

Title: The morphosyntax of Lubukusu locative inversion and the parameterization of Agree

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Abstract:

This paper examines two previously undiscussed locative inversion constructions in Lubukusu (Bantu) with respect to both their theoretical and typological significance. Repeated agreement locative inversion has two distinct verbal affixes which agree with the fronted locative phrase, whereas the verb agrees with both the fronted locative and the postverbal subject in disjoint agreement locative inversion. Each critical aspect of these constructions is explored—the nature of the locative clitic that appears, the position of the fronted locative phrase, and the position of the postverbal subject—concluding that the two locative inversion constructions have very different structural properties. These different structures are then used to examine the apparently ‘downward’ agreement pattern in disjoint agreement locative inversion in light of the Upward Agreement Hypothesis, that is, the claim by Baker [The syntax of agreement and concord, Cambridge University Press, Cambridge; among others] that heads in Bantu languages agree with structurally higher phrases. The analyses proposed offer insight into the place of Lubukusu locative inversion among other (Bantu) locative inversion constructions, as well as giving evidence that the apparent counter-evidence of disjoint agreement locative inversion in the end is nonetheless amenable to an ‘upward’ agreement analysis, further supporting the Upward Agreement Hypothesis.

Keywords: locative inversion, locative morphology, agreement, Bantu

1 Introduction

There is a long tradition of analyses of locative inversion (LI) in Bantu languages, in no small part because of the interesting agreement patterns that occur in these constructions. Locative inversion is a non-canonical word order that fronts a locative phrase and positions the subject postverbally (in canonically S-V-O languages). In English the verb agrees with the ‘logical’ subject despite its non-canonical postverbal position:

- (1) a. Down the hill roll **the balls**.
b. Down the hill rolls **the ball**.

The agreement pattern in (1) accords the conception of the Agree relation as probing into its c-command domain, as codified in (Chomsky, 2000, 2001, 2004). Locative inversion in many Bantu languages displays agreement properties distinct from the ‘downward-looking’ properties of (1), however, where a locative phrase occurs in canonical subject position and triggers subject agreement with the verb, and the logical subject does not, as shown in (2b):

- (2) a. **A-nyani a-a-khal-a m-mi-tengo.**¹ [Chichewa]
2-baboon 2S-PRF-sit-FV 18-4-tree (Bresnan and Kanerva, 1989: (4))
‘Baboons are sitting in the trees.’

¹ A note on glossing conventions: numbers represent noun class (i.e. gender and number), not person; ‘S’ signifies subject agreement, ‘L’ signifies the locative clitic, ‘O’ signifies an object marker. ‘PRF’ stands for perfective aspect, ‘CONT’ for continuous, ‘PST’ for past tense, ‘AP’ for applicative, and ‘FV’ for the final vowel.

b. **M**-mi-tengo **mw**-a-khal-a a-nyani.

18-4-tree 18S-PRF-sit-FV 2-baboon

‘In the trees are sitting baboons.’

Data such as (2b) have given rise to recent work arguing that heads in Bantu agree with a structurally higher phrase rather than a structurally lower phrase, what I will refer to as the Upward Agreement Hypothesis (for Bantu) (Baker, 2008; Carstens, 2005; Collins, 2004).

This paper focuses on Lubukusu (Bantu J.30), spoken in Western Kenya by 550,000-800,000 people.² Lubukusu has two distinct locative inversion constructions, both of which have not been discussed in the theoretical literature, to my knowledge, and both of which address the broader question of how to parameterize Agree. I refer to these constructions as *disjoint agreement* locative inversion and *repeated agreement* locative inversion, given in (4) and (5):

(3) Kú-mú-saala kw-á-kwá mu-mu-siiru. [Lubukusu]

3-3-tree 3S-PST-fall 18-3-forest

Declarative

‘A tree fell in the forest.’

(4) **Mú**-mú-siirú kw-á-kwá-**mó** kú-mú-saala. [Lubukusu]

18-3-forest 3S-PST-fall-18L 3-3-tree

Disjoint Agreement LI

‘In the forest fell a tree.’

² Estimates vary widely as to the number of Lubukusu speakers: see Mutonyi (2000) and Lewis (2009) for a few estimates. Lubukusu has also been reclassified from its Guthrie classification of E31c to J30 in Lewis (2009), and JE31c in Maho (2008).

(5) **Mú**-mú-siirú **mw**-á-kwá-**mó** kú-mú-saala. [Lubukusu]

18-3-forest 18S-PST-fall-18L 3-3-tree

Repeated Agreement LI

‘In the forest fell a tree.’

What distinguishes these locative inversions from previously reported constructions is that both of these constructions bear an additional (obligatory) agreement suffix which agrees with the locative phrase. Regarding subject agreement, the *repeated agreement* construction accords with the general Bantu pattern exhibited in (2) where the verb subject-agrees with the fronted locative phrase (with locative agreement repeated postverbally). In contrast, the verb in the *disjoint agreement* construction essentially agrees with both the logical subject and the locative: subject agreement on the verb is English-like (agreeing with the postverbal logical subject) and the postverbal locative clitic agrees with the fronted locative phrase. As will be discussed in more depth in section 3, this apparently diverges from general agreement patterns in other Bantu languages and within Lubukusu itself, bringing into question the Upward Agreement Hypothesis.

The paper will proceed in this manner: the next section discusses the typology of locative inversion in Bantu languages, and introduces the Lubukusu constructions in light of that typology. Section 3 discusses the relevance of these constructions to a parameterized theory of Agree, with special attention to Bantu languages. Section 4 discusses a variety of evidence which leads to different structural analyses of (4) and (5), namely, that the locative phrase is in subject position in (5) but not in (4). Section 5 then gives the full analysis, and revisits the implications of Lubukusu locative inversion for a theory of Agree, showing that the Upward Agreement Hypothesis can indeed be upheld given the appropriate analysis of Lubukusu locative inversion.

2 Locative inversion in Bantu

This section discusses the general structure and typology of Bantu locative inversion, for which there is a reasonably large literature both with reference to thematic structures that are possible with locative inversion, as well as its the morpho-syntactic exponents (cf. Bresnan, 1994; Bresnan and Kanerva, 1989; Culicover and Levine, 2001; Doggett, 2005; Levin and Rappaport Hovav, 1994; among others). Demuth (1990), Demuth and Mmusi (1997), Marten (2006), and Buell (2007) unveil a fair degree of variation between Bantu languages with regard to the morphology associated with locative inversion. In particular, they have observed that the use of morphologically locative forms as subject agreement on the verb may perform different functions, either a fully locative function (i.e. with robust (indexical) locative meaning) or a non-locative, mainly expletive function that does not carry with it any sense of a location being referred to. As a result of this sort of variation, Buell (2007) proposes that there are in fact two different basic structures of locative inversion constructions, which he terms “agreement constructions” and “non-agreeing constructions”. “Agreement constructions” are those in which an agreement relation is established between the fronted locative phrase and the verb as in (6):

- (6) a. [_{AgSP} locative] [_{AgS} SM-V] (Buell, 2007: (5))
b. [_{TopP} locative_i] [_{AgSP} t_i] [_{AgS} SM-V]
c. [_{TopP} locative_i] [_{AgSP} pro_i] [_{AgS} SM-V]

In each of the possibilities given in (6), the phi-features of the locative phrase either directly or indirectly control the phi-features which are realized on the subject agreement marker. This is

exemplified by the Zulu locative inversion example in (7), where subject agreement on the verb is triggered by the fronted locative phrase:³

- (7) Lesi sikole si-fund-ela izingane ezikhubazekile. [Zulu]
 7.this 7.school 17S-study-AP 10.children 10.handicapped (Buell, 2007: (12))
 ‘Handicapped children study at this school.’

“Non-agreeing constructions,” on the other hand, are typified by a structure where a non-referential *pro* occupies subject position.

- (8) a. [_{TopP} locative_i [_{AgrSP} pro_{loc} [_{AgrS} SM-V (Buell, 2007: (6))
 b. [_{TopP} locative_i [_{AgrSP} pro_{expl} [_{AgrS} SM-V

In these cases, subject agreement is controlled by the expletive in subject position, not by the locative or the subject. An example of this is shown in (9), where an invariant class 17 subject marker appears on the verb and the fronted locative appears in a locative form:

- (9) Ku-lezi zindlu ku-hlala (khona) abantu abadala. [Zulu]
 at-10.these 10.houses 17S-stay (there) 2.people 2.old (Buell, 2007: (8))
 ‘In these houses live old people.’

³ Note that in this the verb agrees with the inherent noun class of the location phrase, rather than a locative noun class. Buell (2007) classifies these constructions as ‘semantic’ locative inversion, as compared to the ‘formal’ locative inversion example given above for Chichewa. I refer the reader to Buell’s paper for the full analysis.

Buell argues that in (9) a null locative pronoun or null expletive occurs in subject position and triggers class 17 subject agreement on the verb, while the locative phrase is in the left periphery.

In addition to these differences in subject agreement, there is also cross-linguistic variation with respect to the sort of verbs that locative inversion may occur with. Bresnan and Kanerva (1989) and Bresnan (1994) claimed that locative inversion is restricted to verbs whose highest thematic role is a theme (generally, unaccusatives), based on data from Chichewa and English (see (2)). Demuth and Mmusi (1997) contested this claim, however, demonstrating that in some languages locative inversion is also possible with unergative verbs (i.e. agentive verbs):

- (10) Mó-le-fátshé-ng gó-fúla di-kgomo. [Setswana]
18-5-country 17S-graze 10-cattle (Demuth and Mmusi, 1997: (4))
'In the country are grazing the cattle.'

Marten (2006) showed that there are also Bantu languages which allow locative inversion with active transitive verbs. He discusses Otjiherero, but I demonstrate the phenomenon here with data from Digo.

- (11) Mo chumba-ni mu-na-andika mutu baruwa. [Digo]
18.DEM room-LOC 18S-CONT-write 1.person 9.letter (Steve Nicolle, pc)
'Someone is writing a letter in the room.' (lit. 'In the room is writing someone a letter.')

As Marten (2006) demonstrates, locative inversion constructions occur in an implicational hierarchy across the Bantu language family, which is shown in (12). At the left side of the chart

are the more restrictive languages, and at the right are the less restrictive languages. Locative inversion in Chichewa is possible with unaccusative verbs, but not with unergative verbs or transitive verbs. Setswana allows locative inversion with unergatives and unaccusatives, but not with transitives. Otjiherero and Digo, on the other hand, allow locative inversion with unaccusatives, unergatives, and transitives.

(12) Availability of locative inversion (Marten 2006)

| | | | | | | | | |
|---------------|---|---------------|---|-------------|---|-------------|---|---------------|
| | | non- agentive | | agentive | | active | | Active |
| unaccusatives | > | unergatives | > | unergatives | > | Transitives | > | Ditransitives |
| Chichewa | | Chishona | | Setswana | | Otjiherero | | * |

As we will see in what follows, Lubukusu provides further evidence for this hierarchy, though at the same time distinguishing different structural configurations that are available for different levels on the hierarchy given above (for Lubukusu, at least).

3 Agreement in Lubukusu/Bantu

This section explores the properties of agreement in Bantu, drawing on recent research like (Baker, 2008) to elucidate these properties. First, however, it is necessary to clarify some basic Lubukusu morphology.

3.1 Bantu noun class morphology

Bantu languages possess a (potentially large) number of noun classes, which are generally comparable to grammatical genders. These noun classes trigger different agreement forms on various heads in the language. Bantu noun classes are categorized into numbers which correspond to the reconstructed proto-Bantu noun classes, allowing for comparison across languages. Bantu languages generally have at least 5 sets of noun classes (singular and plural

pairs, classes 1-10), in addition to the locative classes 16-18, though the precise noun class inventory varies from language to language.

Lubukusu retains the proto-Bantu locative noun classes: class 16 *pa, class 17 *ku, and class 18 *mu. In Lubukusu these are realized as the prefixes *a-*, *khu-*, and *mu-*, respectively.⁴ Like in many Bantu languages, nouns in Lubukusu bear two prefixes—the prefix and the pre-prefix—both of which are realizations of a particular noun class.⁵ The locative form of a noun is formed by replacing a word’s pre-prefix with a locative pre-prefix, as demonstrated in (13):

- | | | |
|-------------------------------|-----------------|-----------------|
| (13) a. ku -mu-lyaango | ‘door’ | [Lubukusu] |
| 3-3-door | | (Mutonyi, 2000) |
| b. a -mu-lyaango | ‘near the door’ | |
| 16-3-door | | |
| c. khu -mu-lyaango | ‘on the door’ | |
| 17-3-door | | |
| d. mu -mu-lyaango | ‘in the door’ | |
| 18-3-door | | |

Once a noun (phrase) is co-opted into a locative noun class, it is capable of triggering locative agreement in the appropriate contexts. In what follows, then, noun phrases of class 16, 17, or 18 will be referred to as locative phrases.

⁴ According to Lubukusu orthographic convention, I represent the voiceless velar fricative [x] with the digraph ‘kh’.

⁵ In other work the pre-prefix is also referred to as an ‘augment’, ‘augment vowel’, or ‘prevowel’.

3.2 Upward Agreement Hypothesis

I adopt the framework for syntactic agreement that is set forth in Baker (2008), which proposes a revised version of Chomsky's (2000, 2001) Agree relation. According to Chomsky (2000, 2001), the uninterpretable ϕ -features of a probe α seek a goal β with interpretable ϕ -features and an unchecked Case feature within its c-command domain.

(14) Agree

$$\begin{array}{ccc} [\alpha \ [\dots \ \beta \ \dots]] & \longrightarrow & [\alpha \ [\dots \ \beta \ \dots]] \\ [u\phi] \quad [\phi, u\text{Case}] & & [\cancel{u}\phi] \quad [\phi, \cancel{\text{Case}}] \end{array}$$

Agree results when the probe's search is successful, resulting in the deletion (or valuation) of the uninterpretable features of the probe and the Case feature of the goal. Once its Case has been eliminated, the goal β is no longer a candidate for further Agree relations. Baker (2008: 45) summarizes the c-command requirement of Agree in this way: "a functional head agrees with XP only if F c-commands XP." Baker then modifies this as in (15) so that it is not necessary that the probe be the c-commanding element, only that the probe and the goal be in a c-command relationship:

(15) F agrees with XP only if F c-commands XP *or* XP c-commands F.

Baker proposes that this (revised) Agree relation is subject to two parameters, shown in (16) and (17), claiming that Bantu languages systematically obey (16) and not (17), while Indo-European languages obey (17) and not (16).

- (16) Directionality Parameter: F agrees with DP only if DP asymmetrically c-commands F.
- (17) Case Parameter: F agrees with DP only if F values the Case feature of DP (or visa versa).

The prediction for a Bantu language like Lubukusu, therefore, is that a functional head may only agree with a DP that c-commands it. That is, agreeing heads in Lubukusu only probe ‘upwards’, a proposal which I refer to as the Upward Agreement Hypothesis. Bantu scholars have long argued that agreement occurs in a strictly local (usually spec-head) relationship in Bantu (cf. Kinyalolo, 1991; Baker, 2003; Koopman, 2000; Demuth and Harford, 1999; Henderson 2006; among others) and Baker’s macro-parametric approach may be a way of deriving this claim. In separate work, Carstens (2005) and Collins (2004) link EPP/OCC features with Agree rather than changing the nature of the Agree relation itself, deriving the same result in most cases, but addressing the same issue—Bantu agreement has properties which vary in a systematic way from Indo-European languages.⁶

3.3 *Agreement in Lubukusu*

In many constructions Lubukusu confirms the predictions of the Upward Agreement Hypothesis, as relative and cleft complementizers, embedding complementizers, associative markers, locative clitics (see §4.2), and (generally) subject agreement all accord with it.⁷ Evidence from locative inversion is especially important for Baker’s (2008) argument, as even non-subjects will trigger

⁶This is not to say that the Upward Agreement Hypothesis applies straightforwardly to all Bantu languages, as pointed out to me by Jenneke van der Wal and Kristina Riedel. As this paper argues, however, apparent counter-evidence (like Lubukusu locative inversion) may well be found to accord with the Upward Agreement Hypothesis when subjected to careful structural analysis. See §5.2 for further discussion.

⁷ Most of these agreements are typical to Bantu, but the agreeing embedded complementizer and locative clitic are much more rare, to my knowledge.

subject agreement in the correct structural configuration, as was shown in (2).⁸ The specific settings of the Directionality Parameter in (16) and the Case Parameter in (17) are both crucial here – upward agreement guarantees that the raised locative phrase is the agreed-with phrase, but the fact that Agree(ment) is not dependent on Case valuation allows for a subject to appear postverbally while not triggering any form of agreement on the verb.

We see this evidence in the Lubukusu repeated agreement locative inversion construction: subject agreement is with the fronted locative phrase, and there is no agreement with the in situ logical subject, as shown in (18):

- (18) **Mú**-mú-siirú **mw**-á-kwá-**mo** kú-mú-saala. [Lubukusu]
 18-3-forest 18S-PST-fall-18L 3-3-tree **Repeated Agreement LI**
 ‘In the forest fell a tree.’

Baker’s account does not apply uncontroversially to Lubukusu, however, as (19) shows that disjoint agreement locative inversion in Lubukusu displays what is apparently ‘downward’ agreement with the logical subject.

- (19) Khú-sí-kúlú **kw**-á-biringikhá-khó **kú**-m-pírá. [Lubukusu]
 17-7-hill 3S-PST-roll-17L 3-3-ball **Disjoint Agreement LI**
 ‘On/down the hill rolled the ball.’

⁸ Subject-object inversion (or reversal) is another example of such a construction; in these cases the object raises to subject position and triggers subject agreement (Ndayiragije, 1999; Keach, 1980; Henderson, 2006; Morimoto, 2000). This construction is not present in Lubukusu to my knowledge.

The same ‘downward’ agreement pattern is also true of what might be termed “presentational constructions” in Lubukusu. In prototypical Bantu presentational constructions the verb has invariant locative subject agreement (presumably agreeing with a null expletive), as is shown in the Setswana example in (20):

- (20) *pro* **Gó**-fith-ílé rré. [Setswana]
 17S-arrive-PRF 1S.father (Demuth and Mmusi, 1997: (12))
 ‘There arrived father.’

As (21)-(22) show, however, the closest equivalent to a presentational construction in Lubukusu shows the same agreement pattern as disjoint agreement locative inversion:

- (21) **Bá**-a-kwá-mó bá-bá-ana. [Lubukusu]
 2S-PST-fall-18L 2-2-child
 ‘In there fell children.’

- (22) **B-ólá**-o bá-bá-ana a-bo
 2S-PST.arrive-16L 2-2-child DEM-2
 ‘There arrived those children.’⁹

What we find, therefore, is that despite the fact that Lubukusu displays prototypical Bantu ‘upward’ agreement properties—obeying the Directionality Parameter and not the Case

⁹ But see §4.5.3 for a more precise classification of these constructions, along with §4.2 for in-depth discussion of the locative clitic that appears in these constructions.

Parameter—certain constructions apparently show ‘downward’ agreement with a postverbal subject. This is particularly interesting given that repeated agreement locative inversion shows productive subject agreement with the fronted locative phrase, otherwise seeming to confirm Baker’s (2008) predictions. This also raises the question of how these two apparently divergent agreement patterns are possible within the same language.

There are various ways to approach this apparent contradiction in agreement properties. First, we could conclude that a macroparameter approach like that set forth in (Baker, 2008) is not viable, and that instead agreement must be parameterized on a case-by-case basis for each functional head in each language. This would explain the ‘downward’ agreement in disjoint agreement locative inversion as compared to the other Lubukusu agreement relations, but it does not explain why the same head can show both ‘upwards’ and ‘downwards’ agreement in the two locative inversion constructions in Lubukusu.

Alternatively, one could maintain that Agree always probes upward in Bantu, and at some point in the derivation of Lubukusu disjoint agreement locative inversion, the logical subject (or the features of the logical subject) are structurally higher than the subject-agreeing head. In what proceeds, I argue for the latter on both conceptual and empirical grounds: it maintains a more restrictive account of agreement than the first approach does, and various diagnostics demonstrate that these two locative inversion constructions do in fact show significant structural differences which can be drawn on to account for the differences in agreement. Specifically, I claim that the fronted locative phrase in disjoint agreement locative inversion is not in subject position, rather, the logical subject occupies this position, and the inverted word order is created by verb-raising over the subject. The next section examines the structure of these two locative inversion constructions in more depth, discussing possible

analyses for the both, along with a specific examination of the disjoint agreement construction in particular.

4 The structure of Lubukusu locative inversion

4.1 *Locative inversion in Lubukusu*

As was discussed above, locative inversion in Lubukusu has several noteworthy properties, not least of which being the presence of two different (agreeing) constructions. Also, these constructions obligatorily have a locative clitic suffixed to the verb which agrees with the fronted locative phrase. Furthermore, disjoint agreement locative inversion displays subject agreement with the postverbal logical subject, a surprising pattern given the previously reported Bantu locative inversion constructions. The verb here in effect agrees with both the fronted locative and the postverbal subject, as the locative clitic agrees with the fronted locative phrase and subject marker agrees with the postverbal subject.

- (23) **Mú-mú-siirú kw-á-kwá-mó kú-mú-saala.** [Lubukusu]
18-3-forest 3S-PST-fall-18L 3-3-tree **Disjoint agreement LI**
'In the forest fell a tree.'

- (24) **Mú-kánísá b-éngíla-mó bá-bá-andu.**
18-church 2S-PST.enter-18L 2-2-person
'In the church entered people.'

As discussed above, repeated agreement locative inversion has subject agreement akin to the more general Bantu pattern, but in Lubukusu this construction requires the presence of an agreeing locative clitic (like the disjoint agreement constructions).

- (25) **Khú-sí-kúlú khw-á-biringikhá-khó** kú-m-pira. [Lubukusu]
 17-7-hill 17S-PST-roll-17L 5-5-ball **Repeated Agreement LI**
 ‘On the hill rolled the ball.’

These two constructions are differentiated in a number of ways, evidenced by their properties in extraction contexts. Specifically, I will argue that repeated agreement locative inversion is a consequence of the phrase structure in (6a) (Buell’s “agreement construction”) whereas disjoint agreement locative inversion results from a different structure, more similar to Buell’s “non-agreeing” structure in (8b), though with important differences. First to be considered, however, is the locative clitic that appears in both of these constructions.

4.2 *The Lubukusu locative clitic*

This section explores the properties of the locative clitic in Lubukusu independently from locative inversion, in order to clarify its role in those constructions. First, like an object marker, the locative clitic may be used to pronominalize an argument of the verb, as seen in the statement and response given in (26) and (27):

- (26) **Bá-sóréerí khé-bá-enja** chí-ndemu mu-si-kuuri ... [Lubukusu]
 2-boy PROG-2S-look.for 10-snakes 18-7-field
 ‘The boys are looking for snakes in the field ...’

- (27) ... bá-a-**chí**-nyóla-**mo**.
 2S-PST-10O-*find*-18L
 ‘... they found them (in) there.’

The example in (27) also suggests that the locative clitic and the object marker arise in different syntactic positions, as they may co-occur. Moving on, (28) illustrates that the locative clitic is unacceptable with an *in situ* locative phrase.¹⁰

- (28) Kú-mú-rongóró kw-a-kw-íle-**mo** (*mu-mu-siiru) [Lubukusu]
 3-3-tree 3S-PST-fall-PST-18L (*18-3-forest)
 ‘A tree fell in there.’

The locative clitic may however occur with an overt corresponding phrase, as long as that phrase is left-dislocated, demonstrated in (29):

- (29) Mú-mú-sirú, ku-mw-ítí kw-a-kw-íle-**mo**. [Lubukusu]
 18-3-forest 3-3-tree 3S-PST-fall-PAST-18L
 ‘In the forest, a tree has fallen.’

The locative clitic shares all of the preceding properties with the object marker, but there are also points of contrast between the two morphemes. The first is illustrated extraction contexts. Object markers in Lubukusu are illicit when an object is extracted, whether in a cleft construction, a

¹⁰ Though omitted for space considerations, the data show that the locative clitic cannot pronominalize a non-argument locative phrase, so semantic selection plays a role.

relative clause, or a *wh*-question, illustrated by the cleft construction in (30). The locative clitic, on the other hand, can co-occur with an extracted locative phrase, demonstrated by the data in (31) and (32).

(30) Lw-á-bá lú-u-saala ní-lwó bá-bá-ana bá-a-(***lu**)-funa. [Lubukusu]
 11S-PST-be 11-11-stick COMP-11 2-2-child 2S-PST-7O-break **Object Cleft**
 ‘It was the stick that the children broke.’

(31) Mw-á-bá mú-nju ní-mwó bá-bá-ana bá-a-funa-**(mo)** lú-u-saala. [Lubukusu]
 18S-PST-be 18-house COMP-18 2-2-child 2S-PST-break-18L 11-11-stick **Locative Cleft**
 ‘It was in the house that the children broke the stick.’

(32) Mú-nju ní-mwó Péter á-lá-bóná-**(mó)** bá-ba-andu. [Lubukusu]
 18-house COMP-18 Peter 1S-FUT-see-18L 2-2-people **Locative Relative Clause**
 ‘the house in which Peter will see the people’

Additionally, as we have already seen, the locative clitic necessarily appears in both locative inversion constructions in Lubukusu: disjoint agreement locative inversion in (23)-(24), and repeated agreement locative inversion in (25).

Similar morphemes have been analyzed in at least two other Bantu languages—Kinyarwanda and Kilunda—though they show divergent properties from Lubukusu. Kawasha (2007) shows that Lunda has a locative clitic that (like Lubukusu’s) can pronominalize a locative morpheme, but that same morphological position may be used for a second object marker. (33a) shows a 4-place predicate in Lunda (*put* + applicative) with overt NP arguments; (33b) shows the

locative clitic appearing postverbally, and (33c) shows that the postverbal position may also pronominalize a second object which is not a locative phrase:

(33) a. Mu-mbanda wu-a-sh-il-a ka-ánsi ka-báka mu-i-hébi. [Lunda]

1-woman 1S-TNS-put-AP-FV 1-child 12-corn LOC-5-basket

‘The woman put the corn for the child in the basket.’

b. Mu-mbanda wu-a-mu-sh-il-a-mu ka-báka. **Locative Clitic**

1-woman 1S-TNS-1O-put-APPL-FV-LOC 12-corn

‘The woman put the corn for the child in it.’

c. Mu-mbanda wu-a-mu-sh-il-a-ku mu-i- hébi. **Second-Object Marker**

1-woman 1S-TNS-1O-put-APPL-FV-12O LOC-5-basket

‘The woman put it for the child in the basket.’ (Kawasha 2007: (10-11))

The Lubukusu equivalent of (33c) is unacceptable, however, emphasizing the locative-oriented nature of that morpheme in Lubukusu, and suggesting again that the Lubukusu locative clitic is not the same sort of syntactic element as the Lubukusu object marker.

In addition to Lunda, Kimenyi (1980) describes a similar morphosyntactic element in Kinyarwanda, a verb-final suffix that bears locative phi-features. It shows different syntactic properties, however, appearing in cases where the locative phrase loses locative morphology and is promoted to direct object (including DO position and properties). On Kimenyi’s interpretation, the locative clitic is a preposition that appears on the verb instead of the NP in those cases.

Again, the equivalent constructions are impossible in Lubukusu.¹¹ All of these properties of the Lubukusu locative clitic are summarized in (34):

(34) Properties of Bukusu Locative clitic

- i. Agrees only in locative noun class, with locative phrases
- ii. Can ‘pronominalize’ a locative argument
- iii. Impossible with an *in situ* locative phrase
- iv. Occurs with left-dislocated locative phrase
- v. Optionally possible with an extracted locative phrase
- vi. Obligatory occurs in both locative inversion constructions
- vii. Cannot promote a locative to direct object
- viii. Is not a second object marker

Moving towards an analysis of the locative clitic, I have shown that it is impossible with an *in situ* locative phrase, but acceptable with a left-dislocated locative phrase, properties that it shares with the object marker. The parallel could suggest that the locative clitic and the object marker are the same sort of syntactic elements, perhaps incorporated/resumptive pronouns. This sort of analysis would be consistent with the properties noted in (iii) and (iv) of (34).

As will be seen in §4.4 below, however, in the repeated agreement construction the locative phrase can occur in subject position when the locative clitic appears on the verb. This is inconsistent with an analysis of the locative clitic as an incorporated/resumptive pronoun, as we would not expect a resumptive pronoun to arise both in longer A'-movements (e.g. left-

¹¹ An anonymous *Lingua* reviewer points out that these sorts of agreements are typically an areal feature: see Beaudoin-Lietz (2004) for a typological overview.

dislocation) and shorter A-movements (e.g. VP-to-TP). Moreover, the bifurcation between the object marker and the locative clitic in extraction contexts in (31)-(30) further suggests that these are different morphosyntactic elements. This evidence leads me to an analysis that the object marker is indeed an incorporated pronoun, and the locative clitic is instead an agreement morpheme that arises on a locative-oriented functional projection.^{12,13}

This distinction is particularly useful in explaining the distinction between the locative clitic and the object marker in extraction contexts. If the object marker is an incorporated pronoun (i.e. the actual argument of the verb), we would not expect it to co-occur with an overt (extracted) object, which would be expected to have at one point in the derivation occupied the gap that is in fact occupied by the object marker. An analysis of the locative clitic as an agreement morpheme, on the other hand, explains its co-occurrence with an extracted phrase, as well as explaining its availability (though not necessarily its obligatory nature) in locative inversion constructions. The incompatibility of the locative clitic with an *in situ* locative phrase is then explained on the Upward Agreement Hypothesis: a locative phrase can only trigger agreement with the locative clitic if the locative phrase raises above the functional head which where the locative clitic arises. Therefore, the locative clitic cannot occur with an *in situ* locative phrase.

Regarding the position of the locative clitic, for the sake of simplicity here I assume that it arises on an AgrL projection (Locative Agreement) in the inflectional field (similar to the AgrO projection of Chomsky, 1995).¹⁴ Following the Upward Agreement Hypothesis, this agreement is only realized when the locative phrase raises over the AgrL position. The presence

¹²See (Diercks, 2009) for further discussion, and a more precise analysis.

¹³ An anonymous reviewer raised the question of what evidence there is that locative agreement is cliticized to the verb, as opposed to being a separate word. From a syntactic perspective, it is clear that nothing can intervene between the clitic and the verb, despite the more free distribution of full locative NPs. This accords with the previous analyses of the corresponding morphemes in Lunda and Kinyarwanda. I leave it to future work to demonstrate the phonological word-hood of a verb with the locative clitic.

¹⁴For a more complete (though slightly modified) proposal of the syntactic position of the locative clitic see (Diercks, 2009).

In Lubukusu non-subject relative clauses, on the other hand, there is no C-agreement and the agreeing complementizer is obligatory.

- (36) ká-má-tunda*(ní-kó) bá-bá-andú bá-a-kula [Lubukusu]
 6-6-fruit *(COMP-6) 2-2-people 2S-PST-buy **Object Relative Clause**
 ‘the fruit which the people bought’

The same pattern generally holds for Lubukusu wh-questions and clefts. Though subject clefts do allow for the complementizer together with C-agreement for subject, as shown in (39), object clefts still prohibit C-agreement (as in (40)) (example taken from Wasike, 2007: 236, 118).

- (37) Naanu **ba**-ba-a-tim-a? [Lubukusu]
 who 2C-2S-PST-run-FV **Subject Question**
 ‘Who ran?’

- (38) Ba-ba-ana ba-a-siim-a náánu? [Lubukusu]
 2-child 2S-PRS-love-FV who **Object Question**
 ‘Who do the children love?’

- (39) Ba-a-ba ba-ba-ana ni-b-o **ba**-ba-a-fun-a luu-saala. [Lubukusu]
 2S-PST-be 2-2-child COMP-2 2C-2S-PST-break 11-stick **Subject Cleft**
 ‘It was children who broke the stick.’

- (40) Lw-a-ba luu-saala ni-lwo Wamalwa a-a-fun-a. [Lubukusu]
 11S-PST-be 11-stick COMP-11 1.Wamalwa 1-PST-break-FV **Object Cleft**
 ‘It was a stick that Wamalwa broke.’

In (Diercks, to appear) I analyze this subject extraction morphology as evidence of extraction from a structural subject position, following the framework set forth in (Rizzi, 2006; Rizzi and Shlonsky, 2007). Whatever the analysis, however, the empirical generalization is clear from Wasike (2007) that this morpheme is only possible in subject extraction and is never possible with non-subject extraction. On these grounds it is a sufficient diagnostic for the morpho-syntactic subjecthood of a particular phrase, and as we will see in the next section, productively distinguishes between the two locative inversion constructions considered here.

4.4 *The position of the fronted locative phrase*

This section examines the position of the inverted locative phrase in both types of locative inversion constructions, with the subject/non-subject asymmetries discussed in the previous section serving as the main diagnostic.

As is evident in the contrast between (41) and (43) below, the fronted locatives in the different sorts of locative inversion constructions are relativized differently. In the disjoint agreement construction, the subject marker on the verb agrees with the postverbal logical subject, and the agreeing complementizer necessarily appears, as shown in (41). As (42) demonstrates, relativization of the locative in the disjoint agreement construction is incompatible with C-agreement.

- (41) mú-mú-siiru ní-mwó kw-a-kwa-mo kú-mú-saala [Lubukusu]
 18-3-forest COMP-18 3S-PST-fall-18L 3-3-tree **Disjoint Agreement**
 ‘the forest in which fell a tree’

- (42) *mu-mu-siiru mu-kw-a-kwa-(mo) ku-mu-saala
 18-3-forest 3C -3S-PST-fall-18L 3-3-tree

The strategy of relativization in (41) is exactly that associated with relativization of non-subjects, as is evident by comparing (41) with (36). This suggests, therefore, that the locative does not occur in subject position in disjoint agreement locative inversion constructions.

The repeated agreement locative inversion construction shows precisely the opposite behavior, however, as fronted locatives instead pattern with subjects. When the fronted locative phrase is the head of a relative clause, C-agreement appears on the verb and the complementizer does not appear, as shown in (43):

- (43) mú-mú-siiru **mú**-mw-á-kwá-mó kú-mú-saala [Lubukusu]
 18-3-forest 18C-18S-pst-fall-18L 3-3-tree **Repeated Agreement**
 ‘the forest in which fell a tree’

This suggests that the inverted locative in repeated agreement is in the structural subject position, while the fronted locative is in some other (non-subject) position in disjoint agreement locative inversion. This analysis is further confirmed in other extraction contexts. The presence of subject

extraction morphology in Lubukusu raising constructions allows it to serve likewise as a diagnostic of movement out of subject position:

- (44) É-fwáná oli bá-bá-andú bá-a-sóma sí-i-tabu. [Lubukusu]
 9S-seem COMP 2-2-person 2S-PST-read 7-7-book **Raising Construction**
 ‘It seems that the people read the book.’

- (45) Bá-bá-ndú bá-fwáná oli **bá-bá-a-soma** sí-i-tabu.
 2-2-people 2S-seem COMP 2C-2S-PST-read 7-7-book
 ‘The people seem like they read the book.’

As (45) shows, the embedded subject *babaandu* ‘people’ may raise to matrix subject position, triggering subject agreement on the matrix verb. In addition to subject agreement on the embedded verb, however, it may also trigger C-agreement like in matrix extraction contexts.

Applying this diagnostic to locative inversion, then, we can see that when the disjoint agreement construction in (46) is embedded under the raising verb, the lower verb subject-agrees with the inverted logical subject (and C-agreement is impossible). In the case of the repeated agreement construction in (47), however, C-agreement is possible when the fronted locative is raised to matrix subject position.

- (46) Mú-mú-siirú mu-fwáná oli (***mu-**)kw-á-kwá-mó kú-mú-saala. [Lubukusu]
 18-3-forest 18S-seem COMP (*18C-)3S-PST-fall-18L 3-3-tree **Disjoint Agreement**
 ‘In the forest (it) seems like fell a tree.’

- (47) mú-mú-siirú mu-fwáná oli **mu-mw-á-kwá-mó** kú-mú-saala [Lubukusu]
 18-3-forest 18S-seem COMP 18C-18S-PST-fall-18L 3-3-tree **Repeated Agreement**
 ‘In the forest (it) seems like fell a tree.’

As with the relativization facts above, these data suggest that the preposed locative in disjoint agreement locative inversion is not in subject position, but the preposed locative in repeated agreement is in fact in subject position, and as such displays subject-like properties.

Similar evidence can be found in matrix subject questions in locative inversion constructions. In (48) we can see that in a repeated agreement construction, if the inverted locative is questioned it triggers C-agreement on the verb, as is typical of subject extraction. On the other hand, (49) shows again that the locative phrase in disjoint agreement locative inversion patterns with non-subjects, employing the complementizer but not C-agreement.

- (48) Mu-mu-siiru siina **mu-mw-a-kwa-mo** ku-mu-saala? [Lubukusu]
 18-3-forest what 18C-18S-pst-fall-18L 3-3-tree **Repeated Agreement**
 ‘In which forest fell a tree?’

- (49) mu-mu-siiru siina ***(ni-mwo)** **(*mu)-kw-a-kwa-mo** ku-mu-saala? [Lubukusu]
 18-3-forest what *(COMP-18) (*18C)-3S-PST-fall-18L 3-3-tree **Disjoint Agreement**
 ‘In which forest fell a tree?’

All of the evidence presented here shows that despite the apparent similarity between disjoint agreement locative inversion and repeated agreement locative inversion, there are important

structural differences: fronted locatives in the repeated agreement locative inversion construction have subject properties, whereas fronted locatives in disjoint agreement locative inversion have non-subject properties.

Based on this observation, I claim that in repeated agreement locative inversion the inverted locative occurs in the structural subject position (Spec, TP), as shown in (50):

(50) Repeated agreement LI

[_{TP} LOC T-V [_{VP} \forall SUBJ]]

This structure is one of the options proposed by Buell (2007) as a potential structure for the ‘agreeing’ locative inversion constructions (cf. (6a)), and it is not difficult to classify Lubukusu repeated agreeing locative inversion as an “agreeing construction” by Buell’s criteria.

In contrast, disjoint agreement locative inversion in Lubukusu consistently displays non-subject extraction properties. As a result, I claim that the locative phrase is in the left periphery, and some other phrase occurs in subject position, yielding the structure in (51):

(51) Disjoint agreement LI (preliminary)

[_{CP} LOC ... [_{TP} XP T-V [_{VP} \forall ...]]]

This structure is somewhat similar to that proposed by Buell (2007) for the ‘non-agreeing’ locative inversion constructions. The question arises, though, as to what element is in Spec, TP in the disjoint agreement constructions (assuming along the lines of the classical EPP that the position must be filled). The following section will entertain two competing hypothesis. The first

is that there is a null expletive in subject position, and the logical subject remains in situ in the VP, directly parallel to the ‘non-agreeing’ structure of (Buell, 2007). The second alternative is that the logical subject itself raises to Spec, TP, and the verb raises over it to produce the inverted word order. As will be seen, the evidence is not completely straightforward, but does seem to suggest that the latter (verb-raising) approach is preferable.

4.5 The position of the logical subject

Given the analysis in the previous section that the fronted locative in the repeated agreement construction is in subject position, it follows that the logical subject in those cases must be within the VP, as it could not have raised to subject position (which is filled by the locative phrase). This was schematized in (50), but is also further supported by evidence from adverb positions and argument structure, discussed below in §4.5.1 and §4.6, respectively. The focus of this discussion, however, will be on the position of the logical subject in disjoint agreement locative inversion, with the conclusions about repeated agreement coming in the comparison.

As mentioned above, there are two different analytical approaches to the question of what syntactic element occupies subject position in disjoint agreement locative inversion, or conversely, what the position of the logical subject is in these constructions. The first is that there is a null expletive in subject position, and the verb remains in T. The second is that the logical subject is actually in subject position (assumed to be Spec, TP), and the verb has raised over that position to C.¹⁵

The evidence is not completely unambiguous, but tends to point towards a V-raising analysis. First I discuss evidence of adverb placement, followed by extraction of the logical

¹⁵Thanks to an anonymous reviewer for their comments on this analytical option.

subject, and finally what I tentatively refer to as “presentational constructions”, though their precise nature is drawn into question in the discussion below.

4.5.1 Adverb evidence

The properties of the adverb *bwangu* ‘quickly’ provide a good testing ground for the position of the subject in Lubukusu locative inversion. As can be seen in (52), *bwangu* may occur postverbally or between the verb and its complement, but cannot occur preverbally.

- (52) Kú-mú-saala (*) kw-á-kwá(✓) mu-mu-siiru o-mwo (bwangu)¹⁶ [Lubukusu]
 3-3-tree 3S-PST-fall 18-3-forest DEM-18 (quickly)
 ‘A tree fell in this forest quickly.’

I interpret this data to mean that *bwangu* ‘quickly’ is a *vP*-level adverb, which can occur either right adjoined or left adjoined (cf. Bowers 2002), and V-to-T movement accounts for the position of the adverb between the verb and its complement (in the case of a left-adjoined adverb). The adverb cannot occur preverbally, because it does not adjoin to T.

This analysis makes an interesting prediction regarding the two analytical options noted in the previous section. For disjoint agreement locative inversion in Lubukusu, if an expletive is in subject position and the logical subject is in situ within the *vP/VP*, we would expect the same adverb distribution in locative inversion as in the declarative in (52): clause-final and postverbal, but not preverbal. If, on the other hand, the subject raises to Spec, TP, we would expect that the immediately-postverbal adverb position would be ruled out, and instead only the clause-final position would be licit. As (53) demonstrates, it is the latter that is the case:

¹⁶ [✓] and [*] mark where the adverb can and cannot occur, respectively.

- (53) mú-mú-siiru o-mwó (*) kw-á-kwá-mó (*) kú-mú-saala (bwangu) [Lubukusu]
 18-3-forest DEM-18 3S-PST-fall-18L 3-3-tree (quickly)
 ‘In the forest fell a tree quickly.’

This therefore supports the analysis that the subject has actually raised to subject position in disjoint agreement locative inversion, as opposed to remaining *in situ* with an expletive in subject position. This analysis receives further (albeit indirect) support on comparison with the repeated agreement construction, in which the postverbal adverb is acceptable, as shown in (54):

- (54) Mú-mú-siiru o-mwó (*) mw-á-kwá-mó (✓) kú-mú-saala (bwangu) [Lubukusu]
 18-3-forest DEM-18 18S-PST-fall-18L 3-3-tree (quickly)
 ‘In the forest fell a tree quickly.’

This is consistent with the analysis proposed above, that in repeated agreement LI the locative phrase is in Spec, TP and the logical subject is *in situ* within the VP. It also highlights the contrast with disjoint agreement, reinforcing the hypothesis that the logical subjects in these constructions are in different positions.

4.5.2 *Extracting the logical subject*

Another relevant piece of data for disjoint agreement LI concerns cases where there is a postverbal wh-subject. As discussed above, when a subject is extracted C-agreement appears on the verb, argued to be the result of extraction from a structural subject position. The prediction, then, is that if the logical subject does not occur in subject position, it should not trigger C-

agreement, but if it does, it should trigger C-agreement. What we find is actually somewhat complicated however, as C-agreement is optional in these cases:

- (55) Mú-mú-siirú (sí)-sy-á-kwá-mó síina? [Lubukusu]
18-3-forest 7C-7S-PST-fall-18L 7.what **Disjoint Agreement LI**
'What (is it that) in the forest fell?'

The optionality in itself is not surprising, as many speakers will drop the C-agreement morpheme in speech due to a more general phonological effect where one of two consecutive identical prefixes can be unpronounced. But even speakers who generally prefer to pronounce both agreement prefixes will allow C-agreement to be dropped in this case. And for all speakers, when C-agreement *does* appear, it triggers a cleft-like interpretation (which is not necessarily the case when C-agreement appears in canonical subject extraction). So the situation is ambiguous, but I interpret it in the following way.

If the subject were actually never in subject position, it would be difficult to explain how the C-agreement morpheme ever occurs, given the analysis that it results from extraction from subject position. On the other hand, if the logical subject is actually in Spec, TP, we can explain why the C-agreement can possibly arise. What this still does not explain, however, is the obligatory cleft interpretation with the C-agreement, along with the (sometimes preferred) absence of the C-agreement altogether for certain speakers. I will simply have to attribute these properties to the non-canonical nature of the construction – perhaps the postverbal subject position creates unusual focal effects, and perhaps even on analogy to other postverbal elements

creates a preference among speakers for the absence of C-agreement. These specific issues remain topics for future research.

Looking at this same issue for repeated agreement locative inversion, however, it is evident in (56) that C-agreement with the in situ wh-phrase is also impossible when questioning the logical subject.

- (56) Mú-mú-siirú (***si-**)mw-á-kwá-mó síina ? [Lubukusu]
18-3-forest (*7C)-18S-PST-fall-18L 7.what **Repeated Agreement LI**
'in the forest fell what?' (matrix question)

In this case there is much clearer evidence that the logical wh-subject cannot does not move to subject position, again supporting the analysis for repeated agreement locative inversion in (50). The contrast with (55) again suggests that there is a structural difference in subject position between the repeated agreement and disjoint agreement locative inversion constructions, though this is admittedly less clear evidence than that offered by the adverb positions.

4.5.3 "Presentational constructions"

In (21)-(22) it was noted that the Lubukusu equivalent of presentational constructions share the same agreement patterns as disjoint agreement locative inversion. One of those constructions is repeated here as (57) for reference.

- (57) Bá-a-kwá-mó bá-bá-ana. [Lubukusu]
2S-PST-fall-18L 2-2-child
'In there fell children.'

These constructions actually provide an interesting commentary (though again not direct evidence) on the evaluation of the two analytical options for the logical subject position of disjoint agreement locative inversion—the expletive analysis and the V-raising analysis. If an expletive is in subject position in disjoint agreement locative inversion, it is plausible to think that it would also occur in presentational constructions, resulting in something looking fairly similar to (57).

There are two reasons, however, for doubting this analysis for (57). First, the locative clitic necessarily appears in these constructions, which would presumably not be necessary if this were simply an EXPL-V-SUBJ construction. Secondly, these constructions are only licit in contexts where the locative referent (translated *there* in (57)) is extremely salient in the discourse. This suggests to me, therefore, that these apparent presentational constructions are actually cases of covert locative inversion, where the null locative phrase is in CP, which triggers agreement with the locative clitic and T-to-C movement, creating the V-S word order.

The evidence offered in this section (adverb positions, subject extraction, and “presentational constructions”) therefore argues for a further specification of the disjoint agreement analysis offered in (51), as shown in (59), where the logical subject is in Spec, TP and the inverted word order is created by T-to-C movement.

(58) Repeated agreement LI

[_{TP} LOC T-V [_{VP} SUBJ ~~V~~ ~~LOC~~]]

(59) Disjoint agreement LI (final)

[_{CP} LOC C-V [_{TP} SUBJ ... [_{VP} ~~SUBJ~~ ~~V~~ ~~LOC~~]]]

As will be discussed in depth in the next section, the analyses for Lubukusu locative inversion constructions offered in (58) and (59) are lent additional support from the properties of these two constructions with respect to verbs of different argument structures.

4.6 *Interactions between argument structure and locative inversion*

This section examines how the two different locative inversion constructions in Lubukusu show variation with regard to what sorts of verbs they may co-occur with. I will first systematically address locative inversion with verbs of different argument structures, after which I will examine the Lubukusu patterns with reference to the broader typology of locative inversion in Bantu.

4.6.1 *Unaccusatives*

As is evident in (60), the unaccusative verb *-ola* ‘arrive’ is compatible with both disjoint agreement locative inversion in (60b) and with repeated agreement locative inversion in (60c) (the same pattern holds for *-biringikha* ‘roll’, *-kwa* ‘fall’, *-fwa* ‘die’, and *-kona* ‘sleep’).

- (60) -OLA ‘ARRIVE’ [Lubukusu]
- a. Bá-bá-ana b-óla e-engo. **Declarative**
 2-2-child 2S-PST.arrive 9-home
 ‘The children arrived home.’
- b. Mú-nju b-ólá-mo bá-bá-ana. **✓ Disjoint Agreement**
 18-home 2S-PST.arrive-18L 2-2-child
 ‘Inside/at home arrived the children.’

c. mú-nju mw-ólá-mo bá-bá-ana.

✓ **Repeated Agreement**

18-home 18S-PST.arrive-18L 2-2-child

‘Inside/at home arrived the children.’

Example (60) therefore illustrates that unaccusative verbs can occur with both types of locative inversion constructions. As can be seen in (61), however, the verb *-echa* ‘come’ shows different properties than the aforementioned unaccusative verbs do (the same pattern holds for *-cha* ‘go’).

(61) -ECHA ‘COME’

[Lubukusu]

a. Papa k-échá mu-si-kuuri.

Declarative

father 1S.PST-come 18-7-field

‘Father came (in)to the field.’

b. Mú-sí-kúuri k-échá-mó papa.

✓ **Disjoint Agreement**

18-7-field 1S.PST-come-18L 1.father

‘Into the field came father.’

c. ***mu**-si-kuuri **mw**-echa-mo papa

* **Repeated Agreement**

18-7-field 18S-PST.come-18L 1.father

The fact that repeated agreement locative inversion is impossible with the verbs for ‘come’ and ‘go’ in Lubukusu means that they do not pattern with unaccusatives, but rather pattern with unergatives (as is clear by comparing the results of the following section). This result is

potentially unexpected, but here I must simply assume that ‘come’/‘go’ in Lubukusu bear unergative-like argument structures, as a full explanation of this departure is beyond the scope of this paper.

4.6.2 *Locative unergatives*

Unergative verbs have a single (agentive) argument, but the verbs considered in this section also select for a locative phrase, and for that reason I refer to them as *locative unergatives*. As can be seen for *-engila* ‘enter’ in (62) (and which also holds for *-khala* ‘stay’ and *-suna* ‘jump’), disjoint agreement locative inversion is possible (see (62b)), but repeated agreement locative inversion is impossible, as (62c) shows.

- (62) -ENGILA ‘ENTER’ [Lubukusu]
- a. Bá-bá-ndú b-éngíla mu-kanisa. **Declarative**
 2-2-person 2S-PST.enter 18-church
 ‘People entered the church.’
- b. Mú-kanisa b-éngila-mo bá-bá-andu. **✓ Disjoint Agreement**
 18-church 2-PST.enter-18L 2-2-person
 ‘In the church entered people.’
- c. *mu-kanisa mw-engila-mo ba-ba-andu *** Repeated Agreement**
 18-church 18S-PST.enter-18L 2-2-person

We therefore see that locative unergatives have the same properties as ‘come’ and ‘go’, allowing disjoint agreement locative inversion and disallowing repeated agreement locative inversion, in contrast to unaccusatives, which allow both.

4.6.3 *Non-Locative Unergative*

Non-locative unergatives pattern differently than locative unergatives, disallowing both forms of locative inversion. This is exemplified in (63) for the verb *-chekha* ‘laugh’, where both disjoint agreement locative inversion and repeated agreement locative inversion are both unacceptable.

- (63) -CHAKHA ‘LAUGH’ [Lubukusu]
- a. Mósés ká-a-chékha mw-í-dúka **Declarative**
 Moses 1S-PST-laugh 18-9-store
 ‘Moses laughed in the store.’
- b. *mw-i-duka ka-a-chekh-a-mo Moses *** Disjoint Agreement**
 18-9-store 1S-PST-laugh-FV-18L Moses
- c. *mw-i-duka mw-a-chekh-a-mo Moses *** Repeated Agreement**
 18-9-store 18S-PST-laugh-FV-18L Moses

The situation is more complex, however, as the data in (64) show. When an applicative morpheme appears on the verb, disjoint agreement locative inversion is possible, but the repeated agreement construction is still impossible.

(64) –CHAKHA ‘LAUGH’ (WITH APPLICATIVE)

[Lubukusu]

a. Mw-í-dúka ká-a-chékh-el-a-mo Mósés

✓ **Disjoint Agreement**

18-9-store 1S-PST-laugh-AP-FV-18L Moses

‘Inside the store laughed Moses.’

b. *mw-i-duka mw-a-chekh-el-a-mo Moses

* **Repeated Agreement**

18-9-store 18S-PST-laugh-AP-FV-18L Moses

This, together with the locative unergative data, suggests some sort of relationship between the selection of the locative phrase by the verbal form (as opposed to adjoined locative phrases) and the availability of locative inversion. This requirement of selection also holds for the locative clitic in non-inversion contexts, which I assume is explained by necessity of the AgrL projection to license argument locative noun phrases more generally.¹⁷ The facts demonstrated in (63) and (64) are replicated for other non-locative unergatives, like *–emba* ‘sing’.

Once the argument structure is made even more complex by adding an object, however, all forms of locative inversion are impossible, even with applicative morphology on the verb. Examples are omitted here for space considerations, but the overall patterns realized by the data above are summarized in the chart in (65):

(65) Availability of Lubukusu Locative Inversion

| Verbal Thematic Structure | <u>Unaccusative</u> (e.g. fall, arrive) | Come/Go | <u>LOC unergative</u> (e.g. jump, enter) | <u>Non-LOC Unergative</u> | | Transitive unergative |
|---------------------------|--|---------|---|---------------------------|------------|-----------------------|
| | | | | with applic | w/o applic | |
| Disjoint agreement | ✓ | ✓ | ✓ | ✓ | * | * |
| Repeated agreement | ✓ | * | * | * | * | * |

¹⁷ For more details see (Diercks, 2009). A full explanation of the selectional requirements for locatives is beyond the scope of this paper.

As (65) shows, repeated agreement locative inversion is licensed in only one context: with unaccusative verbs. In contrast, disjoint agreement locative inversion is possible with both unergative verbs (including ‘come’/‘go’) and unaccusative verbs, with the caveat that the locative phrase must be selected by the verb, whether lexically or via the applicative. Both forms of locative inversion are ruled out with transitive verbs.

It is interesting that the two different locative inversion constructions would seem to fall in two different categories in Marten’s (2006) implicational hierarchy of locative inversion in Bantu. This hierarchy is repeated here from (12), with the addition of Lubukusu:

(66) Availability of locative inversion (Marten 2006)

| | | | | | | | | |
|--------------------|---|---------------|---|---------------------|---|-------------|---|---------------|
| | | non- agentive | | agentive | | active | | active |
| unaccusatives | > | unergatives | > | unergatives | > | transitives | > | ditransitives |
| <u>Chichewa</u> | | Chishona | | <u>Setswana</u> | | Otjiherero | | * |
| Lubukusu | | | | Lubukusu | | | | |
| (Rep. Agr.) | | | | (Disj. Agr.) | | | | |

In Lubukusu, repeated agreement locative inversion groups with Chichewa, available with only unaccusative verbs. Disjoint agreement locative inversion, in contrast, groups together with Setswana, being available with both unergatives and unaccusatives, but not with transitives. Both the more restricted distribution of repeated agreement locative inversion and the broader distribution of disjoint agreement locative inversion follow directly from the analyses set forth in (58) and (59). The structure of repeated agreement entails that it could only appear with unaccusative verbs, whereas this is not the case for disjoint agreement locative inversion. The next section brings together all of the facts discussed to this point to draw together a complete analysis of Lubukusu locative inversion.

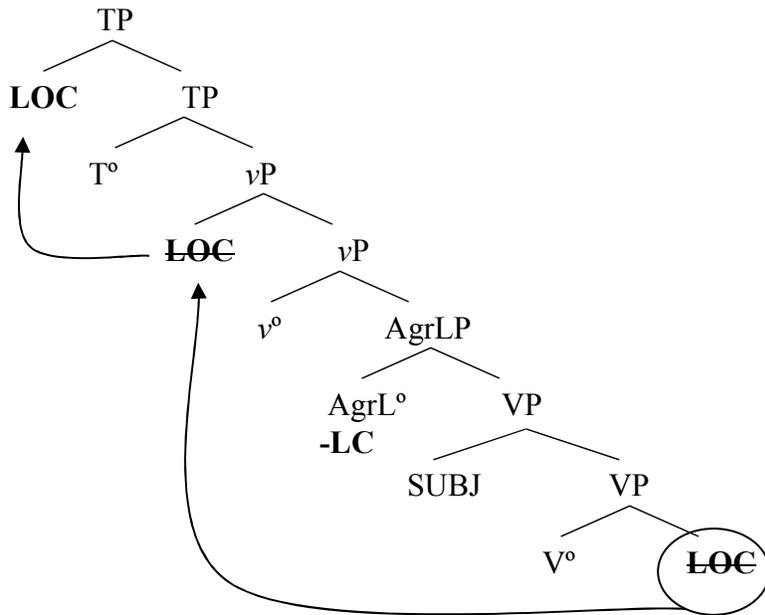
5 Analysis

5.1 Drawing up the analysis

As just noted, the distribution of locative inversion with verbs of different argument structures is a direct consequence of the respective structure of the locative inversion constructions, an issue which I will address in the course of drawing an overall picture of the locative inversion constructions in Lubukusu. As argued for previously, repeated agreement locative inversion consists of a locative phrase moving to Spec, TP, at the same time triggering agreement with the postverbal locative clitic, while the logical subject remains *in situ*. This is illustrated in (67). I assume that because the subject and the locative are within the same maximal projection, they are rendered equidistant to Spec, TP, allowing the locative phrase to raise over the logical subject (Chomsky, 1995; Collins, 1997). V-to-T movement produces the proper word order. I assume that the locative phrase does not move through Spec, AgrLP, and that agreement on AgrL° is triggered by a long-distance (upward) Agree relation.¹⁸

¹⁸ I don't rule out the possibility, however, that the locative phrase first moves to Spec, AgrLP.

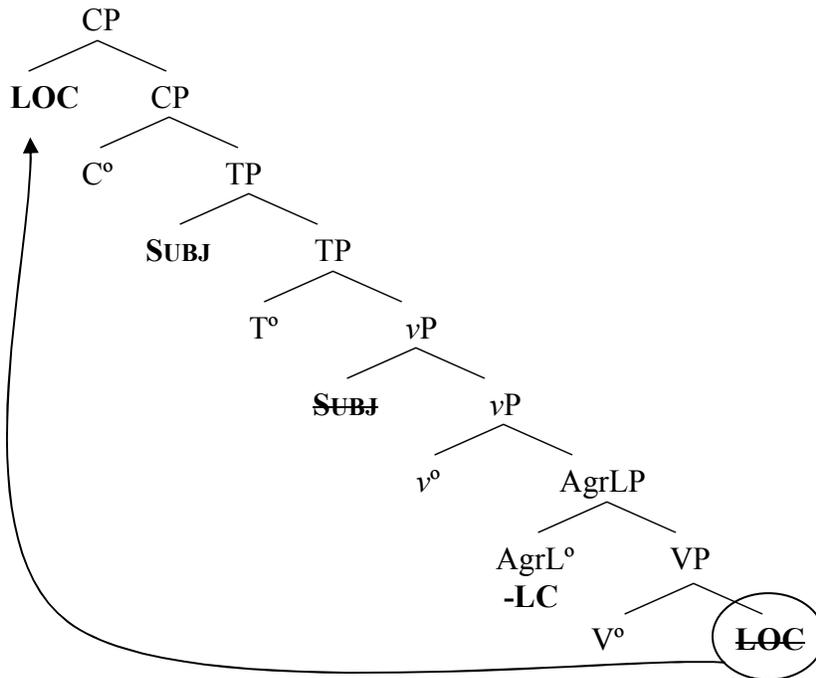
(67) Repeated Agreement Locative Inversion¹⁹



Regarding the restriction to unaccusatives, because repeated agreement locative inversion requires A-movement of a locative to subject position, it is impossible with any verb with an external argument. The presence of the external argument in Spec, vP would create a minimality violation if the locative phrase were moved to Spec, TP, as the external argument in Spec, vP would intervene between Spec, TP and the locative phrase. But because disjoint agreement locative inversion consists of A'-movement to CP, this movement is not subjected to the same locality constraints as A-movement to subject position, making this form of locative inversion possible with both unaccusatives and unergatives. An analysis of an unergative is given in (68).

¹⁹ I assume that Spec, vP is a non-thematic position for unaccusative verbs.

(68) Disjoint Agreement Locative Inversion



It should be noted that this analysis bears many similarities to the English so-called “Heavy Inversion” construction of Culicover and Levine (2001), with the difference that they analyze S-V inversion as a result of heavy NP shift of the subject to the right (explaining the restriction of English locative inversion with unergatives to cases with phonologically heavy logical subjects).

(69) Heavy Inversion (Culicover and Levine, 2001: 284)

[IP PP [IP t_{subj} I [VP t_{subj} V t_{PP} . . .] NP_{subj}]]

This heavy NP shift analysis also accords with the well-known generalization that verbs in English do not raise to T°. Looking at Lubukusu, however, it is clear that disjoint agreement locative inversion is not restricted to phonologically heavy inverted subjects, and verb-raising is not a new analysis for Bantu phenomena (cf. Demuth and Harford, 1999; Ngonyani, 1999,

2001), suggesting that the analysis in (68) is more plausible than simply adopting the English analysis in (69). This is even further supported by the adverb evidence in §4.5.1: if the logical subject were right-dislocated, we would expect a postverbal adverb position to be acceptable.

Looking back at Bantu typology, then, recall from §2 that Buell (2007) proposed two different basic structures for locative inversion, “agreement” constructions and “non-agreeing” constructions. As can be seen from comparing the analyses in (6) and (8), respectively, disjoint agreement locative inversion in Lubukusu does not fit either of these patterns. Therefore we need a third class of Bantu locative inversion constructions, which I will refer to as “subject-agreeing” constructions following Buell’s terms.

(70) Subject-agreeing locative inversion

[_{CP} locative C-verb [_{TP} SUBJ ...

The typological breadth of the structure in (70) is still uncertain, because it remains to be seen whether other Bantu languages with the same agreement patterns as Lubukusu disjoint agreement actually realize the same syntactic structure. What is not in question, however, is that Lubukusu has introduced a new piece to the puzzle of Bantu locative inversion.

5.2 *Revisiting Agree*

Before concluding, it is important to discuss the implications of these analyses of Lubukusu locative inversion constructions for a theory of Agree. To revisit the issue, disjoint agreement locative inversion provided an interesting challenge to the Upward Agreement Hypothesis that has been set forth for Bantu languages, that is, that heads agree only with structurally higher phrases (see §3). As we have seen, however, there is solid evidence that the locative phrase in

standing issue, however, and the Upward Agreement Hypothesis must still be tested in many constructions in many languages.

Regarding Lubukusu, however, I therefore conclude that the Upward Agreement Hypothesis for Bantu languages is at least not disproven by disjoint agreement locative inversion, if not actually supported by the claim that an apparently ‘downward’ agreement relation is in fact syntactically an ‘upward’ relation.

6 Conclusions

This paper has tackled various empirical and theoretical challenges, introducing new locative inversion constructions to the theoretical literature—repeated agreement locative inversion and disjoint agreement locative inversion—and demonstrating based on a variety of diagnostic contexts that they realize different syntactic structures. These structures were then shown to interact with argument structure, providing interesting parallels with the previously-established typology for Bantu locative inversion. There are still remaining questions about Lubukusu locative inversion as well: for example, this paper focuses largely on structural distinctions between the locative inversion constructions in Lubukusu, but there are many discourse-related issues (e.g. whether there are focal differences between the constructions) that must still be explored.

In addition, I observed that the agreement relation that results in disjoint agreement locative inversion apparently runs counter to the well-defined agreement configurations in Bantu languages, which Lubukusu otherwise exemplifies in many contexts. This was explained by a verb-raising analysis where the postverbal subject is actually in subject position, showing that this counter-evidence is only apparent. This conclusion further bolsters the macro-parameteric approach to agreement typology set forth by the Upward Agreement Hypothesis, as even a

seemingly aberrant ‘downward’ agreement relation in Lubukusu was found to be only apparent. Whether these results can be replicated for other such ‘downward’ relations in other Bantu languages remains to be seen, but these results do provide supporting evidence at least for the more general claims of the recent literature, that there can be deep and systematic differences between languages with regard to the parameterization of Agree.

Acknowledgements

This research was completed with the support of a Teaching Assistantship from Georgetown University and a Doctoral Dissertation Research Improvement Grant from the National Science Foundation as part of my dissertation research on the morphosyntax of Lubukusu. I am thankful for the comments from participants in the Bantu Word Order and Movement workshop, and from audiences at the LSA 2009, ACAL 40, and Bantu 3 conferences. Héctor Campos, Thilo Schadeberg, Raffaella Zanuttini, Mark Baker, Paul Portner, Marco Nicolis, and Jong Un Park all provided invaluable criticisms and suggestions; any mistakes that remain are my own responsibility. Many thanks go to Adrian Sifuna, Maurice Sifuna, Christine Nabutolah for their judgments, and most of all, to Vivian Lusweti for her judgments and her altruistic faithfulness to this project.

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