Linking, Predication, and Symmetry: 
On the Syntax of the Linker in Kinande

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1. Introduction

In the Bantu language Kinande (ISO 639-3, DR Congo), we find a particle called the linker ((Hyman 1985 (class lectures), & Mutaka 1986)) that occurs between arguments of the verb and sometimes also between arguments of the verb and adjuncts. The linker (LK) agrees in noun class with the DP that immediately precedes it:

(1) a. Kámbale ágúlira ekitábú kyo Nadíne
   Kambale bought 7book 7LK 1Nadine
   ‘Kambale bought a book for Nadine.’

b. Kámbale ágúlira Nadínè y’ ekitábu
   Kambale bought 1Nadine 1LK book
   ‘Kambale bought Nadine a book.’

The linker is absent when constructions involve only a single post-verbal XP:

(2) Kámbale ágúla (*kyo) ekitábú (*kyo)

K. 3s.buy 7LK 7book 7LK

In this paper, I ask why there should be a syntactic element like the linker and what its syntax must be. My answer in brief is that the linker is a copular like element that mediates predication within the verbal phrase in Kinande. Further, I propose that this functional element provides a means of symmetry breaking within a grammar where minimalist concerns lead to the conclusion that syntax is not inherently endocentric and labeling is dynamic (Chomsky 2013). I will elaborate on this idea below.

2. What the linker is not

There have been two proposals in the literature concerning the linker in Kinande. One is essentially that the linker licenses the distribution of expressions that need Case (Baker & Collins 2006). The other proposal is that the linker is a device that facilitates Distinctness (Richards 2010). In short, from the Distinctness perspective, the linker separates two syntactic objects (SO) that are too similar for the grammar to linearize. I will discuss the problems with each proposal in turn.

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2.1. The analysis of Baker & Collins (2006)

I consider first the analysis of Baker & Collins (2006). They build a convincing case for the presence of a functional category within the verbal phrase. But their account of why such a functional category exists is problematic. They propose a Case theoretic account for the distribution of the linker, where they argue that it primarily functions as a Case assigner to the XP which follows it. However, as noted in Schneider-Zioga (2014), the empirical evidence does not support their analysis of the motivation for the presence of this category. Schneider-Zioga (2014) points out that adverbs can follow the linker. I repeat one example from that paper here:

(3) Kámbalé átuma ebarúhá yó lubálúba
Kambale sent 9letter 9LK quickly=Adverb
‘Kambale sent the letter quickly.’

If the distribution of the linker really is regulated by Case theoretic concerns, then the adverb example should be just like the examples of a monotransitive verb in (2)—not requiring a linker—since only one XP needs Case, which it could get directly from the verb. We see then that the linker need not be followed by a syntactic object that requires Case. Therefore, a Case theoretic account of the function of the linker is not convincing on empirical grounds.

There is also a conceptual reason to reject a Case theoretic account. Namely, following their proposal to its logical limits forces Baker & Collins (2006) to conclude that the Minimal Link Condition (MLC) is parameterized, with the value set to “off” in Kinande. Baker & Collins assume the following version of the Minimal Link Condition:

(4) 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).

This condition basically says that derivations must make the shortest possible links. Schematically, if there are two syntactic objects bearing feature F: say syntactic object A and syntactic object B, in the following configuration, K cannot reach more deeply into the structure, past A, to form a link with B. Instead, it must form a link with A, which is structurally closer. Superiority and super raising effects are among the phenomena that this condition accounts for:

(5) […]K…A…B…]

Baker & Collins (2006) conclude this condition is parametrically set to “off” in Kinande because, as illustrated in ((1) a&b), in linker constructions the phrases can appear in either order:

(6) a. THEME LK GOAL/BEN, or

b. GOAL/BEN LK THEME.

This fact leads them to conclude the MLC does not hold for Kinande because they assume that the linker heads a functional projection that is structurally higher than the VP (or applied phrase). In their

1 An anonymous GLOW abstract reviewer points out that Baker & Collins note in a footnote (their fn 26) that an adverb can follow a linker. First, Baker & Collins observe that when there is more than one linker within the verb phrase, sometimes this second linker can be followed by an adverb. Moreover, they argue this is not the same linker as the linkers they studied, and so they excuse their analysis from accounting for it. Given their dismissal of facts concerning adverbs in the footnote, they cannot be credited with observing that linkers are not always followed by syntactic objects that need Case. The datum I present here does involve a single linker and so it is clearly the same kind of linker they studied. The study of more complex clauses involving more than one linker lies outside the scope of this paper due to space limitations.
view, the SO that immediately precedes and agrees with the linker has moved from a base position below the linker into the pre-linker position. If the first merged order is BEN THEME, the order THEME LK BEN arises when THEME moves past BEN into the specifier of linker position. Such a move would appear to violate the MLC:  

(7) \[\text{linker phrase } (LP) \quad \text{THEME}_{j} \quad [\text{LK} \quad \text{applied phrase} \quad \text{BEN} \quad \text{applied phrase}] \quad \text{APPLIED} \quad \text{VP} \quad \text{THEME}_{j} \quad ]] 

The conclusion that the MLC does not hold in Kinande is an odd conclusion from a conceptual point of view: syntax is not expected to impose parameters on a third factor constraint like the MLC. Moreover, the proposal that the MLC is parameterized in Kinande is empirically wrong. The MLC does hold in Kinande. Consider data from small clauses. It is not possible to passivize out of a small clause in Kinande past the subject of the small clause ((8)b):

(8)  
a. akaratási mókatwírwé [______ mo bhindibihindi]  
12paper aff.12cut.pass MO 8piece.piece  
‘The paper was cut into pieces.’

b.*ehihindibihindi mohitwirwe [akaratasi (mo) ________ ]  
19small.pieces aff.19cut.pass 12paper (MO)  
‘Pieces were cut from the paper.’

Note that word order within a small clause in Kinande is fixed:

(9)  
a. móbatwír é akaratási mo  bhindibihindi  
aff.12cut. 12paper MO 8piece.piece  
‘They cut paper into pieces.’

b.*móbatwír é bihindibihindi mo akaratási  
aff.12cut. 8piece.piece MO 12paper  
‘They cut paper into pieces.’

Therefore, passivization out of a small clause of anything other than the subject would have to violate the MLC. We see that such movement is ungrammatical. Therefore, the MLC appears to be operative in Kinande. Given these empirical and conceptual concerns, Baker & Collins’ Case theoretic account of the linker is not fully satisfactory.

2.2. Richards’ Distinctness account

The Distinctness approach of Richards (2009, 2010) also falls short empirically as an account of the linker. Distinctness is a condition on linearization whereby the grammar resists having adjacent syntactic objects that are too similar. The intuition behind this is that the grammar would not be able to evaluate which identical syntactic object precedes the other since Richards hypothesizes that linearization refers to node labels rather than to particular nodes in a tree.

Richards argues that the linker occurs because two noun phrases within the same spell out domain are too similar to each other for the grammar to linearize them. “Too similar” for Richards means both SO’s have the same label. For the grammar to resolve this linearization conundrum, Richards conjectures that the phrase headed by the linker provides a phase boundary when there are two DPs (and therefore adjacent identically labeled nodes) such that one DP is spelled out in the domain of the immediate phase and the other is spelled out in the higher phase. As noted in Schneider-Zioga (2014) Richards’ account is empirically inaccurate as an account of the function of Kinande linkers because it depends on distinctness of labels. If Distinctness in Kinande cares about projected labels, then the

\(^{2}\)In the first three sections of the paper, phrases are labeled according to the endocentric requirements of X’-syntax. In the final section of this paper, labeling will be considered from a dynamic perspective.
same examples that show Baker and Collins’ (2006) Case theoretic proposal is empirically wrong also show that Richards’ (2009, 2010) *Distinctness* account cannot work to account for the linker in Kinande. This is because as can be observed in (3), DP & ADVP are distinct labels, but a linker is still necessary to separate them. This does not require us to reject a *Distinctness* account per se if we can identify the right kind of non-distinctness that is relevant here. However, the Kinande facts do establish that the presence of like and unlike labels alone do not predict the occurrence of a linker.

3. What the linker is

In Schneider-Zioga (2014) and Schneider-Zioga & Mutaka (2014), I argued that the Kinande linker has copular properties. More specifically, I demonstrated that it behaves very much like a linker in the sense of den Dikken (2006). Here I add that it also can behave like a relator (in the sense of den Dikken 2006). I briefly recapitulate the discussion in Schneider-Zioga (2014). First, I noted that morphologically, the linker is indistinguishable from a main clause copula of the type that is used in equative and inverse specific clauses:

(10) a. Barack Obama y’ omupresidâ {copula, for class 1 = $y(o)$}
   ‘Barack Obama is the president/the one who is president.’

b. Omupresidá yo Barack Obama {inverse copular}
   1president 1COP 1Barack Obama
   ‘The president is Barack Obama.’

c. ágúlira Barack Obama y’ ekitábu {linker, for class 1 = $y(o)$}
   3SG.bought.APPL 1B. O. 1LK 7book
   ‘He bought Barack Obama a book.’

That is, the linker *looks* like a copula. Moreover, I noted that it *behaves* like a copula. First, it mediates predication relations. To see this, consider that Kinande has high applicatives according to the diagnostics of Pylkkänen (2008). High applicatives (as in (1), for example) establish a relation between an event and an individual. Therefore, the linker is found in a construction that involves predication. Here is an example of the structure involved according to Pylkkänen:

(11) […] [ApplP Ben [Appl’ APPL [VP V …]]]]

However, this structure cannot be completely correct if we embrace the idea that predication is always mediated by a functional category (Bowers 1993, den Dikken 2006). Instead, we must have the following structure:

(12) […] [VP Ben [F F [ApplP APPL [VP V theme ]]]]]

This means the applied morpheme, a lexical morpheme, does not “link” the benefactive noun phrase with the verb phrase. Instead, the applied phrase is the predicate that is linked to the benefactive noun phrase, through the mediation of the functional category *F*.

It has been convincingly argued in the literature that give-type verbs also involve predication. Specifically, *give*-type verbs select a small clause (see Schneider-Zioga (2014b) and Schneider-Zioga & Mutaka (2014) for discussion relevant to Kinande). Following den Dikken (2006), the small clause would be headed by a functional category *F*, which mediates the predication relation between the theme (subject of the predication) and the goal (predicate). We would have the following structure where the verb takes a small clause, where *F* is a functional category that heads the small clause. Again, we see that the linker is associated with a construction that involves predication:

(13) […] … [VP [V’ [V V ] [FP Theme [F F [Predicate Goal ]]]]]]
I will articulate the role that the linker plays in these predication constructions in the next section, where I will show it breaks points of symmetry. For now, I identify the linker as the functional category F in the applied and give-type constructions. The linker in these examples is a relator in the terminology of den Dikken (2006):

(14) a. […[FP Ben [F LK [ApplP APPL [VP V theme ]]]]]
   b. [… [VP [V [v V ] [FP Theme [F LK [Predicate Goal ]]]]]]

I refer the reader to Schneider-Zioga (2014) and Schneider-Zioga & Mutaka (2014) for additional evidence that these constructions are (small) clause like. The main point of this section has been to establish that linkers in Kinande, like copulas, are associated with predication structures.

I note here an additional way that the linker is copular-like. This has to do with the distribution of focus within these structures. The post linker phrase bears focus, whereas the immediate pre-linker position cannot be focused:

(15) a. áha ekitábú kyó BÁ:NA
gave 7book 7LK 2CHILDREN
‘He gave the book to the CHILDREN (not to the adults).’

b.*aha EKITÁBÚ kyó bá:na
gave 7BOOK 7LK 2children

The generalization would be the same if the word order were reversed to GOAL LK THEME: only the post linker phrase bears focus. The pre-linker position cannot be associated with a focused XP. Here is the generalization in schematic form:

(16) ok: XP LK FOCUS
    *FOCUS LK XP

This is the pattern of focus that we find in pseudo-clefts that are free relative initial and other inverse copular constructions: the post copular/post linker position is obligatorily focused. However, in those types of copular clauses, the reverse word order results in yet a different pattern of focus. In Kinande, the focus remains post linker regardless of the word order. This is the same pattern found in the semi-cleft construction discussed by Resenes & den Dikken (2012) for Brazilian Portuguese: the post copular position in semi-clefts bears focus:

(17) a. O João comprou um livro
    the João bought a book

b. O João comprou foi um livro
    the João bought was a BOOK

In light of this focus pattern, I assume that the linker has a focus feature that must be realized on the immediately following post linker syntactic object.

Finally, if linker constructions in Kinande are copular constructions, it is not surprising that they show no MLC effects. Inverse and related copular clauses are insensitive to the MLC. Therefore, whatever accounts for this insensitivity in inverse copular clauses should be extendable to linker constructions as well. It is not necessary to conclude that the MLC is subject to parameterization.

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3 All facts discussed in this section also hold true for applied constructions.
4. Linkers solve a labeling problem

In this final section, I ask why linkers are found in these predication constructions. In response, I note that linkers occur where there is a point of symmetry in a minimalist syntax where there is Merge without projection. I conjecture that the agreeing linker is a means of breaking the symmetry of the merged structure that exists at that point in the derivation of the sentence. In this, I follow Chomsky’s 2013 labeling interpretation of Moro’s dynamic antisymmetry. With the symmetry broken, the structure can be labeled and thus interpreted as the conceptual/intentional interface.

A minimalist view of syntax attempts to reduce syntax to only its conceptually necessary elements. Chomsky (2013) points out that this line of thinking reveals a number of stipulations built into x-bar syntax that could be eliminated in favor of a simpler system. In particular, the concepts of specifier and endocentricity—that is, that merge is always to a head, which subsequently projects—seem unavailable. In this kind of simpler system, labeling is no longer automatically part of forming a syntactic object, although labeling is still necessary: only labeled structures can be interpreted. Chomsky (2013) proposes that labeling proceeds through a Labeling Algorithm (LA) based on a simple operation such as minimal search.

Given Merge without projection, when Merge involves a head and a phrase, projection is straightforward. Chomsky proposes that the LA looks for the most prominent item within the syntactic object to supply the label for the SO. Consider the case of merger of the applied morpheme and the verb phrase. The labeling algorithm picks the most prominent element by virtue of minimal search, the head, which supplies the label for the SO. Therefore, if we call the applied morpheme APPL, the SO under consideration here will be labeled APPL:

(18) \[ \alpha_{APPL \ VP} \] Label of \( \alpha = APPL \) (Applied Phrase)

The challenge to the labeling algorithm is how to label a syntactic object when the merged elements within it have equally prominent heads as when two phrases are merged:

(19) \[ \beta_{XP \ YP} \] \( \beta = ??? \)

Predication will always present this kind of labeling challenge, even if the predication is headed (in a pretheoretical sense) by a functional category. To see this, suppose first that the applied phrase and the benefactive phrase are Merged:

(20) \[ \beta_{BenP \ ApplP} \] \( \beta = ??? \)

Clearly neither the head of the benefactive phrase nor the head of the applied phrase are more prominent. Therefore, the LA cannot label the object. The situation is not improved by the mere presence of a functional head, such as the linker. To see why, note that Merger of the linker LK and the ApplP (recall the proposed structure in (14)) can straightforwardly be labeled. The label would be LK by virtue of the prominence of the head LK:

(21) \[ \alpha_{LK \ ApplP} \] Label of \( \alpha = LK \) (Linker Phrase, LkP4)

Merger of LkP and BenPhrase again seem unresolvable: Neither phrasal category would appear to have a more prominent head:

(22) \[ \alpha_{BenP \ LkP} \] Label of \( \alpha = ?? \)

Note however, that BenP and LkP share phi-features (\( \phi \)) by virtue of the agreeing property of the linker and therefore, unambiguously prominent features are detectable by the LA:

\[ ^4 \text{Labels of course would not actually create new objects: } LK \rightarrow LkP. \text{ However, in the interest of perspicuity, I will use the phrasal notation.} \]
It should be clear that the symmetric challenge to labeling in give-type small clauses (as in (14)b) could be resolved in virtually the same way via the sharing of phi-features and thus the sharing of a single most prominent element.

What about the movement of the theme in benefactive constructions or the goal in give-type small clauses? In order to see the effects this would have on the LA, we need to first consider how a dynamic interpretation of labeling can resolve the labeling of ambiguous XP YP structures through movement, rather than through agreement, as we saw above. The idea of dynamic labeling following Chomsky (2013) here is that if an element has moved out of a SO, it is not visible to the LA. This is illustrated in the following example where an XP has moved out of a structure:

(24) XP ... [β <XP> YP] β = YP

Here only the head Y is prominent within the SO β and therefore the label must by Y(P). XP is invisible to the labeling algorithm by virtue of its movement out of β. Movement of a head is proposed by Chomsky to have the same effect of removing its features from the view of the LA.

The “inverted” structure of THEME LK BEN and GOAL LK THEME can be understood in light of the nearly analogous structure considered by Alexiadou & Anagnostopoulou (2001, 2007) in their study of the Subject in Situ generalization (here given in dynamic LA form, from Chomsky (2013), his (17)), where Alexiadou & Anagnostopoulou note that one of the arguments must vacate the verbal phrase—either the External Argument (EA) or the Internal Argument (IA):

(25) T [β (EA) [v* [V IA]]]

Chomsky suggests that dynamic labeling can derive much of the effects of the Subject in Situ generalization: (a) EA could vacate the symmetric structure that exists where EA and vP are merged. This would dynamically break the symmetry by making <EA> not visible to the labeling algorithm, and β would be labeled v*:

(26) EAj T [β <EAj> [v* [V IA]]]

If EA doesn’t vacate the symmetric structure that exists where EA and vP meet, Chomsky (2013) points out that IA can dynamically create antisymmetry by vacating this structure instead. Specifically, head movement of V to v* and movement of IA (internal argument) out of the structure, for instance as follows, renders IA invisible to the LA:

(27) IAj T [β EA [v* [V <IAj>]]]

In this case, EA would be the “complement of v*” since v* is a head by virtue of the invisibility to the LA of <IA>, rather than a phrase and β would be labeled v*. “Technically, what is visible to LA is {EA, {v*}}, v* the complex element formed by head-raising of V …, and the internal argument part of a discontinuous element, hence invisible to LA.” (Chomsky 2013 p. 12)

Consider now how dynamic labeling is relevant to the inverted multiple object structure given the nearly analogous (27). Here I assume that the LK raises to a higher position to enable inversion of the more internal argument past the more external one. That is, it is here a linker in the sense of den Dikken (2006). It is possible, however, that the LK is inserted in its surface position by Last Resort:

(28) THEME LK0 [β BEN [appl <LK0> [appl A [V <THEME>]]]] β = ApplP

If the theme vacates the original syntactic object, it is not visible for the LA for that SO. V raises to A. The labeling of moved heads is somewhat murky. I assume this is now A. If <LK> moves it is not visible and again the label is A. The relation between the benefactive phrase and A is like that of a complement to its head. The LA has no problem labeling β as ApplP. The highest part of the structure:
[THEME LkP] is symmetric. Here, the labeling conflict can easily be solved through the sharing of $\phi$-features as was also true for non-inverted benefactive and double object structures: 5

\[(29) [\beta \text{THEME-} \phi [\gamma-\phi \text{Lk}^0 [\beta \text{BEN [A [ V <THEME>] ]}]] \beta = \text{ApplP}, \gamma = \text{LkP}, \delta = \phi\text{-phrase} \]

In short, movement (“inversion”) of the theme can resolve the symmetry problem in linker constructions, just as per Chomsky 2013, movement of either EA or IA can resolve the symmetry captured by Alexiadou & Anagnostopoulou’s SSG (recall (26) & (27)). Movement is not always necessary to solve the symmetry problem in linker constructions as these constructions are predication structures and the “head” (in a pretheoretical sense) of these predication structures is the agreeing linker. As we saw, symmetry can also be resolved for the LA by $\phi$-feature sharing.

This analysis makes several predictions. For instance, if the linker, or at least visible manifestation of the linker through agreement, is a last resort mechanism, it should not occur just in case either the theme or goal/benefactive phrase has moved out of the verbal domain. This could happen via passivization or wh-questioning. Indeed, the linker no longer occurs under these circumstances. One final prediction is that linkers would not occur in applied constructions with intransitive verbs—even though these also involve predication. This is a correct prediction. We do not find structures such as:

\[(30) \ldots \text{V-APPL (LK) BEN (LK)} \]

Note that such structures pose no symmetry problems. The structure could be either (31a or b), depending on the assumptions one makes about the last resort nature of the linker: is it only inserted by last resort, or is it simply agreement that emerges by last resort:

\[(31) \]a. \([...[\text{BEN [Appl [V]]}])\]

b. \([...[\text{BEN [LK(no agreement) [Appl [V]]}])\]

From a dynamic labeling perspective, the benefactive phrase is clearly the complement of the applied verb, which is a head here. Therefore, no symmetry problem exists for the labeling algorithm.

5. Conclusion

Although clearly many unresolved questions remain, both about the full range of data that exists with respect to linkers and about the LA in general, the view that the linker is a copula accounts for a wide array of data in a cohesive and interesting way. We have seen that a variety of effects that have been attributed to Case theory in past analyses can be captured without reference to Case. Moreover, by providing a principled account of linker constructions through a labeling interpretation of dynamic antisymmetry, the analysis here gives evidence for a grammar in which a) symmetric structures can arise from Merge; and b) (internal) Merge and phi-feature sharing can function as an antisymmetrizing device.

References


5 It should be clear that inverted give-type verbs would be labeled in essentially the same way.
6 Movement of the goal in give-type linker constructions would work in a parallel way.


