

# Complex Anaphora in Lubukusu

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## 1. Introduction

In many ways, the central features of the anaphoric pattern in Narrow Bantu are quite familiar. There is usually both a reciprocal marker (RCM) that is an extension, and a reflexive marker (RFM) that is a prefix and is usually thought to be in complementary distribution with the object marker (OM). While the OM agrees with its antecedent or with an overt direct object (in the languages where this is possible), the RFM and the RCM are invariant, regardless of the features of the antecedent. In Lubukusu, however, we will show that overt direct object anaphoric argument anaphors can co-occur with anaphoric markers on the verb as ‘combination anaphors’, even though an OM and an overt direct object are normally in complementary distribution. We then show that there is reason to regard the RFM and the RCM as (associated with) distinct heads in clausal architecture, and that as a result of that distinction, a surprising contrast between these heads emerges when comitative structures are considered. In our account of the latter contrast, we return to the combination anaphora construction, which, when it occurs in comitative structures, suggests the derivational analysis of the comitative construction we propose to account for the RFM/RCM contrast is on the right track.

## 2. Combination anaphors in Lubukusu<sup>1</sup>

The complex anaphora phenomena we are focusing on involve situations where two elements that can occur independently to support anaphora can also support anaphoric readings when they occur together. Typical cases are illustrated in (1).<sup>2</sup>

1a) *Yohána éyonaka ómweene*

Yohana a-a-i-yonak-a o-mu-eene

Yohana SM.c1-PST-RFM-destroy -fv c1-c1-own

John destroyed himself.

b) *Bob ne Billi báábonana bábeene khu beene*      **ID1377**

Bob ne Billi ba-a-bon-an-a ba-b-eene khu b-eene

Bob and Bill SM.c2-PST-see-RCM-fv c2-c2-own on c2-c2-own

Bob and Bill saw each other.

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<sup>1</sup> Lubukusu is a Bantu J language spoken in Kenya near Mt. Elgon. It is generally considered to be a member of the Luyia macrolanguage.

<sup>2</sup> In the examples, only high tones are marked. The ID numbers that accompany some examples were collected for, and entered into, the Afranaph Database as part of the research for Safir and Sikuku (2011), where the complex anaphora facts were first analyzed. This work is the source of most of the analysis for section 2. Interested readers can find more details about these examples and related ones by searching for these ID numbers in the *Afranaph Database*, which is freely accessible online.

The complex *-eene* form that is preceded by the nominal noun class preprefix and noun class prefix, which we refer to as *AGR-eene*, is a root that means something like ‘owner’ in non-anaphoric contexts.<sup>3</sup> *AGR-eene* can occur on its own in contexts where it can form a reflexive reading, as in (2a), and in this respect, it contrasts with a pronoun in the same position (2b), which, though well-formed, requires that the prepositional object be someone other than *Yohana*. *AGR-eene* is normally not possible, however, on its own with this function in direct object position where the RFM is possible, as in (2c) (compare (1a)). Thus in (2c), *AGR-eene* does not have a reflexive reading; The reflexive reading is achieved by the RFM, alone or in combination with *AGR-eene*.

- 2a) *Yohána ákáchulila Maria khu mweene* **ID1435**  
 Yohana a-a-kachul-il-a Maria khu o-mu-eene  
 Yohana SM.c1-PST-talk-APPL-fv Mary about c1-c1-own  
 Yohana told Mary about himself/him.
- b) *Yohána ákáchulila Maria khu niye*  
 Yohana a-a-kachul-il-a Maria khu niye  
 Yohana SM.c1-PST-talk-APPL-fv Mary about pron.c1  
 Yohana told Mary about him. (him is not Yohana)
- c) \**Yohána ónaka ómweene*  
 Yohana a-a-onak-a o-mu-eene  
 Yohana SM.c1-PST-destroy -fv c1-c1-own  
 Yohana destroyed himself.

Similar facts hold of the RCM and *AGR-eene khu AGR-eene* (the reciprocal phrase), which consists of two *AGR-eene* forms separated by the multipurpose preposition *khu*, which has the morphological effect of suppressing the pre-prefix on any noun that follows it (not just in this construction – see Sikuku, 2011).

It is natural to ask whether or not RFM+*AGR-eene* is really a combination anaphor involving a full direct object anaphor *AGR-eene*, or whether *AGR-eene* is just an emphatic adjunct. *AGR-eene* can indeed act as an anaphoric adjunct, as illustrated in (3a,b), either adjacent to the subject or in final position, agreeing with the subject, where both sentences can mean that Wekesa did it personally, or did it in contrast to someone else, or did it without assistance.

- 3a) *Wekesa ómweene áchá engo (\*ómweene)* **ID3750**  
 Wekesa o-mu-eene a-a-ch-a engo o-mu-eene  
 Wekesa c1-c1-own SM.c1-PST-go-fv home c1-c1-own  
 Wekesa himself went home \*himself.
- b) *Wekesa (\*ómweene) áchá engo ómweene*  
 Wekesa o-mu-eene a-a-ch-a engo o-mu-eene  
 Wekesa c1-c1-own SM.c1-PST-go-fv home c1-c1-own  
 Wekesa \*himself went home himself.

Notice that two instances of adjunct *ómweene* cannot both modify the subject. There are at least two reasons to reject an adjunct analysis for (1a), however.

First, (1a) does not have an emphatic reading, and in most cases the presence of the *AGR-eene* is just optional. Moreover, there are contexts where the combination anaphor must appear in full, suggesting that it has a particular function. In (4), where the respondent is affirming what the first speaker has questioned, the answer requires the presence of both the RFM and *AGR-eene*. Suppose that the men are asked to speak in praise of others, but it is known that these men are so vain that they cannot help themselves, and so the questioner asks, ‘They didn’t end up praising themselves, did they?’ The answer to this question after ‘yes’ would be (4a) and not (4b), though both are acceptable in other contexts.

<sup>3</sup> There is more on the behavior of *AGR-eene* on its own in Safir and Sikuku (2010) and in Sikuku (2011).

- 4a) *Basaani béfumyá bábeene* **ID1534**  
 ba-saani ba-a-i-fumy-a ba-b-eene  
 c2-man SM.c2-PST-RFM-praise-fv c2-c2-own  
 The men praised themselves.
- b) *Basaani béfumyá* **ID5141**  
 ba-saani ba-a-i-fumy-a  
 c2-man SM.c2-PST-RFM-praise-fv  
 The men praised themselves.

If the questioner were to ask, ‘The women didn’t end up praising each other, did they? Is that what they did?’, the answer to this question after ‘yes’ would require the presence of both the RCM and the reciprocal phrase, as in (5).

- 5) *Bakhasi bááfumyana bábeene khu beene* **ID5143**  
 Ba-khasi ba-a-fumy-an-a ba-b-eene khu ba-b-eene  
 c2-woman SM.c2-PST-praise-RCM-fv c2-c2-own on c2-c2  
 The women praised each other.

The ‘affirmative reading’ is akin to a contrastive reading, insofar as it appears to place object focus to confirm what the first speaker has raised as a possibility but called into question.

Second, reciprocal phrase and AGR-*eene* are in ‘close construction’ with the verb in affirmative usage, that is, almost nothing can intervene between the verb and AGR-*eene*, or between the verb and the reciprocal phrase, without a degraded result (some adverbs degrade it more than others). To get sharper results, we use the exclusive phrase adjunct, AGR-*eene ne* AGR-*eene*, which has the same distribution as emphatic AGR-*eene* as illustrated in (3a,b), but always modifies the object when in postverbal position. In (6a), the reflexive combination anaphor is in close construction with the verb and does not have an emphatic interpretation, but in (6b), the exclusive phrase intervenes between the verb and AGR-*eene* and the interpretation shifts: The sentence is still reflexive, but now it is also emphatic. The reciprocal phrase is never used as an emphatic (6c), and so it is simply unacceptable, though it is acceptable if *babeene khu beene* precedes the exclusive phrase.<sup>4</sup>

- 6a) *Bakhasi béyeeta bábeene bábeene ne bábeene* **ID5053**  
 ba-khasi ba-a-i-yeet-a ba-b-eene, ba-b-eene ne ba-b-eene  
 c2-women SM.c2-PST-RFM-help-fv c2-c2-own c2-c2-own with c2-c2-own  
 The women helped themselves and themselves only.
- b) *Bakhasi béyeta bábeene ne bábeene bábeene* **ID5142**  
 ba-khasi ba-a-i-yeet-a ba-b-eene ne ba-b-eene ba-b-eene  
 c2-woman SM.c2-PST-RFM-help-fv c2-c2-own with c2-c2-own c2-c2-own  
 The women helped themselves and themselves only, personally.
- c) \**Bakhasi bááyeetana bábeene ne bábeene bábeene khu beene* **ID5160**
- |          |                     |           |      |            |           |
|----------|---------------------|-----------|------|------------|-----------|
| ba-khasi | ba-a-yeet-an-a      | ba-b-eene | ne   | ba-b-eene, | ba-b-eene |
| c2-woman | c2-PST-praise-an-fv | c2-c2-own | with | c2-c2-own  | c2-c2-own |
| khu      | ba-b-eene           |           |      |            |           |
| on       | c2-c2-own           |           |      |            |           |

<sup>4</sup> Close construction effects for RCM+reciprocal phrase are weaker with simple adverb interventions (like ‘yesterday’) by comparison with RFM+AGR-*eene*. This may be because there is a possible meaning for RFM+AGR-*eene*, namely, the emphatic one, while RCM+reciprocal phrase combination has no alternative meaning, and so is more likely to be accommodated. The exclusive phrase is itself somewhat emphatic, and perhaps this is why mild accommodation is not possible.

Adverbs cannot normally intervene between a verb and its direct object in Lubukusu (for whatever reason) and so the close construction fact about the combination anaphors parallels the behavior of DOs in simple transitive sentences.

We conclude from the evidence presented in this section that combination anaphors exist and that AGR-*eene* and the reciprocal phrase are in direct object position in these constructions - or at least this is what we take to be the reason that close construction effects hold of them.

### 3. Analytic and theoretical issues

Our preliminary result is that combination anaphors exist, but this immediately raises questions about how the direct object (DO) argument is saturated in these constructions. If the RFM saturates the DO, then how is it possible for the DO position to be filled? Why is AGR-*eene* the only element that can appear there? This suggests that the view that the RCM detransitivizes a predicate in Bantu (e.g., as Mchombo, 2004, and Sells, Zaenen and Zecs, 1987 argue for Chichewa) or that the RFM, does not, but acts like the OM in saturating the DO (again, Mchombo, 2004) are not the right analyses for these affixes in Lubukusu, since it appears that neither affix truly saturates a thematic argument.<sup>5</sup> In addition, there is a contrast between the OM, which does not normally tolerate a DO,<sup>6</sup> and the RFM and RCM. This suggests that the RFM and RCM do not normally saturate the DO position, but rather that they match the anaphoricity of something that does, such as AGR-*eene* (7a), the reciprocal phrase (7b), or perhaps a form of anaphoric pro (7c) when neither AGR-*eene* or the reciprocal phrase is present.<sup>7</sup>

- 7a) [RFM [<sub>VP</sub> V [<sub>VP</sub> V [<sub>DP</sub> AGR-*eene*] ]]]  
 b) [RCM [<sub>VP</sub> V [<sub>VP</sub> V [<sub>DP</sub> AGR-*eene* *khu* AGR-*eene*] ]]]  
 c) [RFM/RCM [<sub>VP</sub> V [<sub>VP</sub> V [<sub>DP</sub> pro] ]]]

In addition to licensing the anaphoric pro object, the two affixes provide semantic instruction as to how an anaphoric direct object is to be related to its antecedent, i.e., whether the relation is to be

<sup>5</sup> There is some evidence that the OM and the RFM do not occupy the same position. Marlo (2010) notes that the RFM interacts phonologically with the verb in a way that the OM does not, Sikuku (2011) points out that the RFM and the OM can co-occur, but the RFM is always closer to the verb (see also Diercks and Sikuku, 2011), and Baker, Safir and Sikuku (in preparation) note that class 5 *li*-nominalizations in Lubukusu can bear the RFM but not the OM. This contrast must be captured by those who treat the OM as a clitic moved from object position, and in this paper, we take it to favor a non-movement head-related analysis for the RFM. Diercks and Sikuku (2011) and Sikuku (forthcoming) propose a clitic analysis for the RFM. We take no position on the status of the OM, but point to these facts to suggest that a position on what the OM is does not clearly dictate a position on what the RFM is.

<sup>6</sup> The data is more complicated than this, as discussed in Safir and Sikuku (2011:37-40). Although the OM is in complementary distribution with an in situ lexical NP, the OM is compatible with a freestanding pronoun in the same position, forming some sort of complex object (the combination cannot, for example, allow interruption by an adjunct). This evidence has always been a challenge to theories that use complementarity evidence to support OM-as-argument hypothesis (e.g. Diercks & Sikuku 2011). Safir and Sikuku suggest that “It is particularly notable, however, that the degree of ‘referentiality’ of the object [is limited to] that of the verb affix, which is to say that a pronoun cannot co-occur with the RFM or the RCM, but AGR-*eene* and the phrasal reciprocal can, and a pronoun or AGR-*eene* can co-occur with an OM, but a non-pronominal r-expression cannot.” There are, however, very special circumstances where the OM can co-occur with an overt description in Lubukusu, but the implications of these cases are not yet clear.

<sup>7</sup> The status of anaphoric pro (or PRO) is very much in dispute these days. Hornstein (1999) introduced the idea that ‘PRO’ is just a trace left by movement from a Caseless theta-position to another theta-position (which has Case), while Landau (2000) argues that PRO is licensed by Agree. These approaches no longer restrict a missing argument corresponding to PRO in earlier theories from appearing in object position (which, in GB era syntax, would have to be pro, since DO is a governed position). If PRO is just an anaphoric empty category, then it is not obvious that it cannot occur as a DO. We do not take a stand on how exactly anaphoric pro is licensed here, though either theory aimed at the distribution of PRO could be bent to this purpose.

reciprocal or reflexive.<sup>8</sup> This would explain why an overt direct object is possible, particularly one that is consistent with what the affix requires.<sup>9</sup>

Our preliminary proposal about these affixes is that both the RCM and the RFM are associated with head positions on the verbal spine and that these heads, which license the direct object anaphor, are in turn licensed by the subject antecedent of the anaphor that originates in Spec vP and passes through the Spec positions of the heads in question. In other words, the RFM and the RCM must be licensed, perhaps as anaphors themselves, by something in the Spec of the head they are associated with, and the RFM and RCM in turn can license an empty object position that is understood anaphorically (see note 6). This suggests that the RCM and the RFM could co-occur in Lubukusu and be associated with the same DO, since neither of these affixes saturates the DO (though they can license anaphors that do). This prediction is true in Lubukusu, as illustrated in (8), which can allow the inferences in (9a-e) when a previous discourse appropriate to each is provided (i.e., not all the inferences in (9) will be appropriate in every discourse, but for each there is a discourse in which they are permitted).

8) *Bakhasi béyeetana bábeene/ bábeene khu beene* ID1533

Ba-khasi ba-a-i-yeet-an-z (ba-b-eene/ ba-b-eene khu ba-b-eene)

c2-woman SM.c2-PST-RFM-help-RCM-fv c2-c2-own/ c2-c2-own on c2-c2-own

The women helped each other and themselves.

- 9a) Each woman helps all (or almost all) of the women, excluding herself.
- b) Each woman helps all (or almost all) of the women, including herself.
- c) Each woman helps at least some of the other women.
- d) The women together as a group help the women together as a group.
- e) Each woman helps one of the women other than herself, such that all of the women are helped by one of the others.

The reading in (9b) is the ‘mixed reading’ that would appear to add a distributed reflexive reading to the strict reciprocal reading in (9a). The other readings are possible with just the RCM, but (9b) is only possible when the RFM accompanies the RCM as it does in (8). Any reading where each woman only helps herself is ruled out if the RCM is present. (It would appear that the RFM can be disregarded or not, but RCM is always interpreted).

Although (8) is possible and productive in Lubukusu, it is not generally reported for other Bantu languages, so it is possible that the head-like status of the RFM and the RCM in Lubukusu, or else some other feature of the way arguments are saturated, is different than it is in other Bantu languages, a matter we leave for future research.

Since the RFM is a prefix and the RCM is a suffix, a question arises as to whether or not they are co-inhabitants of the same head position, but treated differently in the morphology, or if they are in separate head positions. We will show in the next section that the head positions these affixes are associated with are different and that the RFM is in a higher position than the RCM.

#### 4. Comitative structures and a contrast between anaphoric affixes

As in many Narrow Bantu languages, the diversity of noun classes and the plurals associated with them create problems for the morphological expression of mixed plurals, plurals that consist of atoms from more than one noun class. For example, if the plural of class 1 is class 2, and the plural of class 3 is class 4, then a subject consisting of a conjunction of classes 1 and 3 will not allow for a predictable choice of agreement on the subject marker (SM), which is a verb prefix. There are at least three solutions to this problem and it is handled differently in different Bantu languages. There can be a default agreement class prefix form for mixed plurals (class 8 in Lubukusu), as in (10a), or one plural form from an atom of the mixed plural can win out over certain other classes. More relevant to our

<sup>8</sup> We hope to give a fuller account of the semantic contribution of the RFM and RCM in future work.

<sup>9</sup> There are occasional cases where the RCM can co-occur with AGR-*eene* as opposed to a reciprocal phrase, see Safir and Sikuku (2011), but we have nothing to say about such cases here.

concerns, however, is that the language may allow, as Narrow Bantu languages generally do, a comitative construction, whereby subjects interpreted as if conjoined can be ‘split’, such that part of the subject occurs in a postverbal comitative phrase, as in (10b,c).<sup>10</sup>

- 10a) *Omundu neembwa byárekukha*  
 o-mu-ndu ne e-m-bwa bi-a-rekukh-a  
 c1-c1-person and c9-c9-dog SM.c8-PST-leave-fv  
 The man and the dog left.
- b) *Émbwa yárekukha noomundu*  
 e-m-bwa yi-a-rekukh-a ne o-mu-ndu  
 c9-c9-dog SM.c9-PST-leave-fv with c1-c1-person  
 The dog left with the man./The dog and the man left.
- c) *Omundu árekukha neembwa*  
 o-mu-ndu a-rekukh-a ne e-m-bwa  
 c1-c1-person SM.c1-PST-leave-fv with c9-c9-dog  
 The man left with the dog./The man and the dog left.

The *ne*-phrase is ambiguous between a true comitative reading (equivalent to conjunction with the subject) and an adverbial one, where the *ne*-phrase designates an instrument or, less freely, an individual ancillary to the event.

The interest of this construction for the differential analysis of the RFM and the RCM suggested above resides in the following contrast:

- 11a) *Omuhayi ne etwika byébona*  
 o-mu-hayi ne e-twika bi-a-i-bon-a  
 c1-c1-hunter and c9-giraffe SM.c8-PST-RFM-see-fv  
 The hunter and the giraffe saw themselves
- b) *Omuhayi ébona ne etwika*  
 o-mu-hayi a-a-i-bon-a ne e-twika  
 c1-c1-hayi SM.c1-PST-RFM-see-fv with c9-giraffe  
 The hunter saw himself with the giraffe.  
 \*The hunter and the giraffe saw themselves.
- 12a) *Omuhayi ne etwika byábonana*  
 o-mu-hayi ne e-twika bi-a-bon-an-a  
 c1-c1-hunter with c9-giraffe SM.c8-T-see-RCM-fv  
 The hunter and the giraffe saw each other.
- b) *Omuhayi ábonana ne etwika*  
 o-mu-hayi a-a-bon-an-a ne e-twika  
 c1-c1-hunter SM.c1-PST-see-RCM-fv with c9-giraffe  
 The hunter and the giraffe saw each other.

The striking difference between these two structures is that the RCM is understood to take the comitative *ne*-phrase as part of its plural antecedent even when agreement on the SM is singular, whereas the RFM cannot have a plural antecedent in this situation. The *ne*-phrase is taken as instrumental or ancillary (bystander) in the comitative structure with the RFM. This suggests to us that the RCM ‘sees’ a unified conjoined antecedent at an early point in the derivation, perhaps in Spec vP, and that the conjoined subject subsequently splits, but does so before the surface subject is raised

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<sup>10</sup> Alert readers will notice that the conjunction meaning ‘and’ is phonologically identical (in most contexts) to the comitative ‘preposition’ *ne*. Thus (10a) with class 1 agreement on the verb would mean ‘the man with the dog’. One cannot have [The dog with the man] with c9 agreement on the verb though (unless the dog is in charge). The homophony between ‘and’ and ‘with’ may very well contribute to the ease in which such structures are formed and related to conjoined subjects in Lubukusu, and perhaps in Bantu more generally.

to Spec TP position.<sup>11</sup> Thus the SM agrees with the singular, but the RCM is anteceded by the conjoined subject in Spec vP. We hypothesize that this difference between the RFM and the RCM emerges because the RFM is higher in structure, and so only sees the singular subject after the split. Thus the RFM can only have a singular antecedent, not the full antecedent that the RCM sees.<sup>12</sup>

## 5. Our structural assumptions and the form of derivations

We propose that comitative constructions in Lubukusu are derived by a literal split of a conjoined subject in the course of the syntactic derivation. In cases like (11a) and (12a), where the subject is conjoined, we assume that the external argument of the verb originates in Spec vP (e.g., as in Chomsky 2000:102) and raises through intervening projections to Spec TP (or whatever the canonical subject position is for those subjects that trigger agreement on the verb) with resulting default plural agreement, class 8. However, for the pattern where the *ne*-phrase is postverbal, the verb agrees with the one preverbal conjunct, and the interpretation is that the subject is conjoined, as in (11b) and (12b), we propose that the derivation begins again as in (11a) and (12a), respectively, but the first conjunct raises out of the full conjunction, stranding the *ne*-phrase in Spec vP. In this situation, the DP that reaches Spec TP is only the first conjunct, and so only the first conjunct determines agreement as in (13c) (copies created by movement are italicized).

- 13a) [TP T ...[vP [DP<sub>pl</sub> hunter [ne giraffe]] [v' v [vP see (AGR-eene)]]]]  
 b) [TP [DP<sub>pl</sub> hunter [ne giraffe]] [T...[vP [DP<sub>pl</sub> hunter [ne giraffe]] [v' v [vP see (AGR-eene)]]]]  
 c) [TP [DP<sub>sg</sub> hunter] [T...[vP [DP<sub>pl</sub> hunter [ne giraffe]] [v' v [vP see (AGR-eene)]]]]

Thus comitative split achieved by first conjunct raising explains the agreement pattern.

The difference between the RFM, which is only sensitive to the surface subject, and the RCM, which is only sensitive to the subject in Spec vP can be accounted for by associating the RCM with little v, or 'low voice' (lv) and the RFM with some higher head position, which we will simply call high voice (hv). Insofar as lv is what we presume to be the phase head, we assume it is always present, but we are neutral as to the necessity of hv when it has nothing in it. The difference between the positions of the RFM and the RCM in (14a,b) and (15a,b) and the way the derivation proceeds then together explain the difference in interpretation between the RFM and the RCM in comitative constructions, respectively (the order of embedding is most easily read from the order of the outer brackets on the second line of each example)

- 14a) [TP [DP<sub>pl</sub> hunter [ne giraffe]] [T' T...[<sub>hvP</sub> [DP<sub>pl</sub> hunter [ne giraffe]] [<sub>hv'</sub> hv.RFM  
 [<sub>lvP</sub> [DP<sub>pl</sub> hunter [ne giraffe]] [<sub>lv'</sub> lv [vP see (AGR-eene)]<sub>vP</sub>]]<sub>lvP</sub>]]<sub>hvP</sub>]]TP  
 b) [TP [DP<sub>sg</sub> hunter] [T' T...[<sub>hvP</sub> [DP<sub>sg</sub> hunter] [<sub>hv'</sub> hv.RFM  
 [<sub>lvP</sub> [DP<sub>pl</sub> hunter [ne giraffe]] [<sub>lv'</sub> lv [vP see (AGR-eene)]<sub>vP</sub>]]<sub>lvP</sub>]]<sub>hvP</sub>]]TP  
 15a) [TP [DP<sub>pl</sub> hunter [ne giraffe]] [T...[<sub>hvP</sub> [DP<sub>pl</sub> hunter [ne giraffe]] [<sub>hv'</sub> hv  
 [<sub>lvP</sub> [DP<sub>pl</sub> hunter [ne giraffe]] [<sub>lv'</sub> lv.RCM [vP see (reciprocal phrase)]<sub>vP</sub>]]<sub>lvP</sub>]]<sub>hvP</sub>]]TP  
 b) [TP [DP<sub>sg</sub> hunter] [T' T...[<sub>hvP</sub> [DP<sub>sg</sub> hunter] [<sub>hv'</sub> hv  
 [<sub>lvP</sub> [DP<sub>pl</sub> hunter [ne giraffe]] [<sub>lv'</sub> lv.RCM [vP see (reciprocal phrase)]<sub>vP</sub>]]<sub>lvP</sub>]]<sub>hvP</sub>]]TP

<sup>11</sup> Seidl and Dimitriadis (2002) argue against the split conjunct analysis on the grounds that reciprocal interpretation associated with comitative split is more constrained in interpretation. They point out that Swahili sentences like one corresponding to 'The boys and the girls praised each other' allows pairings of boys praising each other, while the comitative construction requires boy-girl pairings. We believe that this is a result of the pragmatics, because the construction structurally and prosodically isolates the two sets, but we will not make this argument here.

<sup>12</sup> We have simplified the presentation of the data by not including all the complex permutations that result from default class 8 agreement in the comitative construction, and while further results for the theory of agreement and antecedency can be gleaned from the broader pattern, we limit our presentation for reasons of space, though we expect to return to the matter in future research. For more on the rich varieties of agreement in Lubukusu, see Diercks (2010) and Carstens and Diercks (2011).

When high voice is associated with the RFM, as in (14), agreement will be determined by whether or not first conjunct comitative split occurs below hv.RFM or not. In (14a), the whole conjunct is raised through Spec hvP, and the RFM will be anteceded/licensed by the conjoined DP in its Spec hvP, hence interpreted as plural, i.e., ‘The hunter and the giraffe saw themselves.’ T will then Agree with the conjunct DP in Spec hvP that subsequently moves to Spec TP, with class 8 agreement resulting. In (14b), first conjunct comitative split occurs when *hunter* is raised to Spec hvP, where it licenses/antecedes the RFM associated with hv, and thereby determines a singular interpretation for the RFM. Subject agreement with the DP raised from Spec hvP position will then be singular. The only difference in the derivations in (15a,b) is that the RCM is associated with the lv and not the hv (if the hv is present at all). It does not matter for the interpretation of the RCM in (15a,b) whether the conjunct in Spec lvP splits subsequently in the derivation because the RCM will always have the conjoined antecedent in Spec lvP. When the split does occur, as in (15b), the subject that raises to Spec TP will be the singular class 1 ‘hunter’, but the interpretation is correctly predicted to be unaffected.<sup>13</sup>

We are not the first to propose the derivational splitting of a conjunct to explain the Bantu comitative construction. Mchombo and Ngunga (1994) in their paper on Ciyao propose a splitting analysis also, but they assume that the operation is not the raising of the first conjunct, but the extraposition of the second conjunct to a position in the right periphery. We believe both sorts of derivations are possible, but they lead to notably different agreement patterns. The extraposition analysis, when the *ne*-phrase moves rightward, results in plural agreement, whereas first conjunct extraction leads to agreement with only the extracted conjunct. If the extraposition analysis were to account for singular agreement, it would have to be assumed rightward movement does not leave a copy (or a trace with phi-features), or else the movement will not change the agreement pattern (e.g., default class 8 would appear in (11b) and (12b)). We believe that when the extraposition of the *ne*-phrase takes place it does indeed leave a copy, as all movements do in our theory, so even the position the *ne*-phrase moves out of contains a *ne*-phrase copy, i.e., the remnant remains plural. As a result, second conjunct split (*ne*-phrase extraposition) results in default class 8 agreement on the verb, as shown in (16a), which is also acceptable in Lubukusu. Mchombo and Ngunga did not explore the behavior of the RFM or the RCM in Ciyao in this construction, but in Lubukusu there is another consequence of the plural agreement: (16a) must have the plural reflexive interpretation.

16a) *Omuhayi byébona ne etwika*

o-mu-hayi bi-a-i-bon-a ne e-twika

c1-c1-hunter SM.c8-PST-RFM-see-fv with c9-giraffe

\*The hunter saw himself with the giraffe

?The hunter and the giraffe saw themselves

b) *Omuhayi byábonana ne etwika*

o-mu-hayi bi-a-bon-an-a ne e-twika

c1-c1-hunter c8-T-see-RCM-fv with c9-giraffe

The hunter and the giraffe saw each other.

The reciprocal in (16b) is unaffected, which is unsurprising on our analysis, because every derivation with an external argument begins with the thematic subject in Spec lvP, a position where the RCM can be licensed/anteceded by its specifier. In the derivation of these sentences, it does not matter at what point in the derivation the second conjunct split takes place (or even first conjunct split), since movement to the right does not affect agreement one way or the other. Thus it is possible that the split takes place after raising to, or raising beyond, Spec hvP, but wherever it takes place, the subject in

<sup>13</sup> There is another crucial assumption here that we cannot independently justify, namely, that one cannot move out just the first conjunct from the conjunction when it is in Spec,hvP. If the first conjunct splits at all, it has to split low, i.e., in Spec,lvP. Otherwise we could derive plurally interpreted RFMs with singular agreement, which is what we have shown not to exist. The restriction is interesting, but puzzling at this point.



Spec TP will still be inhabited by (copies of) both conjuncts. As a result of second conjunct split, hv.RFM will be anteceded/licensed by a plural that passes through Spec hvP and the sentence will be interpreted as plurally reflexive. Schematic examples with early and late second conjunct split are presented in (17a,b), respectively, where the bolded italics are the copies created by the rightward movement (early in (17a) and late in (17b)).

- 17a) [TP [DP<sub>pl</sub> *hunter* [***ne giraffe***]] [T...[<sub>hvP</sub> [DP<sub>pl</sub> *hunter* [***ne giraffe***]] [<sub>hv'</sub> hv.RFM  
 [<sub>lvP</sub> [DP<sub>pl</sub> *hunter* [***ne giraffe***]] [<sub>lv'</sub> lv [<sub>VP</sub> see (AGR-*eene*) ] ] ] ] ...[***ne giraffe***]]  
 b) [TP [DP<sub>pl</sub> *hunter* [***ne giraffe***]] [T...[<sub>hvP</sub> [DP<sub>pl</sub> *hunter* [***ne giraffe***]] [<sub>hv'</sub> hv.RFM  
 [<sub>lvP</sub> [DP<sub>pl</sub> *hunter* [***ne giraffe***]] [<sub>lv'</sub> lv [<sub>VP</sub> see (AGR-*eene*) ] ] ] ] ] ...[***ne giraffe***]]

As is generally the case, we assume that in morphology, only the highest copy is pronounced, and so wherever the landing site is for the rightward moved second conjunct, it is presumably in a position that c-commands the other copies of *ne giraffe*. Otherwise, we have no analytic commitment as to where the rightward-moved second conjunct attaches in the right periphery, except that it can occur to the right of the direct object, but more on this below.

To summarize, we have proposed that the RFM is associated with the hv head which is higher in structure than the lv head. The RCM is associated with the lv head and Spec lvP is where the external argument is introduced. Left conjunct split, extraction of the left conjunct from the conjoined DP to the next higher Spec position, creates differences in agreement on the verb and in interpretation for the RFM. In such a derivation, the RFM is licensed by a single conjunct, not the whole conjoined structure, and so both reflexive interpretation and verb agreement are with the single conjunct. The RCM is licensed in a position below left conjunct split, and so its interpretation is unaffected by comitative split, though verb agreement is with the single conjunct as it is in the case with the RFM. Second conjunct split does not affect either agreement or interpretation because the full conjoined DP remains intact as a copy in all of the Spec positions it inhabits as it travels up the clausal structure; Both the RFM and the RCM are interpreted with the full conjunct as licensing antecedent and verb agreement is default plural in both cases.

## 6. Further supporting evidence for the derivational approach?

Our proposal makes a striking prediction about the possible word orders for comitative structures after the comitative split. If the comitative split occurs by first conjunct extraction from the initial conjunction in Spec lvP, and if the verb raises through the heads of the verbal spine, collecting affixes as it goes, then the verb will end up to the left of the comitative phrase in Spec vP, but *the comitative phrase can also be to the left of the direct object in combination anaphor structures*. This prediction is correct.

- 18a) *Omuhayi óbonana ne etwika bíbyeene khu byeene*  
 o-mu-hayi a-a-bon-an-a ne e-twika bi-bi-eene khu bi-eene  
 c1-c1-hunter c1-PST-see-RCM-fv with c9-giraffe c8-c8-OWN on c8-c8-OWN  
 The hunter and the giraffe saw each other.  
 b) *??Omuhayi abonana bíbyeene khu byeene ne etwika*  
 o-mu-hayi a-a-bon-an-a bi-bi-eene khu bi-eene ne e-twika  
 c1-c1-hunter SM.c1-PST-see-RCM-fv c8-c8-OWN on c8-c8-OWN with c9-giraffe  
 The hunter and the giraffe saw each other.

Neither of these sentences is fully acceptable because there is a mismatch between the class 8 agreement in the reciprocal phrase and the class 1 agreement on the SM. Moreover, this is not the best way to construct this meaning, which is more comfortably rendered with class 8 agreement on the SM. However, the contrast in (18a,b) is striking, since in this instance, *the anaphoric expression that is NOT in surface close construction with the verb is preferred*. We claim that this is due to the fact that close construction still holds in such cases, because the lowest copy of the verb, the one in VP, is

still adjacent to the DO containing the reciprocal phrase, given our structure in (15b). As remarked earlier in note 3, there is no alternative adjunct meaning for the reciprocal phrase, so accommodation weakens the effect, but where only the placement of the *ne*-phrase is at issue, the preference is for the structure that superficially violates close construction, but that respects it at an earlier point in the derivation in our analysis.<sup>14</sup>

We must regard our analysis of (18) as tentative right now, as there are complicated cases involving comitative split, complex anaphora, and class 8 agreement on the SM that are not so straightforward in our account and we hope to address these in future research. We have no evidence at this juncture, however, that the necessary approach to the class 8 cases will undermine this evidence for a derivational account.

## 7. Remarks and conclusion

We have established that Lubukusu combination anaphors involve a relationship between an affix on the verb and an anaphor in direct object position, on the basis of close construction effects and the co-occurrence of the RFM and the RCM associated with the same thematic argument in the mixed interpretation. We then examined a difference between the placement of the heads we posit these affixes to be associated with by exploring a difference between them that arises in the comitative construction. Our analysis of the comitative construction allowed for two forms of split, where first conjunct raising produces differential effects for interpretation of the RFM and for SM agreement, while second conjunct extraposition did not affect plural antecedent interpretation for either affix and agreement on the SM remains plural. Our analysis of the comitative construction accurately predicts the absence of close construction effects for combination anaphors when comitative split is accomplished by raising the first conjunct– the comitative phrase can precede the DO anaphor.

Combination anaphors raise questions about how thematic arguments are saturated and how affixes are licensed and interpreted that suggest comparisons with other Bantu languages. On our account the RFM and the RCM must have subject antecedents (passing through the Spec of the heads they are associated with) but do not themselves saturate argument positions, leaving saturation to a DO anaphor or an anaphoric *pro* (licensed by the affixes). This is not to say that the RFM cannot be an argument-saturating argument in some other Bantu language, as Mchombo (2004) has maintained for Chichewa, but the existence of combination anaphors in Lubukusu establishes that not all Narrow Bantu languages are like Chichewa in this respect, and thus a new paradigm for comparative work is opened up.

Our commitment to a derivational approach is what enables us to make the right predictions about interpretations and close construction effects for affixal and combination anaphors, so the analysis we propose is a challenge to non-derivational analyses, insofar as such analyses must show that they can capture the same generalizations in a natural way. Finally, interesting issues arise for the expression of agreement in complex anaphora contexts that we have barely touched on here, but that we are investigating in other work in progress.

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<sup>14</sup> Adverbs in Lubukusu do not normally precede the verb, and so verb raising would not be expected to allow a V to raise to the left of an underlyingly preverbal adverb, permitting the adverb to appear before the DO, violating close construction. When an adverb intervenes between verb and NP a notable pause is required after the adverb, suggesting right dislocation. We take this to mean that the close construction effect is still there.

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