the light verb *v*, the linker, but crucially not *V* (including the V_{appl} found in applicative structures like (10))—have the ability to check the Case feature of these DPs. If a head has the ability to check the Case feature of a DP, it means

the head has an uninterpretable Case checking feature. In the Minimalist Program, checking is equivalent to valuing and deletion (see Chomsky 2000, 2001a,b on the analysis of Case we are adopting here). Furthermore, we assume that there has to be a local relationship between the Case checker X and the DP. For example, if X c-commands DP, and X checks the Case feature of DP, then there can be no barrier/phase boundary intervening between X and DP.

3.1 The Linker as a Case checker

The initial motivation for saying that linkers are involved in Case checking comes from the fact that the linker is obligatorily present in double object constructions (DOC), but is obligatorily absent with simple transitive verbs. Thus, we find the following contrast in Kinande:

(17) a. Kambale a-hek-er-a omwami *(y'-) obwabu (Kinande)

Kambale IS/T-carry-Appl-Fv chief.1 Lk.1- drink.14

Kambale carried drink for the chief.

b. Kambale a-hek-a (*y'-) obwabu (*bo).

Kambale IS/T-carry-fv Lk.1- drink.14 Lk.14

Kambale carried drink.

This observation also holds for the Khoisan languages (Collins 2003a). The question of how the Case of the second object of a DOC is licensed has been a major theoretical issue ever since the introduction of Case theory (see Baker 1988a and Collins 1997 for differing

points of view). It is very attractive to say that the linker performs this function in Kinande, as well as in the Khoisan languages Hoan and Ju|'hoansi.

More specifically, we claim that the light verb *v* checks the Case of the first DP and Lk checks the Case of the second DP in these structures. When only one DP is selected, the accusative Case checking feature of the light verb *v* is sufficient to do the checking, and Lk need not be generated. (We return to intransitive verbs in section 5.)

Note that in Kinande the first DP of the DOC agrees with Lk but has its case checked by the light verb *v*. Carstens (2001) discusses at length the fact that in Kiswahili (and Bantu languages more generally) agreement between a head H and a DP does not always result in the Case feature of the DP being checked by H, and that is exactly what we find in our linker constructions.

The analysis of Lk as a Case checker can be extended to explain why Lk appears in locative and instrumental constructions in Kinande (see (5) and (6)). Locative expressions (with noun classes 17 and 18) have nominal properties in Kinande. Bresnan and Kanerva 1989, Bresnan 1991, and Bresnan and Mchombo 1995 argue this in detail for Chichewa (see also Baker 1992 and Carstens 1997), and some of their arguments carry over to Kinande. For example, nouns with locative prefixes can be in subject positions, they can trigger subject-verb agreement in the usual way, they can be pro-dropped, and so on (see (23) below for an example of a locative in subject position). Now if locative expressions are nominal in Kinande, then it is reasonable to assume that they also have a Case feature that needs to be checked. Hence the linker is required in constructions with a direct object and a locative expression just as it is in ordinary double object constructions. This analysis carries over to

Kinande's instrumental constructions as well, because the instrument is marked with a locative (class 18) gender prefix (unlike the other Bantu languages that we know).

The assumption that the linker is required to check the Case feature of additional nominal phrases explains its distribution in some detail. Linker morphemes do not appear between an object and a true PP headed by a preposition comparable to *with* or *by* in Kinande:

- (18) Omukali mo-a-h-er-u-e eritunda (*ryo) na Kambale (Kinande)
woman.1 Aff-1S/T-give-Ext-Pass fruit.5 Lk.5 by Kambale

The woman was given fruit by Kambale.

(19) shows a minimal pair illustrating the same point in Ju|'hoansi: in (19a) (which repeats (4b)), the instrument is expressed as a bare NP, and a linker must appear between it and the direct object; in (19b), the instrument is expressed as a PP, and no linker appears between it and the direct object.

- (19) a. Mi ba ||ohm-a !aihn ko |'ai (Ju|'hoansi)
my father chop-Trans tree Lk axe (Dickens 1992: 21)

My father chopped the tree with (by means of) an axe.

- b. |Kaece goaq 'an gu tju |xoa ||'aisi (Ju|'hoansi)
|Kaece yesterday build house with grass

He built the house with grass yesterday

The linker also does not show up between a DP complement and a CP complement in Kinande, as expected given our Case theoretic account.

- (20) Mo-n-a-layir-ire Kambale (*y') in-di a-gul-e amatunda.
Aff-1sS-T-convince-Ext Kambale.1 Lk.1 1sS-that 1S-buy-Subj fruits.6
I convinced Kambale that he should buy fruits.

The complementizer in (20) crucially has no nominal features; on the contrary it is related to a verb meaning ‘say’. Therefore, its projection does not have a Case feature, and there is no need for a linker to come before it.

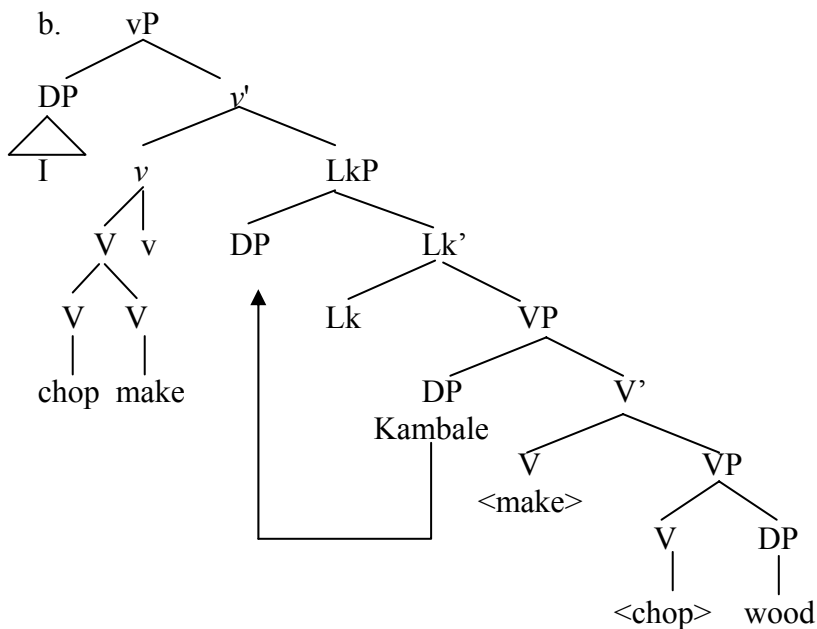
Conversely, the Case-theoretic account predicts that the linker will show up in other constructions with two DPs. A case in point is the morphological causative construction. When a causative morpheme is added to a transitive verb root, the result is typically a kind of double object construction, with both the causee and the underlying object following the verb. Given that the causee and the object are both DP arguments that have to have their Case feature checked, we predict that linkers should be needed in this type of causative construction as well (see Baker 1988a on the Case properties of causatives). The prediction is correct for Kinande, as shown by (21a), which we analyse as having the syntactic structure in (21b).¹⁰

¹⁰ Apart for the presence of Lk, this causative structure is a reasonably standard one, with the causee ‘Kambale’ generated outside the core VP ‘chop wood’ but below the causer/matrix subject ‘I’, in accordance with its role as the agent of the chopping but the patient of the causing. The main debatable point is whether the projection headed by the causative morpheme is a VP or a vP. Considering it to be a VP makes the overall structure maximally

(21) a. Mo-n-a-seny-es-irie Kambale y' olukwi (Kinande)

Aff-1sS-T-chop-Caus-Ext Kambale.1 Lk.1 wood.11

I made Kambale chop the wood.



See also Collins (2003a) for a comparable causative example in Ju|'hoansi.

The fact that a wide range of expressions, including locatives and instruments, are treated as nominals rather than as (pure) PPs in Kinande is an important similarity that it has

similar to an applicative (see (10)) and indeed morphological causatives have the same Case, movement, and word order properties as applicatives in Kinande and other Bantu languages. (Indeed, causatives and applicatives are homophonous in many languages, the only difference being how the added argument relates thematically to the core VP; see Baker (1996: 438-439) and references cited there.)

with the Khoisan languages.¹¹ Locative PPs in Ju|'hoansi and Hoan are clearly nominal (see Dickens 1992 for Ju|'hoansi). The evidence for this in Hoan includes the following: First, Collins 1998 shows that postpositions have the same plural form as inalienable nouns. Second, Collins 1998 shows that postpositions assign genitive Case to the 1sg pronoun (the only pronoun showing Case distinctions). Thus, these expressions plausibly have Case features that need to be checked in these languages, unlike in English and other Indo-European languages. We conjecture that this is a large part of the reason why Kinande and the Khoisan languages have linkers, whereas English does not. We express this conjecture as follows:¹²

- (22) A ν P internal Case checking Lk may appear only in languages with nominal adpositions.

3.2 The linker makes a DP accessible to Case checking

Kinande contains two other, language-specific environments in which the Case-theoretic contribution of the linker can be seen. These confirm that the linker bears a Case checking feature, but their careful consideration also shows that the linker makes a second contribution

¹¹ Larson (2002: 3) also notes that “postpositions are nominal in Baule”, where Baule is another language that has overt linkers.

¹² It may be possible to extend this statement to a biconditional: A ν P internal Case checking Lk appears in a language if and only if the language has nominal adpositions. Whether this extension is possible depends on whether there are null linkers in languages like Chichewa, an issue that we discuss in detail in section 6.

to Case checking. The landing site that Spec Lk provides makes movement out of the VP possible, and this movement makes it possible for heads external to LkP (e.g., the v head of vP) to check the Case of the moved DP.

As already mentioned, locative expressions in Kinande clearly bear some nominal features. Evidence for this is the fact that they can trigger subject agreement on the verb in, for example, locative inversion structures.

(23) Oko-mesa kw-a-hir-aw-a ehilanga.

Loc.17-table 17S-T-put-Pass-Fv peanuts.19

On the table were put peanuts.

But they are not full-fledged NPs/DPs. Unlike what Bresnan (1991) reports for Chichewa, locatives in Kinande cannot receive subject or object theta roles:

(24) a. *Omo-ki-buga mu-li endeke

Loc.18-7-playground 18S-be nice/good

It's nice in the playground.

b. *N-anz-ire oko-mu-longo.

1sS-like-Ext Loc.17-3-village

I like (it) at the village.

Also unlike Chichewa, modifiers can agree only with the inner, inherent gender marker associated with the noun, not with the outer, locative gender in Kinande (see Valinande 1984).

- (25) a. Omo-ki-buga ky-age/ *mw-age
Loc.18-7-playground 7-my 18-my
 in my playground
- b. Omo-ki-buga e-ki/ *o-mu
Loc.18-7-playground Dem-7 Dem-18
 in this playground

Third, there is no object marker for class 17 or 18 in Kinande (Valinande 1984), the way there is in Chichewa. So locative phrases are PPs in Kinande, not DPs/NPs, even if they bear some nominal features (such as gender). Suppose then that in view of this hybrid status they bear a Case feature only optionally. This predicts that one could have a sentence with two locative expressions and an intransitive verb but no linker, since neither phrase needs to undergo Case checking. And indeed the linker is optional in sentences like the following:

- (26) Omulume mo-a-sat-ire omo-soko (m') omo-nzoga.
Man.1 Aff-1S/T-dance-Ext Loc.18-market Lk.18 Loc.18-bells
 The man danced in the market with bells.

We assume that the Lk is present if the option of generating these expressions with a structural Case feature is taken. Kinande is a bit different from Ju|'hoansi and Hoan in this regard, since in these languages the linker is obligatory preceding a locative.

The second quirk of Kinande that is relevant to Case theory is that nominals can be generated with or without an initial “augment” vowel (sometimes called the “preprefix”). The

version with the augment vowel is the normal one, found in almost all the examples given so far; the version without it is a kind of polarity form that can only be interpreted as a narrowest-scope indefinite.(cf. Progovac 1993):

- (27) a. Kambale mo-a-teta-gul-a e-ri-tunda. (Kinande)
Kambale Aff-1S-Neg/Past-buy-Fv Aug-5-fruit (with augment)
Kambale did not buy the/a certain fruit.
- b. Kambale mo-a-teta-gul-a ri-tunda.
Kambale Aff-1S-Neg/Past-buy-Fv 5-fruit (without augment)
Kambale did not buy a/any fruit.

It is known crosslinguistically that bare NP arguments are interpreted as narrow-scope existentials, whereas DPs can have definite and wide-scope indefinite readings (Chierchia 1998). The augment vowel on *eritunda* ‘fruit’ in (27a) thus has the status of a D; examples with it are DPs, and examples without it are NPs. Now it is reasonable to say that Case is really a feature of D, not NP (compare German, where determiners are inflected for Case but nouns normally are not). This fits with the fact that in inversion constructions in Kinande, where something other than the thematic subject occupies Spec IP and enters into a Case relation with Infl, the thematic subject cannot get a Case feature checked by Infl, and so must be an augmentless form (compare also Ndayiragije 1999, where the Case problems that subject-object reversal raises are noted):¹³

¹³Anticipating the discussion of the MCC below, note that the lack of the augment vowel on the external argument explains why (28b) does not violate the Subject in-Situ Generalization

- (28) a. ?Olukwi si-lu-li-seny-a (*a)-ba-kali (Kinande)
Wood.11 Neg-1IS-Pres-chop-Fv Aug-2-women
 WOMEN do not chop wood. (see also (15a) above)
- b. Mo-ha-teta-sat-a (*o)-mu-kali omo-soko.
Aff-there-Neg/Past-dance-Fv Aug-1-woman Loc.18-market
 There danced no woman in the market.

With this in mind, consider what happens in double object constructions. When both arguments appear in the augmentless form, then the linker is impossible:

- (29) Si-n-andisyata-hek-er-a mu-kali (*yo) ka-tebe.
Neg-1sFut-carry-Appl-Fv 1-woman Lk.1 12-pail
 I will not carry any pail for any woman.

This example contrasts minimally with examples like (17a), in which both arguments are DPs and the linker is required. The linker is impossible in (29) because the NP preceding the linker has no augment. It is a fact about Kinande, already anticipated above, that agreement between a functional head H and a nominal expression is only possible if the nominal expression is a

of Alexiadou and Anagnostopoulou (2001: 193), since the subject in Spec vP does not have a Case feature. The Multiple Case Constraint (see (33) below) does not rule out (28b) either, because only one constituent (the locative) is in the VP (the external argument is in Spec vP, external to VP).

DP (i.e., if it has an augment vowel). But given our assumptions so far, the absence of the linker in (29) causes no Case theoretic problems, since the final NP has no augment and thus has no Case feature to check.

The two types of Caseless nominals (augmentless NPs and locatives) can both be present in a single sentence, with predictable results. If a VP contains one augmentless NP and one locative adjunct, then there must not be a linker (since the augmentless NP cannot agree with Lk), and the absence of the linker causes no Case problems (since the locative need not have a Case feature).

(30) a. Kambale mo-a-teta-gul-a ri-tunda (*ry') omo-soko.

Kambale Aff-1S-Neg/Past-buy-Fv 5-fruit Lk.5 loc.18-market

Kambale didn't buy any fruit in the market.

b. Kambale mo-a-teta-tw-a ki-seke (*ky') omo-mu-hamba.

Kambale Aff-1S-Neg/Past-cut-Fv 7-sugarcane Lk.7 loc.18-3-axe.

Kambale didn't cut any sugarcane with the axe.

So far, all this can be understood as straightforward evidence that Lk is able to check Case and is not generated unless it is needed for this purpose, in interaction with Kinande-specific details about which expressions bear Case features and which expressions can appear in Spec LkP. Now comes the complication. Suppose that the VP contains two elements with nominal features, one of which has a Case feature and one of which does not (necessarily). All things being equal, we would expect that a linker would not be needed. The transitive *v* could check the Case of the one expression that has it, and that would be that (cf. (17b)). But

this is not true. If a DP with an augment vowel appears along with an augmentless NP or a locative adjunct, the linker is required in Kinande:¹⁴

(31) a. Si-n-andisyata-hek-er-a o-mu-kali *(yo) ka-tebe.

Neg-1sS-Fut-carry-Appl-Fv Aug-1-woman Lk.1 12-pail

I will not carry any pail for the woman.

b. Kambale mo-a-teta-gul-a e-ri-tunda *(ry') omo-soko.

Kambale Aff-1S-Neg/Past-buy-Fv Aug-5-fruit Lk.5 Loc.18-market

Kambale didn't buy the fruit in the market.

c. Kambale mo-a-teta-tw-a e-ki-seke *(ky') omo-mu-hamba.

Kambale Aff-1S-Neg/Past-cut-Fv Aug-7-sugarcane Lk.7 Loc.18-3-axe.

Kambale didn't cut the sugarcane with the axe.

Why should this be? What contribution does Lk make in these examples? There are enough Case features to go around without Lk, given that the augmentless NP has no Case feature, and the locative only has one optionally. These are the facts that motivate us to say that Lk has another contribution to make as well.

Indeed there is more to Case theory than the simple matching of features; the elements bearing those features must be in proper configurations as well. Collins 2003a faced a similar problem when he considered why the Jul'hoansi sentence in (32) with a transitive suffix on the verb but no linker in the vP is bad.

¹⁴ The order [... V NP DP...] is also ruled out (where the NP does not have an augment).

- (32) *Uto dchuun-a |Kaece n!ama n!ang (Ju|'hoansi)
car hit-Trans |Kaece road in
 A car hit |Kaece in the road.

In this example, both the DP |Kaece and the locative *n!ama n!ang* are internal to the VP (as shown by the absence of the LkP), and both the transitive *v* and the transitivity suffix *-a* can in general check Case features. Suppose that *v* checks the Case feature of the DP |Kaece, and the transitivity suffix *-a* checks the Case feature of the locative. Both Case features are valued (ready to be deleted at Spell-Out), but nevertheless the sentence is ungrammatical.

In order to explain the badness of (32), Collins posited the Multiple Case Constraint (MCC) in (33), modeled in part on Alexiadou and Anagnostopoulou's (2001:193, 197) Subject-in-Situ Generalization (SSG)¹⁵ (see also Chomsky 2001a: 20 for related principles).

¹⁵Although similar in conception, the MCC differs from Alexiadou and Anagnostopoulou's SSG in the following important ways. First, the MCC does not force movement of the external argument in Spec vP (unlike the SSG). Second, the MCC forces movement to the Spec Lk (dominated by vP), whereas the SSG forces movement of either the subject or object to a position external to vP. For now we offer the MCC as a descriptive generalization, hoping to unify it with the SSG in the future.

Note that by saying that the MCC applies to the "VP complement of *v*" we insure that it applies to the larger VP in applicative structures like (10) and causative structures like

(33) *The Multiple Case Constraint* (preliminary, revised below)

By Spell-Out the VP complement of *v* can contain no more than one argument with an undeleted Case feature.

The MCC has the effect of forcing the presence of an LkP as the complement of *v* in sentences like (32). The reason is that otherwise the VP complement of *v* contains two expressions that have undeleted Case features at Spell-Out, in violation of (33). But if Lk is included, and one DP moves to Spec LkP, then only one item with an unchecked Case feature is left in VP, and the MCC is satisfied.

An important virtue of this approach is that it explains the fact that if either the theme or the locative is extracted from a sentence like (32), the sentence becomes acceptable. This is shown in (34).

(34) a. |Kaece komm Uto dchuun-a (*ko) n!ama n!ang (Ju|'hoansi)

|Kaece *Emph car hit-Trans Lk road in*

|Kaece, the car hit in the road.

b. N!ama n!ang komm Uto dchuun-a (*ko) |Kaece

road in Emph car hit-Trans Lk |Kaece

In the road, the car hit |Kaece.

(21b)—the VP that contains the applied object or the causee. This captures the fact that these complex VPs behave just like simpler VPs for purposes of Case and word order in Kinande.

The MCC as stated in (33) does not yet account for the Kinande facts in (31), however, because the VPs in (31) do not (necessarily) contain two constituents with Case features. But we can generalize the MCC to be applicable to both Ju|'hoansi and Kinande as follows:

(35) *The Multiple Case Constraint* (revised)

By Spell-Out, if the VP complement of *v* contains a DP with a Case feature, then VP cannot contain any other nominal expression (includes augmentless NPs, semi-nominal locatives, and DPs with Case features).

The basic intuition behind this version of the constraint is that if *v* checks the Case of a DP (with an unvalued Case feature) inside its VP complement, then it requires that no other potential Case bearing elements (such as NPs or locatives) are around internal to that VP to compete with it. Consider the contrast between (36) and (37) in Kinande again:

(36) Kambale mo-a-teta-gul-a ri-tunda (*ry') omo-soko.
Kambale Aff-1S-Neg/Past-buy-Fv 5-fruit Lk.5 Loc.18-market
 Kambale didn't buy any fruit in the market.

(37) Kambale mo-a-teta-gul-a e-ri-tunda *(ry') omo-soko.
Kambale Aff-1S-Neg/Past-buy-Fv Aug-5-fruit Lk.5 Loc.18-market
 Kambale didn't buy the fruit in the market.

The desired results now follow straightforwardly. Locative adjuncts and augmentless NPs in Kinande do not have (need) a Case feature. If there is nothing else in the largest VP

that needs a Case feature, all is well; no movement is required, and neither is a linker. This explains (36). But locative expressions and augmentless NPs are still nominal. Thus, they contribute to creating the configuration that the MCC in (35) describes. If there is a second phrase inside the largest VP that is not only nominal but has an actual Case feature (*eritunda* ‘fruit’ in (37)), then that feature can only be checked if the DP escapes the VP. This explains the unacceptability of (37) without the linker.

Note that the sentence in (31a) suggests that Lk does not obligatorily check a Case feature: the NP following the Lk has no augment, and so has no Case feature to check. In this sense, Lk is like the category P (preposition) which sometimes checks Case ([_{PP} in the car]), and sometimes does not (particles), or the category v which checks Case when the verb is transitive, but not when it is unergative.

It is also important to note that the MCC does not force a Lk in (17b) (a transitive verb with no locative), since the direct object is the only XP which occupies the VP.¹⁶

We conclude that there are two reasons for a language to have the category Linker, both rooted in Case theory. One is that the linker is itself a Case checker; the other is that it makes possible vP-internal movements that can avoid MCC violations.

¹⁶There are nontrivial questions about how the MCC should be generalized to structures that have three or more nominal expressions in VP, and whether the VP complement of Lk (as opposed to the VP complement of v) is also subject to the MCC. See (45) and (61) below for discussion of these issues.

4. Parametric Variation (1): Inversion

We turn now to the first of two major points of variation that we find in linker constructions.

This has to do with the possibility of inversion. In section 2 we showed that any VP-internal nominal can move to Spec LkP in Kinande and Ju|'hoansi, giving rise to inverted word orders.

But this is not the case in Hoan, as mentioned already in Collins 2003a. In a double object construction, the goal can be in Spec LkP, but the theme cannot:

(38) a. Ma 'a cu Jefo ki setinkane. (Hoan)

Isg Prog give Jeff Lk hand-harp

I am giving Jeff the hand-harp.

b. *Ma 'a cu setinkane ki Jefo.

Isg Prog give hand-harp Lk Jeff

Similarly, in locative and instrumental constructions in Hoan, the theme can come before the linker, but the locative or instrumental nominal cannot:

(39) a. Koloji g||on-a 'amkoe ki gyeo na. (Hoan)

car hit-Perf person Lk road in

A car hit a person in the road.

b. *Koloji g||on-a gyeo na ki 'amkoe.

car hit-Perf road in Lk person

A car hit the person in the road.

(40) a. Gya'msi a-'n a'm Jefo ki setinkane. (Hoan)

child Prog-hit Jeff Lk hand harp

The child is hitting Jeff with a hand harp.

- b. *Gya”msi a-’n a”m setinkane ki Jefe.

child Prog-hit hand harp Lk Jeff

We thus arrive at the following generalizations:

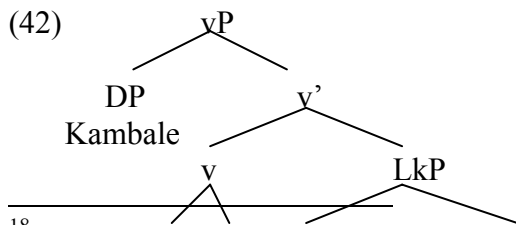
- (41) a. Hoan does not allow inversion.¹⁷
b. Ju|’hoansi and Kinande do allow inversion.

These facts could be interpreted as showing that sentences with the linker morpheme in Hoan have a fundamentally different structure than those in Ju|’hoansi and Kinande. It could be suggested that the linker morpheme in Hoan is actually a preposition, as in the diagram in (11), a structure that we rejected for Ju|’hoansi and Kinande. There are conceptual reasons not to adopt this preposition analysis, however. What is common to all three languages is that the linker does not impose any particular theta-role or selectional restrictions on the following nominal. If the linker were a preposition, then we would expect it to enforce such thematic constraints.

¹⁷N|uu, another Khoisan language, lacks inversion in linker constructions (see Collins 2005).

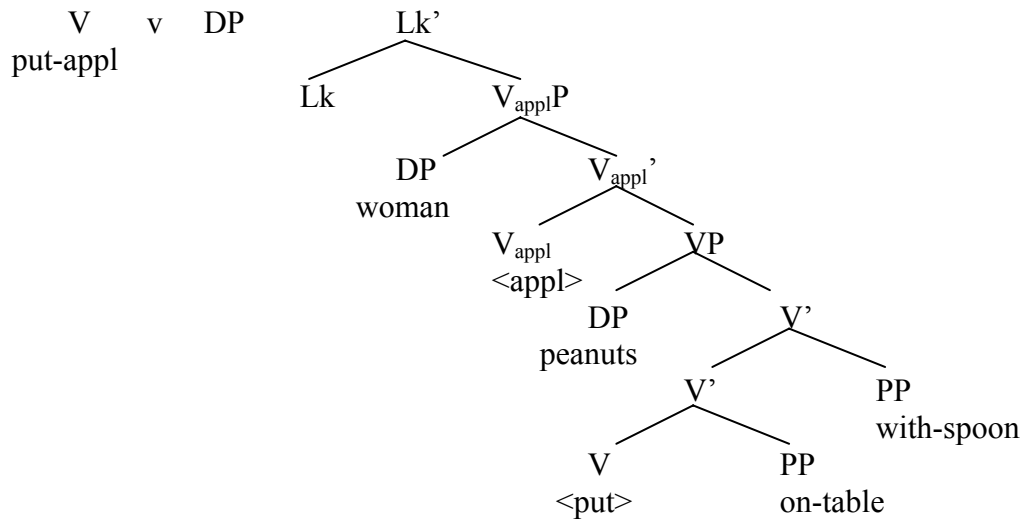
Baule seems to be like Hoan in not having inversion (Martha Larson, personal communication). If the particle *ni* that comes between the two objects of a DOC in Yoruba is an instance of Lk, then this language also bars inversion.

Assuming, then, that Lk takes a VP complement in Hoan, just as in Kinande and Ju|’hoansi, how can we explain the impossibility of inversion in this language? The difference can be stated in terms of locality conditions on movement. Putting together all the various substructures that we have argued for, a maximally articulated VP—one containing a theme, goal, instrument, *and* applied (benefactive) object structure—would look something like (42).¹⁸



¹⁸We have not shown any one sentence that is this complex, but all our particular sentences are proper subsets of this maximal structure. See below for examples with three of the four nominal elements. We have not investigated whether Kinande or Ju|’hoansi has quadruple complement constructions and (if so) whether they are consistent with (42) and (43).

Recall that the exact position of instrumental (and locative) adjuncts is left open, the exact details not being particularly important for our main point.



This structure expresses the familiar c-command relationships known from other studies: Benefactive/Goal > Theme > Locative/Instrument. (Compare this to the use of the thematic hierarchy in other, less structurally oriented theories, such as Bresnan and Moshi 1990.) The parameter of variation that distinguishes Hoan from Kinande and Ju|'hoansi can now be stated as follows:¹⁹

- (43) MLC-Parameter: A-movement to a specifier position is either:
- (a) subject to the Minimal Link Condition (Hoan, N|uu) , *or*

¹⁹ Collins (2003a) gives a different (more conservative) approach to this parameter in terms of how the EPP property of the Lk is satisfied under Multiple Match. Collins' (2003) approach does not seem consistent with the Kinande data in (45), however, or the Ju|'hoansi data involving three complements in (59).

- (b) exempt from the Minimal Link Condition (Kinande, Ju|'hoansi)
- (44) The Minimal Link Condition
- K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K (Chomsky 1995: 297).

In short, any nominal constituent of VP can move to Spec LkP in some languages, whereas only the highest DP can move in others. We see this as similar to the fact that any *wh*-expression can move to Spec CP in some languages (e.g., German), whereas only the highest *wh*-expression can move in others (e.g., English) (Joachim Sabel, personal communication).

The MLC-parameter in (43) is quite daring, in that it posits variation in a rather deep principle of grammar that one would expect to be universal. More specifically, it is not the Hoan value of the parameter, which says that movement is restricted, that is surprising, but rather the Kinande/Ju|'hoansi value.

One possible alternative account of the difference between Hoan and N|uu on the one hand, and Kinande and Ju|'hoansi on the other is that movement to Spec LkP in Kinande and Ju|'hoansi involves A'-movement, whereas movement to Spec LkP in Hoan and N|uu involves A-movement. A problem with this account is that movement to Spec LkP in Ju|'hoansi and Kinande does not give rise to any focus effects at all as far as we can tell. In particular, we can find no evidence that the DP in Spec LkP is focused, hence there is no independent evidence that this is a (focus-like) A'-position. Furthermore, as shown in Collins 2003b, movement to Spec LkP does not give rise to Weak Crossover violations in Ju|'hoansi, suggesting that it counts as an instance of A-movement.

Another possible alternative account is in terms of the parametrization of equidistance. There are various notions of equidistance that will permit a DP to skip over one other DP on its way to a potential landing site (see Chomsky 1993 for the origins of this line of research). But these notions of equidistance typically do not allow a DP to skip over two or more intervening DPs. Now triple-complement constructions are possible in Kinande, and any of the nominals can in general move to Spec LkP.

- (45) a. N-a-seny-er-a omwami y' olukwi omombasa.
 IsS-T-chop-Appl-Fv chief.1 Lk.1 wood.11 Loc.18-axe
 I chopped the wood for the chief with an axe.
- b. N-a-seny-er-a olukwi l' omwami omombasa.
 IsS-T-chop-Appl-Fv wood.11 Lk.11 chief.1 Loc.18-axe
 I chopped the wood for the chief with an axe.
- c. (?)N-a-seny-er-a omombasa m' omwami olukwi.
 IsS-T-chop-Appl-Fv Loc.18-axe Lk.18 chief.1 wood.11
 I chopped the wood for the chief with an axe.

Whatever assumptions one makes about the thematic hierarchy and verb phrase structure, one of these NP/DPs (probably the instrument) must be the lowest of the three. Nevertheless it can move to Spec LkP over the other two. Thus, it seems we do not want to say that the MLC holds universally, but with an equidistance rider in some languages. Rather, it seems that the MLC can be “off” in this domain. (And in any case it is just as odd conceptually to parameterize equidistance as to parameterize the MLC itself.)

The examples in (45) also bring up some interesting issues for the MCC as defined in (35). First, we assume that the (locative-marked) instrument in these examples does not have a Case feature. Therefore, there are no unvalued Case features at the LF-interface. Furthermore, we assume that in (45b,c) the Lk checks the Case of the following DP (located in Spec $V_{\text{appl}}P$). Note the acceptability of the sentences in (45) shows that Case checking of the DP in the $V_{\text{appl}}P$ complement of Lk is *not* subject to the MCC. This fact follows from the formulation in (35), which only applies to VPs that are complements of *v*. We believe that this aspect of MCC can be related to the fact that multiple linkers are simply not allowed in Kinande. We return to this point later after (61) below.

Another way to save the universality of the MLC would be to deny that there is a rigid ordering of phrases inside the VP in Kinande. If the Kinande VP were intrinsically nonconfigurational in some sense, then any DP inside it could be the highest one in a particular structure. That DP could then move to Spec LkP while still obeying the MLC. But there is evidence against this approach too. In fact, the Kinande VP seems to be quite rigidly structured, with the possibility of moving one nominal to Spec LkP as the only source of word order freedom. One type of evidence for this comes from further consideration of three-complement constructions like (45). Any DP can come first, before the linker, but the order of the remaining two DPs is strictly fixed in precisely the way one would expect given the structure (42). If the instrument is in Spec LkP, then the benefactive must come before the theme. If the benefactive is in Spec LkP, then the theme must come before the instrument. If the theme is in Spec LkP, the benefactive must come before the instrument. The following alternative orders are all bad:

- (46) a. *N-a-seny-er-a omwami y' omombasa olukwi.
IsS-T-chop-Appl-Fv chief.1 Lk.1 Loc.18-axe wood.11
 I chopped the wood for the chief with an axe.
- b. *N-a-seny-er-a olukwi l' omombasa omwami.
IsS-T-chop-Appl-Fv wood.11 Lk.11 loc.18-axe chief.1
 I chopped the wood for the chief with an axe.
- c. *N-a-seny-er-a omombasa m' olukwi omwami.
IsS-T-chop-Appl-Fv Loc.18-axe Lk.18 wood.11 chief.1
 I chopped the wood for the chief with an axe.

These are exactly the same ordering relationships of benefactive before theme and theme before location or instrument as those seen across the board in Hoan, where there is no inversion. Thus, the VP must be structured in the same way in Kinande as it is in Hoan, even though this structure does not restrict movement to the specifier of a functional category in the same way, given the parameter setting in (43).²⁰

There is another way to see that the variable word orders in Kinande are purely the result of free movement to Spec LkP. Recall that when the VP contains only augmentless NPs or locatives/instrumentals without a Case feature, no Lk is required for Case checking or

²⁰Strikingly, the facts in Ju|'hoansi are a bit different. Unlike Kinande, Ju|'hoansi permits two or more linkers in a single vP. This goes along with the fact that all six word orders are possible in three-complement constructions in Ju|'hoansi (see (59)). In general terms, this supports the idea that free word order in vP is strictly the result of moving to Spec, LkP in these languages. We return to this fact in section 5.

to satisfy the MCC. When there is no Lk, there is no verb-phrase internal landing site for movement in such examples. In these circumstances too word order is rigidly fixed, with benefactive before theme, theme before location, and location before instrument:

- (47) a. *Si-n-andisyata-hek-er-a hitebe bakali. (Kinande)
Neg-1sS-fut-carry-Appl-Fv pails.19 women.2
 I will not carry any pails for any women. (Compare (29))
- b. *Kambale mo-a-teta-gul-a omo-soko ritunda.
Kambale Aff-1S/T-Past/Neg-buy-Fv Loc.18-market fruit.7
 Kambale did not buy any fruit in the market. (compare (30a))
- c. ?*Omukume mo-a-sat-ire omo-nzoga omo-soko.
man Aff-1S/T-dance-Ext Loc.18-bells Loc.18-market
 The man danced in the market with bells. (compare (26))

We conclude that the parameter of variation does not concern the basic structure of the VP, but rather the principles that constrain movement to the specifier of LkP, as stated in (43).

One further question about the parameter in (43) is whether it relates only to A-movement to the specifier of LkP or whether it characterizes A-movement to the specifier of other functional projections as well. We have a little bit of evidence in favor of the second possibility. This comes from the passive in Kinande. First of all, a range of DPs can move to the specifier of IP in a passive construction, as shown in (48).²¹

²¹We do not fully understand why no linker is needed between the two remaining objects in these examples.

- (48) a. Omwami a-seny-er-aw-a olukwi (l') omombasa.
chief.1 1S/T-chop-Appl-Pass-Fv wood.11 Lk.11 Loc.18-axe
 The chief was chopped wood with an axe.
- b. Olukwi lw-a-seny-er-aw-a omwami (??y') omombasa.
wood.11 11S-T-chop-Appl-Pass-Fv chief Lk.1 Loc.18-axe
 The wood was chopped for the chief with an axe.

The lower DP *olukwi* ‘wood’ in (48b) moves straight from VP into the specifier of IP without transiting through specifier of LkP given that the overt DP *omwami* ‘chief’ (distinct from the trace of the subject) appears before the linker in this sentence. Similar derivations can be seen in (48a), and also in (49).

- (49) a. Omwami a-seny-er-aw-a omo-mbasa m' olukwi.
chief.1 1S/T-chop-Appl-Pass-Fv Loc.18-axe Lk.18 wood.11
 The chief was chopped wood with an axe.
- b. Olukwi lw-a-seny-er-aw-a omo-mbasa m' omwami.
wood.11 11S-T-chop-Appl-Pass-Fv Loc.18-axe Lk.18 chief.1
 The wood was chopped for the chief with an axe.

The DP in Spec LkP is clearly closer to Infl than any DP inside VP would be (see the structure in (10)). Nevertheless, Infl can attract a DP from within VP. Thus, movement to the specifier of IP does not respect the MLC either. Furthermore, any DP can move to Spec FocP

(see (13)) in a cleft construction, regardless of DPs in Spec IP or Spec LkP (although this is not so surprising for a *wh*-type movement). So it seems that the MLC does not restrict movement to any functional specifier with ϕ -features in Kinande. Unfortunately, we do not have such good data on this point for Jul'hoansi, in part because this language does not have a passive to compare with. (Hoan has a passive, but we do not have the relevant data to verify whether or not passives such as (49) are acceptable.) We tentatively conclude, then, that (43) is a parameter related to all instances of ϕ -feature checking, and is not restricted to linker constructions. There is nothing to suggest that extraction of adjuncts out of islands is allowed in Kinande, however, so we do not extend the lack of MLC effects to A'-movement.

The data above indicate that the MLC should be parametrized. This result is surprising because the MLC has been considered to be a principle of UG (not a parameter) (see Rizzi 1990, and Chomsky 1995). Furthermore, the MLC is naturally stated as a condition minimizing the search needed to value an uninterpretable probe (see Chomsky 2000). Is it possible for such a principle of computational efficiency to be parametrized? It is impossible to answer these questions on conceptual grounds alone at this stage in the development of syntactic theory. Our data suggests that such a parametrization is possible. Furthermore, no obvious alternative can account for the data (e.g., the A/A'-distinction, or parametrized equidistance). We believe that we have presented enough data in this article so that such a parametrization of the MLC must be considered seriously.

One theoretical consideration that bears on the issue is that parameters generally concern the nature of uninterpretable features (e.g., nominative-accusative versus ergative-absolutive Case systems). From this point of view, the MLC-parameter is a possible

parameter.²² We hope that future research on the MLC in Bantu and other languages will illuminate this result.²³

5. Linker variation (2): Agreement

The second important parameter of variation in linker constructions concerns agreement. In Hoan and Ju|'hoansi, the linker is an invariant particle (*ki* and *ko*, respectively); the person, number and gender features of the DP in Spec LkP have no effect on its pronunciation. In contrast, the linker in Kinande agrees with the DP in the specifier of LkP. Indeed, we used this as evidence for our basic LkP structure back in section 2.²⁴ The linker can take 19 different forms, depending on the number and gender of the DP immediately before it, given Kinande's rich Bantu-style system of noun classes. The morphological forms the linker takes

²²The work of Hiraiwa (2005) suggests that Agree might be parametrized as well. In addition to Agree, there is Multiple Agree.

²³The effects of the parametrized MLC might be expected to show up in pronominalization and extraction from DPs, as a reviewer notes. Extraction from DPs in Kinande is always impossible, however, regardless of whether it is the highest element in the DP that is extracted or not, so this prediction is not testable in Kinande. Furthermore, having two "genitive" nominals within a single DP is marginal at best in Kinande; hence it is difficult to form expressions analogous to *his picture of Mary* or *Mary's picture of him* in order to test the pronominalization prediction. We thus leave investigation of the MLC parameter's implication for extraction from NPs to further research.

²⁴There is also agreement of a simpler kind on linkers in Baule; the linker in this language shows only a singular-plural distinction (Larson 2002).

are in fact shared with those of other functional heads; the agreement morphemes are homophonous with those that appear on the focus head and on the genitive (associative) particle. They are also the same as the subject agreement markers that appear on Infl for many of the noun classes.

From a theoretical point of view, this parameter of variation (invariant versus agreeing linker) is relatively trivial. It is well known that some functional heads in some languages agree with their specifiers while corresponding heads in other languages do not. For example, Infl agrees with its specifier in Spanish and Greek, but not in Chinese or Japanese. The Kinande versus Khoisan (Hoan, Ju|'hoansi and N|uu) difference can be seen as the same kind of variation in a different functional head.

While relatively trivial, the parameter is worth discussing because it accounts for a cluster of other differences between the languages. For example, because there is an agreement-bearing functional head inside the vP in Kinande, Kinande allows a kind of *pro*-drop inside the verb phrase that the Khoisan languages do not have. The linker does not normally appear in simple transitive clauses in Kinande (see also (17b)):

(50) Nyi-namu-rond-a esyombwa (*syo). (Kinande)

1sS-Prog-seek-Fv dogs.10 Lk.10

I am looking for (the) dogs.

feature that can check it. We therefore expect that a linker should appear in these circumstances. The prediction is straightforwardly correct for Hoan, which has a non-agreeing linker (similar facts hold for N|uu, see Collins (2005)):

- (52) Tsi a-kyxai ki !oa na. (Hoan)
3pl Prog-dance Lk house in
 They are dancing in the house.

It is arguably true in Ju|’hoansi too, with the complication that the extra Case-checking element shows up as the transitivity suffix *-a* suffixed to the verb rather than as the independent lexical item *ko* in this particular context²⁵:

- (53) Lena koh djxani-(*a) tju n!ang. (Ju|’hoansi)
Lena Past dance-Trans house in
 Lena danced in the house.

But Kinande does not show a linker in comparable sentences:

- (54) Omulume mo-a-sat-ire (*y’) omosoko. (Kinande)
man.1 Aff-1S/T-dance-Ext Lk1 Loc.18-market

²⁵ See Collins 2003a for a detailed economy-based analysis of the distribution of the transitivity suffix *-a* and the linker *ko* in Ju|’hoansi, a difference we abstract away from for the purposes of this paper.

The man danced in the market.

This difference, we claim, is more apparent than real, and follows from the agreement properties of the linkers in question. Notice that in the Hoan example in (52) there is nothing in the specifier of LkP, while Lk checks the Case feature of the following locative. This shows that Lk does not necessarily have an EPP feature that triggers movement to its Spec. We postulate that an EPP feature is associated with Lk if and only if movement out of VP is needed in order to satisfy Case theory, to satisfy the MCC, or to license *pro*. Since there is only one nominal expression in VP in these examples, there is no risk of a MCC violation; movement to Spec LkP is not required, and hence forbidden. These considerations apply equally to Kinande, except that in this language there is obligatory agreement between the specifier of LkP and the linker head. When there is no specifier of LkP, there can be no agreement. But the Kinande linker has no overt lexical content apart from the agreement. Thus, a non-agreeing linker cannot be realized as an overt element. We assume that a linker is present in the syntax in (54) (perhaps optionally) to check Case, but its phonological form is predictably \emptyset .

Very similar considerations apply in constructions that have more than one nominal element, one of which has been extracted by some kind of movement. In Hoan, an overt linker appears in these circumstances too:

- (55) 'amkoe koloï g|lon-a ki gyeo na. (Hoan)
Person truck hit-Perf Lk road in

The person, the truck hit in the road.

Ju|’hoansi is similar, except that the usual linker *ko* is replaced by the transitivity suffix *-a* in this context too; see Collins 2003a for examples and analysis. In contrast, no overt linker is observed in Kinande when there has been extraction of one VP-internal nominal:

(56) Ehilanga hyo n-a-hir-a (*hy’) oko-mesa. (Kinande)

Peanuts.19 Foc.19 IsS-T-put-fv Lk.19 Loc.17-table

It’s peanuts that I put on the table.

This paradigm is very similar to the intransitive one. We assume that in cases of A’-movement such as these, the *v* has an EPP feature that is satisfied by the moved element (see Chomsky 2000, 2001a,b). Therefore, there is no need for the DP to move through the specifier of Lk, since such movement is not needed to satisfy the MCC. As a result, the linker is clearly present in Hoan examples like (55) but it has nothing in its Spec. The linker is also present in Kinande to check Case on the locative, we claim, but since there is nothing in its Spec to agree with, it is realized as \emptyset (phonetically null).

It should be pointed out that under the analysis presented above, the transitivity suffix in Ju|’hoansi (see (34) and (53)) and the null linker in Kinande (see (54) and (56)) have identical distributions, both appearing with intransitives and when there has been extraction.

The fourth and final difference between the agreeing language Kinande and the nonagreeing languages Hoan and Ju|’hoansi shows up in sentences with three (or more) nominal elements generated inside the verb phrase. In the nonagreeing languages, such

examples always contain two instances of the linker, one between the first nominal and the second, and another between the second nominal and the third:

(57) a. Mi |'an Maria ko ambere ko tzi. (Ju|'hoansi)

I give Maria Lk bucket Lk outside

I gave Maria the bucket outside.

b. Mi ||ohm-|xoa |'ai ko da'a ko tju|ho.

I chop-with axe Lk wood Lk village

I chopped wood with an axe in the village.

In these sentences, there are three expressions that have a Case feature. Since *v* can value the Case feature of only one DP, two additional linkers are expected. More surprising is the fact that in Kinande, only a single linker can appear; it comes between the first nominal and the second, as illustrated in (58).²⁶

(58) a. N-a-hir-ir-a omukali y' ehilanga (*hy'/*y') oko-mesa.

IsS-T-put-Appl-Fv woman.1 Lk.1 peanuts.19 Lk.19/Lk.1 Loc.17-table

I put the peanuts on the table for the woman.

²⁶Sometimes a second linker is possible in Kinande when the last element is a temporal or manner adverb. But this linker behaves very differently from the one studied in the body of this paper: it cannot license *pro*, it cannot provide a landing site for inversion, and it can only agree with the theme, regardless of which DP immediately precedes it. We put such linkers aside in this work.

- b. Kambale a-seny-er-a olukwi l' omo-mbasa (*m'/?l')omw-irima.
Kambale 1S/T-chop-Appl-Fv wood.11 Lk.11 Loc.18-axe Lk.18/11 Loc.18-field
 Kambale chopped the wood with an axe in the field.
- c. N-a-seny-esay-a Kambale y' olukwi (*l') omo-mbasa.
1sS-T-chop-Caus-Fv Kambale.1 Lk.1 wood.11 Lk.11 Loc.18-axe
 I made Kambale chop the wood with an axe.

Why is a second linker ruled out in Kinande? In order to answer this, we need an analysis of double linker constructions in the languages with non-agreeing linkers. The first thing to note is that Ju|'hoansi allows all possible word orders of the three vP-internal nominals:

- (59) a. Mi |'an Maria ko ambere ko tzi.
I give Maria Lk bucket Lk outside
 I gave Maria the bucket outside.
- b. Mi |'an tzi ko Maria ko ambere.
I give outside Lk Maria Lk bucket
- c. Mi |'an Maria ko tzi ko ambere.
I give Maria Lk outside Lk bucket
- d. Mi |'an ambere ko Maria ko tzi.
I give bucket Lk Maria Lk outside
- e. Mi |'an tzi ko ambere ko Maria.

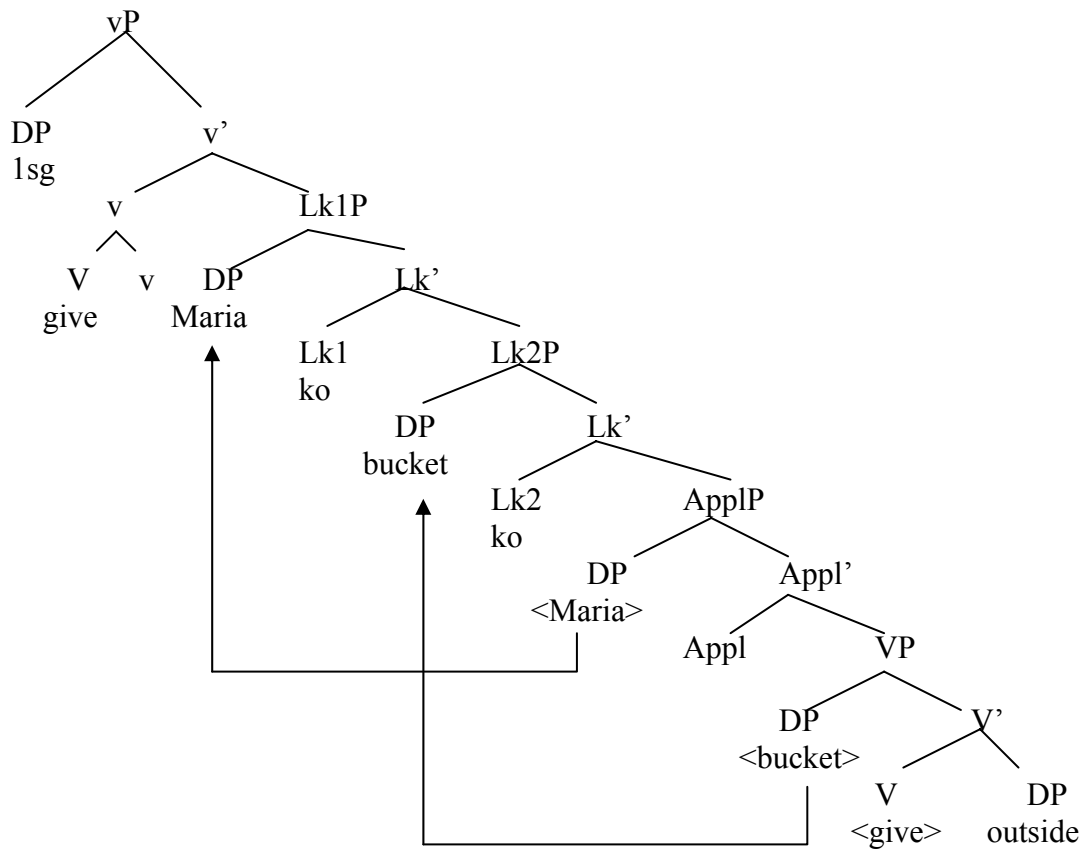
I give outside Lk bucket Lk Maria

f. *Mi |'an ambere ko tzi ko Maria.*

I give bucket Lk outside Lk Maria

The fact that all six word orders are possible, suggests that the two LkPs dominate VP (and are in turn dominated by vP). Since the MLC is not in effect in Ju|'hoansi (see (43)), any DP will be to move to the specifier of LkP1 or LkP2. This gives the following structure for (59a):

(60)



Now why is this type of derivation with two LkPs ruled out in Kinande? Basically, an LkP is projected only if the MCC demands it (see section 3.2), or a Case feature needs to

checked (section 3.1), or *pro* needs to be licensed (see (51)). In Kinande, as opposed to Jul’hoansi, the Case pressures are less severe owing to the fact that augmentless NPs do not have a Case feature, and the fact that locative PPs only optionally have a Case feature.²⁷ So consider again (58a), repeated below:

- (61) N-a-hir-ir-a omukali y’ ehilanga (*hy’/*y’) oko-mesa.
IsS-T-put-Appl-Fv woman.1 Lk.1 peanuts.19 Lk.19/Lk.1 Loc.17-table
 I put the peanuts on the table for the woman.

As mentioned in section 3.2 above, the PP only optionally has a Case feature. If the locative does not have a Case feature, no second Lk is expected to appear. But what prevents the Lk from appearing in (61) when the locative does have a Case feature? The following (descriptive) condition seems to be at work: an agreeing linker cannot have an (agreeing) LkP complement. We speculate that it is not possible for an agreeing Lk to select an agreeing LkP as its complement, because the phi-features on the head of the lower LkP prevent the higher Lk from entering into Agree relationships with the DPs inside the lower LkP. (Note that this effect cannot be the result of the MLC, which is turned off in Kinande.)

²⁷A reviewer asks whether it is possible to put an applicative morpheme on a double object verb and thereby add another (non-locative) DP in Kinande. The answer is that this is marginally possible, but the construction is extremely fragile (resisting passivization and the replacement of an DP with an object marker). More research on this is needed.

As noted above (see (45)), examples such as (61) show that the VP complement of a Lk is not subject to the MCC. This aspect of the MCC in Kinande can be partially understood as a result of the fact that multiple agreeing linkers are not allowed.

In these last two sections, we have identified two parameters of variation that affect linker constructions, one concerning the MLC, and one concerning agreement. The two are logically independent of each other, giving the following four types of languages, three of which are attested in our tiny sample:

(62) Parametric Variation in Linker Constructions

	MLC holds (only highest DP moves)	MLC does not hold (any nominal can move)
FPs agree overtly with Spec (pro is licensed, but no 2 Lk structure, Lk=∅ if intrans)	Baule	Kinande
FPs do not agree overtly with Spec (pro unlicensed, 2 Lks are OK, overt Lk with intrans)	Hoan, N uu	Ju 'hoansi

We believe that the fourth logically possible type of linker construction is also attested, based on Larson's (1998a,b, 2002, personal communication) research on Baule. This language has fairly rigid word order even when a linker is present, indicating that the MLC is active. In this respect, it is like Hoan (and N|uu). However, the linker shows agreement with the DP in its

Spec. In this respect, it is like Kinande. The other properties associated with agreement also hold in Baule: pro-drop of the first nominal is possible, there is no overt linker in intransitive constructions with a locative expression, and only one linker is permitted per clause. Since the Baule examples raise no new theoretical issues, however, we do not reproduce them here, for reasons of space.

Note also that neither of these two parameters seems to be unique to linker constructions. Movement to Spec IP in passives in Kinande shows the same insensitivity to thematic roles and the details of VP-structure that movement to Spec LkP does, showing that the MLC is “off” in both domains. Similarly, the fact that Lk agrees with its specifier in Kinande is not an isolated fact; it is of a piece with the fact that focus particles agree with the focused DPs and tensed verbs agree with their subjects in Kinande. Thus while our comparison of Kinande with the Khoisan languages reveals that there is significant variation in the behavior of linker constructions across languages, there seems to be no need for parameters that are specific to the linker construction per se.

6. Possible Extensions: The Linker in Other Bantu Languages

It takes strong evidence to justify the claim that there is a new category such as linker in the inventory of Universal Grammar. We believe we have given such evidence in the first five sections of this article. In this last section, we want to consider, at a more speculative level, how admitting linkers into the theory might permit insightful new analyses of old problems. More specifically, we have seen how linkers solve the Case-theoretic problems created by double object constructions and nominal locative and instrumental expressions in at least three languages (section 3). We have also seen that they create a degree of free word order in

languages like Kinande and Ju|'hoansi (section 4). Finally, we have seen that linkers can be phonologically null under certain conditions, particularly in languages with agreement (section 5). Suppose that we put these three pieces together, proposing that linkers actually exist in Bantu languages other than Kinande, but they are always phonetically empty. This can potentially shed new light on the syntax of multiple object constructions, which are found throughout this family and have posed many interesting challenges for linguistic theory.

What would it amount to to say that Chichewa (a Bantu language) has the same syntax as Kinande and Ju|'hoansi, except that the Lk is phonologically null? How can we detect the presence of such an abstract head? In languages where it is overt, the linker has the following cluster of properties:

- (63)
- a. The existence of Lk depends on PPs being intrinsically nominal, hence possessing Case feature that need to be checked.
 - b. Lk checks Case on a nominal inside its VP complement, which is therefore not dependent on transitive v for Case feature checking.
 - c. The specifier of Lk is a non-theta, A-position, a target for A-movement.

If this cluster of properties can be observed in a language with no visible Lk head, then it is reasonable to assume that a null Lk is present.

In fact, all three properties hold in Chichewa. First, locative expressions in Chichewa are (or can be) nominals, as shown in detail by Bresnan and Kanerva 1989, Bresnan 1991, Bresnan and Mchombo 1995, and Carstens 1997. Indeed, Chichewa and Kinande have cognate locative gender prefixes. Thus, Chichewa is qualified to have a Lk head by (63a).

Second, Chichewa has a wealth of multiple DP constructions, some of which are underived, others of which are formed by its productive applicative and causative constructions (see Baker 1988a,b). Moreover, the second of two DPs in a DOC in Chichewa clearly does not get its Case feature checked by transitive *v*. The second DP cannot be expressed as an object clitic on the verb, for example, and it is not affected by putting the verb in passive voice (see (64b)). Nor does it need to be adjacent to the verb, as shown in (64a) (the data in (64) to (67) come from Alsina and Mchombo 1993).

(64) a. Chitsiru chi-na-gul-ir-a atsikana mphatso. (Chichewa)

7-fool 7S-Past-buy-Appl-Fv 2-girls 9-gift

The fool bought a gift for the girls.

b. Atsikana a-na-gul-ir-idw-a mphatso.

2-girls 2S-Past-buy-Appl-Pass-Fv 9-gift

The girls were bought a gift.

Of course, these properties do not clearly distinguish DOCs in Chichewa from comparable constructions in languages like English. However, it has always been somewhat problematic to say just how the Case of this second object is licensed. A traditional answer is to say that it receives “inherent Case”—which is little more than to say that it does not fit into the normal Case theory. Given that Chichewa is qualified to have a *Lk* head, this could very well be the source of Case licensing in Chichewa DOCs. The “inherent Case” problem may not disappear from UG entirely by doing this, but at least it is not so mysterious in these languages.

The third and strongest source of evidence that Lk is present comes from inversion: we expect to see word order alternations that arise because movement can target Spec LkP. And we do: the vP-internal word orders in Chichewa are nearly identical to those found in Kinande or Jul’hoansi. In applicative constructions, the theme argument can precede an instrumental DP or a locative DP. This matches the only order found in languages like Hoan, and the order found in linkerless environments in Kinande:

(65) a. Anyani a-ku-phwany-ir-a dengu mwala. (Chichewa)

2-baboons 2S-Pres-break-Appl-Fv 5-basket 3-stone

The baboons are breaking the basket with a stone.

b. Alenje a-ku-luk-ir-a mikeka pa-mchenga.

2-hunters 2S-Pres-weave-Appl-Fv 4-mats Loc.16-3-sand

The hunters are weaving mats on the beach.

But it is also possible for the locative or instrumental to come before the theme; these are the “inverted” orders found in Kinande *only* when a linker is present (see section 4).

(66) a. Anyani a-ku-phwany-ir-a mwala dengu. (Chichewa)

2-baboons 2S-Pres-break-Appl-Fv 3-stone 5-basket

The baboons are breaking the basket with a stone.

b. Alenje a-ku-luk-ir-a pa-mchenga mikeka.

2-hunters 2S-Pres-weave-Appl-Fv Loc.16-3-sand 4-mats

The hunters are weaving mats on the beach.

In Jul’hoansi and Kinande, these orders are clearly the result of DP-movement out of the theta-domain that targets the specifier of LkP. We claim that the same analysis holds also for inversion in Chichewa (see Baker 1988b).

Note that it will only be possible to use inversion to argue for the existence of null linkers in a language which has the “off” setting of the MLC parameter in a way similar to Jul’hoansi and Kinande. Languages with the “on” setting might also have null linkers, but there will be less evidence for a null linker in these languages.

The one complication comes in benefactive applicative constructions. These have only one order in Chichewa, with the benefactive coming first, presumably sitting in Spec LkP. Thus, (67) is ungrammatical, in contrast to (64a).

(67) *Chitsiru chi-na-gul-ir-a mphantso atsikana. (Chichewa)

7-fool 7S-past-buy-Appl-Fv 9-gift 2-girls

The fool bought a gift for the girls.

But this seems to be a matter of very low-level variation, of little significance for our overall hypothesis. Gitonga is another Bantu language, fairly closely related to Chichewa and syntactically similar to it in most respects (Mchombo and Fimino 1995). But Gitonga allows verb-theme-benefactive order as well as verb-benefactive-theme order:

(68) a. Nidzi a-na-tul-el-a lidimba yimbwa. (Gitonga)

Nidzi 1S-Past-open-Appl-Fv 9-dog 5-door

Nidzi opened the door for the dog.

- b. Nidzi a-na-tul-el-a yimbwa lidimba.

Nidzi 1S-Past-open-Appl-Fv 5-door 9-dog

Nidzi opened the door for the dog.

Thus, Gitonga shows full range of vP internal word orders that Kinande does.

Moreover, the same low-level variation that distinguishes Chichewa and Gitonga is also found in languages with an overt linker. The Gobabis dialect of Ju|'hoansi allows only verb-benefactive-Lk-theme order whereas the Tjum!kui dialect allows both orders:

- (69) a. Besa komm ||'ama-|'an Oba ko tcisi. (Gobabis, Ju|'hoansi)

Besa Emph buy-give Oba Lk things

Besa bought Oba some things.

- b. *Besa komm ||'ama-|'an tcisi ko Oba.

Besa Emph buy-give things Lk Oba

This degree of variation, whatever its nature, is thus no obstacle to claiming that there is a null linker in Chichewa and other Bantu languages.

Our argument can be summarized as follows. Chichewa and Gitonga have nominal locative expressions, allow a rich variety of multiple object constructions, and tolerate a considerable degree of free word order inside the verb phrase. In all these respects, they are identical to the related language Kinande. In Kinande, these three properties are demonstrably

tied to the presence of an additional functional head, the linker, which checks the Case of a nominal element and hosts movement. In the absence of a linker, no second noun phrase can be added to the clause in Kinande, whether as a free adjunct or as an argument introduced by a causative or applicative head. Also, when no linker is present or when its specifier is not available for movement, the order of phrases in the Kinande verb phrase is rigidly fixed (see (47)). Chichewa has the same surface properties that are unambiguously attributable to the presence of a linker in Kinande. It is thus reasonable to conclude that the linker is present in Chichewa as well. And these properties seem to hold not only of Chichewa, but of Bantu languages more generally. For example, Bresnan and Moshi 1990 show that Kichaga has the very same cluster of properties (despite its other parameteric differences from Chichewa).

Note in particular that the linker exists in both symmetrical object languages (like Kichaga) and asymmetrical object languages (like Chichewa). Its presence or absence is not directly the source of this well-known parameter, although being aware of its presence might lead to some new understanding of the parameter.

7. Conclusion

In this paper, we have given extensive descriptive material on the linker in Kinande, and we have shown how there are systematic parallels between the syntax of the linker in Kinande and the syntax of the linker in Ju|'hoansi, including the presence of the linker and its position in double object constructions, with locatives and instruments, the possibility of inversion, and the absence of the linker between a verb and its complement and before embedded clauses and non-nominal prepositions.

We have analyzed the linker morpheme in Kinande as being the head of a functional projection LkP that is above VP but below vP. This analysis allowed us to account for the various possible and impossible word orders in structures involving double object constructions, locative and instrumental phrases. It also provides a natural account of the cross-linguistic variation involving the linker which becomes noticeable when one compares Kinande with Khoisan languages such as Jul'hoansi and Hoan.

Theoretically, we have found striking support for a class of proposals concerning vP internal structure (see Travis 1991, Lasnik 1995, Koizumi 1995, Collins and Thráinsson 1996). In particular, the data strongly support an analysis involving a functional head dominated by vP, and dominating VP. We believe that LkP is the first vP-internal functional projection to be discovered that has a phonetically overt head. As such, this is a heartening case of convergence between abstract theoretical considerations and natural language data.

We have also suggested that in order to account for cross-linguistic variation in inversion, the MLC needs to be parametrized. In some languages the MLC holds, and in others it does not. As we showed, there is converging evidence in Kinande (from the passive) for this way of looking at the MLC.

This type of particle that appears between VP constituents (either complements or adjuncts) is relatively rare cross-linguistically. Hopefully, our comparative study of its grammar in three languages will lead to a deeper understanding of this little studied area of syntax.

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