

## Subject extraction and (so-called) anti-agreement effects in Lubukusu: A Criterial Freezing approach

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### 1 Introduction

This paper examines subject/non-subject extraction asymmetries and the (so-called) anti-agreement effects that occur in certain cases of subject extraction in the Lubukusu language (Bantu, Kenya). I will show that the morphosyntax of subject extraction in Lubukusu is straightforwardly explained under a Criterial Freezing framework (Rizzi and Shlonsky 2007), and that this approach to subject extraction extends to explain (so-called) anti-agreement effects as well.

Lubukusu displays systematic asymmetries between subject extraction and non-subject extraction, as is evident in the differences between (2) and (3). Object extraction requires the presence of an agreeing complementizer as shown in (3), whereas the complementizer is absent in subject extraction in (2), which instead shows what appears to be a doubling of the subject agreement marker (glossed as C-agreement).

- |     |   |                    |
|-----|---|--------------------|
| (1) | ba-ba-andu ba-a-kula ka-ma-tunda likoloba <sup>1</sup>            | <b>Declarative</b> |
|     | 2-2-people 2S-PST-buy 5-5-fruit yesterday                         |                    |
|     | “The people bought the fruit yesterday”                           |                    |
| (2) | ba-ba-andu <b>ba</b> -ba-a-kula ka-ma-tunda likoloba <sup>2</sup> | <b>SUBJ RC</b>     |
|     | 2-2-people 2C-2S-PST-buy 5-5-fruit yesterday                      |                    |
|     | “The people who bought the fruit yesterday”                       |                    |
| (3) | kama-tunda <b>*(ni-ko)</b> ba-ba-andu ba-a-kula likoloba          | <b>OBJ RC</b>      |
|     | 6-fruit <b>COMP-6</b> 2-2-person 2S-PST-buy yesterday             |                    |
|     | “the fruit that people bought yesterday”                          |                    |

In addition to this subject/non-subject asymmetry, when a class 1 (i.e. singular, animate) noun phrase is extracted from subject position, an anti-agreement effect appears where the ‘normal’ declarative agreement morpheme *a-* is replaced by *o-* (or *w-*).

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<sup>1</sup> Note that nouns in Bantu languages all fall into one of a number of noun classes, theoretically equivalent to grammatical gender. Cardinal numbers in the glosses in this paper refer to noun class, all third person. First and second person features are glossed with ordinal numbers (1<sup>st</sup>, 2<sup>nd</sup>).

<sup>2</sup> This subject extraction morphology is glossed ‘C’ here, as it will be analyzed as agreement in the complementizer field. It has also been termed wh-agreement in Wasike (2007).

- (4) a. Naliaka a-li mu-nju (Wasike 2007)  
 1.Naliaka 1s-be 18-house  
 “Naliaka is in the house”  
 b. Naanu o-o-li mu-nju?  
 Who 1c-1s-be 18-house  
 “Who is in the house?”

This paper proceeds as follows: §2 briefly lays out the Criterial Freezing framework and §3 analyzes the Lubukusu extraction asymmetries based on that framework. Section 4 then applies the aforementioned analysis to (so-called) anti-agreement effects in Lubukusu.

## 2 Criterial Freezing and the Subject Phrase

Rizzi (2006, 2007) and Rizzi and Shlonsky (2007) offer an analysis for subject/non-subject asymmetries based on the properties of a dedicated structural subject position (a Subject Phrase) which is a “Criterial position”. According to Rizzi (2006, 2007), a Criterion exists when a head bears a “criterial” feature (usually related to some scope-discourse interpretation) which requires a featurally-matching phrase in its specifier (e.g. the well-known WH-Criterion).

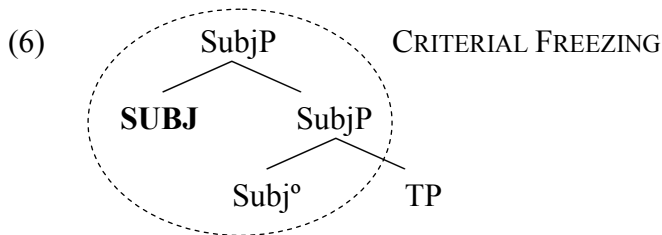
Rizzi proposes that once a phrase reaches a Criterial position, it cannot move any further, accounting for the wide variety of “freezing effects” cross-linguistically wherein a phrase which has A’-moved cannot undergo further A’-movement (cf. Wexler and Culicover 1982, Boškovic 2008, to appear; Chomsky 2008, Boeckx 2009).

- (5) CRITERIAL FREEZING (Rizzi 2007: 149)  
 In a criterial configuration, the Criterial Goal is frozen in place.

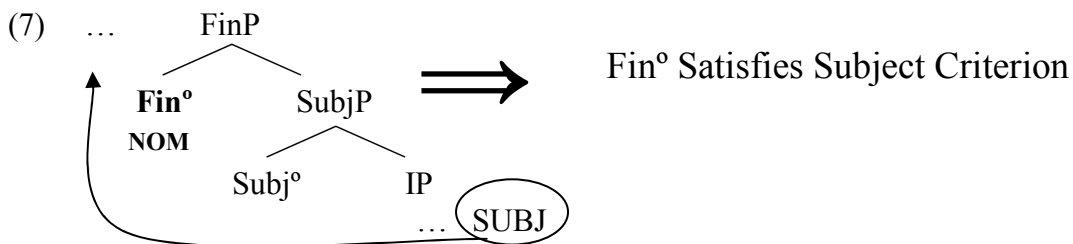
Rizzi and Shlonsky (2007) propose that the the Subject Phrase is a Criterial position which requires a **nominal** element in its specifier (or, more precisely, a nominal element to locally c-command it)<sup>3</sup>. They claim that the interpretive quality of SubjP is one of “aboutness”, capturing the close interpretations of subjects and topics<sup>4</sup>. In turn, the Criterial nature of SubjP derives the classical EPP, that clauses require subjects. This appears to create a theoretical problem, however, as any phrase that satisfies a Criterion should be frozen in place, but it is clear cross-linguistically that subjects may be extracted for questions, relative clauses and clefts. It is this seeming paradox that Rizzi and Shlonsky exploit to explain subject/non-subject asymmetries, claiming they arise from strategies for escaping/eluding the Criterial Freezing configuration in SubjP.

<sup>3</sup> While this is generally a Spec-head relation, Rizzi and Shlonsky (2007) defines it in terms of local c-command to include cases where a head is merged directly atop Subj°.

<sup>4</sup> Rizzi (2006: #56, 57) claims that subjects have *aboutness* but are not D-linked, whereas topics have *aboutness* and **are** D-linked.



Rizzi and Shlonsky argue that there are two main sorts of strategies for subject extraction: fixed subject strategies where the subject does not move from Spec, SubjP (e.g. resumption or clausal pied-piping), and skipping strategies, where some (nominal, expletive-like) element that is not the subject nonetheless satisfies the subject Criterion, allowing the NP subject to skip that position and be extracted past it. This may be done with an overt expletive (*what do you think that \*(there) is in the box?*), or by some other means, specifically, by merging a nominal complementizer head ( $Fin^{\circ}$ ) merged directly atop  $Subj^{\circ}$ <sup>5</sup>. The nominal nature of this complementizer head satisfies the Criterial property of  $Subj^{\circ}$ , and as such the NP subject may skip Spec, SubjP and raise into the left periphery.



Rizzi and Shlonsky (2007) argue that the *que-qui* alternation in French relative clauses is an example of this sort of skipping strategy (where the *-i* element in *qui* is actually a separate  $Fin^{\circ}$  head which satisfies the Subject Criterion). As I will show in §3, the properties of Lubukusu subject extraction follow from this sort of analysis, as sketched in (7).

### 3 Extraction Asymmetries in Lubukusu

#### 3.1 Lubukusu Extraction Paradigm

The extraction asymmetries in relative clauses, as given in the introduction, are repeated here. The crucial contrast is the presence of the complementizer and the absence of C-agreement in object relatives, and the absence of the complementizer and the presence of C-agreement in subject relatives.

- (2) ba-ba-andu **ba**-ba-a-kula ka-ma-tunda likoloba **SUBJ RC**  
 2-2-people 2C-2S-PST-buy 5-5-fruit yesterday  
 “The people who bought the fruit yesterday”

<sup>5</sup>See Rizzi 1997 and much related work on the structure of the left periphery.

- (3) kama-tunda \*(**ni-ko**) ba-ba-andu ba-a-kula likoloba **OBJ RC**  
 6-fruit COMP-62-2-person 2S-PST-buy yesterday  
 “the fruit that people bought yesterday”

This pattern is replicated in interrogatives. Object questions may be *in situ*, but *ex situ* object questions require a complementizer (and, crucially, no C-agreement). Again, the opposite is true of subject questions, as is evident in (9) and (10) and is summarized in (11).

- (8) a. Nafula a-a-siima naanu? **Object question**  
 1.Nafula 1S-PRS-love who *in situ*  
 “Who does Nafula love?”  
 b. naanu \*(**ni-ye**) Nafula a-a-sima? *ex situ (cleft)*  
 who COMP-1 1.Nafula 1S-PRS-love  
 “Who is it that Nafula loves?”
- (9) a. ba-ba-ana ba-a-tima  
 2-2-child 2S-PST-run  
 “Children ran”  
 b. naanu \*(**ba**)-ba-a-tima? **Subject question**  
 who 2C-2S-PST-run  
 “Who ran?”
- (10) a. si-i-tabu si-a-tiba  
 7-7-book 7S-PST-lose  
 “The book got lost”  
 b. siina \*(**si**)-sy-a-tiba? **Subject question**  
 what 7C-7S-PST-lose  
 “What got lost?” (paradigm based in part on Wasike 2007: 234)

- (11) The morphosyntactic exponents of Lubukusu relative clauses and interrogatives

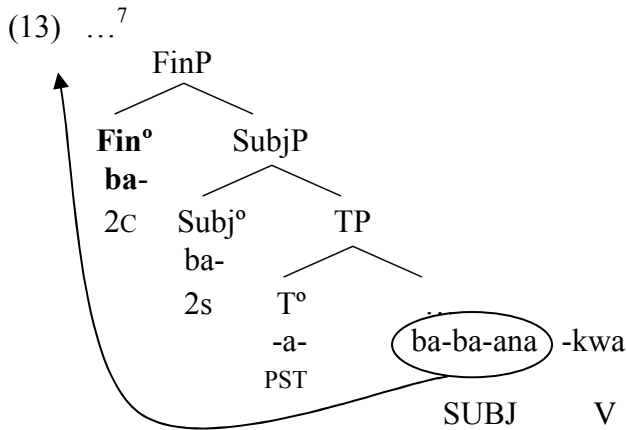
|                         | COMP?          | C-agreement? |
|-------------------------|----------------|--------------|
| Subject relative clause | * <sup>6</sup> | ✓            |
| Subject wh-question     | *              | ✓            |
| Object relative clause  | ✓              | *            |
| Object wh-question      | ✓              | *            |

<sup>6</sup> On the intended reading. A subject relative clause with a complementizer is a subject cleft construction, creating a focus interpretation and licit as a matrix clause.

### 3.2 A Criterial Freezing approach: C-agreement is Nominal Fin°

Subject extraction in Lubukusu can be straightforwardly explained in the Criterial Freezing framework if the C-agreement morpheme is analyzed as a nominal Fin°, which is assumed to satisfy the Subject Criterion, allowing the subject NP to elude Criterial Freezing. This is illustrated in (13) for the subject relative clause given in (12):

- (12) ba-ba-ana **ba**-ba-a-kw-a                      **Subject relative clause**  
 2-2-child 2C-2S-PST-fall-FV  
 “Children who fell”



It is crucial to this analysis that the C-agreement morpheme is sufficiently nominal to satisfy the Subject Criterion, whose sole requirement is that something nominal be merged locally with Subj°. This issue is addressed in the next section.

### 3.3 Subject extraction morphology as nominal Fin°

I claim that C-agreement is sufficiently nominal to satisfy the Subject Criterion in Lubukusu on the strength of two arguments: 1) on the basis of its morphological identity with the pre-prefix that appears on nouns, and 2) based on the related properties of Bantu pre-prefixes in general<sup>8</sup>. The table given in (14) highlights the direct correlation between the first nominal prefix (which I refer to as the pre-prefix) and the C-agreement morpheme that appears in extraction contexts: both are in bold in the table. Note that the C-agreement morpheme in the right column and the pre-prefix morpheme in the left column are identical for each noun class.

<sup>7</sup> For simplicity’s sake, I consider Subj° to be the subject-agreeing head. Assuming this head to be T, AgrS, or some other head does not significantly change the proposal here.

<sup>8</sup> This correlates with the crosslinguistic generalization (Henderson 2009a) stating that the morpheme appearing in anti-agreement effects in Bantu corresponds to the pre-prefix morpheme.

(14) Nominal prefixes and subject extraction morphology<sup>9</sup>

| <u>Class</u> | <u>PP-PREF-nominal stem</u> |          | <u>CA-SA-TNS-verb stem</u> |              |
|--------------|-----------------------------|----------|----------------------------|--------------|
| 1            | <b>o</b> -muu-ndu           | ‘person’ | <b>o</b> -w-a-kwa          | ‘who fell’   |
| 2            | <b>ba</b> -baa-ndu          | ‘people’ | <b>ba</b> -ba-a-kwa        | ‘who fell’   |
| 3            | <b>ku</b> -mu-saala         | ‘tree’   | <b>ku</b> -kw-a-kwa        | ‘which fell’ |
| 4            | <b>ki</b> -mi-saala         | ‘trees’  | <b>ki</b> -ky-a-kwa        | ‘which fell’ |
| 5            | <b>li</b> -li-no            | ‘tooth’  | <b>li</b> -ly-a-kwa        | ‘which fell’ |
| 6            | <b>ka</b> -ma-kaanda        | ‘beans’  | <b>ka</b> -ka-a-kwa        | ‘which fell’ |

(adapted from Wasike 2007: 34)

This correlation is significant not only because the pre-prefix is clearly nominal, being attached to nominal stems, but also because of the specific properties of pre-prefix morphemes across Bantu languages, which consistently show stereotypically ‘nominal’ qualities. For example, Bokamba (1976) shows that the presence of the pre-prefix correlates with definiteness in Dzamba, Likila, Lingala, and its absence correlates with indefiniteness. Others have claimed this is not so much a question of definiteness as it is specificity (Henderson 2007, Mould 1974). Still others have claimed, largely on evidence from Kindande and Luganda, that the pre-prefix is related to referentiality, as its presence/absence is licensed by the complex scoping properties of elements like focus and negation (cf. Ferrari-Bridgers 2009, Progovac 1993, Hyman and Katamba 1993).

Though much work needs to be done on these issues, and on the Lubukusu pre-prefix specifically, it is clear that this morphology has clear connections to nominal properties in Bantu languages. As such, it is sufficient to satisfy the Subject Criterion and to allow a NP subject to skip Spec, SubjP. In this way, a Criterial Freezing approach captures the relationship between the pre-prefix and subject extraction morphology.

### 3.4 Some supporting evidence: Locative Inversion

This account makes an interesting prediction: subject extraction morphology should be impossible when a subject is extracted from some position other than the canonical (preverbal) subject position (including C-agreement and anti-agreement effects, which are discussed in the next section). This is because the subject is not in Spec, SubjP, and therefore does not require the C-agreement skipping mechanism to facilitate extraction.

In disjoint agreement locative inversion constructions, the logical subject occurs postverbally and triggers subject agreement. As can be seen in (16), a wh-subject in these cases does NOT trigger C-agreement, exactly as predicted by a Criterial Freezing account.

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<sup>9</sup> The table shows only classes 1-6, though the same holds all the way through class 14.

(15) **mu-mu-siiru** *pro* **kw-a-kwa-mo** **ku-mu-saala** **Disjoint Agreement**  
 18-3-forest 3S-PST-fall-18L 3-3-tree **Locative Inversion**  
 “In the forest fell a tree”

(16) **mu-mu-siiru** *pro* **(\*si)-sy-a-kwa-mo** **siina**  
 18-3-forest 7C-7-PST-fall-18L what  
 “What fell *in the forest*?” (Lit. In the forest fell what?)

#### 4 The Lubukusu (so-called) anti-agreement effect

As was mentioned above, there is a second morphosyntactic consequence of subject extraction in Lubukusu: (so-called) anti-agreement effects (AAEs)<sup>10</sup>. As this section will show, I analyze AAEs not as a lack of agreement, but actually as a product of agreement which has been bleached of specific features (see also Henderson 2009a, b).

##### 4.1 Basic paradigm for anti-agreement effects

Revisiting the data from the introduction, when a class 1 noun phrase is extracted from subject position in Lubukusu, the ‘normal’ declarative agreement morpheme *a-* is replaced by the form *o-* (or *w-*). Similar patterns have been noted for Kinande (Schneider-Zioga 2007), Bemba (Cheng 2006), Kilega (Kinyalolo 1991), and Luganda (Ashton et al 1954), among others<sup>11</sup>.

(17) a. Naliaka **a-li** mu-nju (Wasike 2007: 235-6)  
 1.Naliaka **1S-be** 18-house  
 “Naliaka is in the house”

b. naanu **o-o-li** mu-nju? (\*ali) **Anti-agreement effect**  
 who 1C-**1S-be** 18-house  
 “Who is in the house?”

(18) a. o-mw-aana **a-a-tima**  
 1-1-child **1S-PST-run**  
 “The child ran”

b. naanu **o-w-a-tima?** (\*aatima) **Anti-agreement effect**  
 who 1C-**1S-PST-run**  
 “Who ran?”

<sup>10</sup> cf. Ouhalla 1993; Campos 1997; Brandi and Cordin 1989; Schneider-Zioga 2007; Richards 2001; Phillips 1998

<sup>11</sup> Similar anti-agreement effects are also suggested for a variety of other languages in the course of various discussions in Nurse (2008); see especially the appendices recounting the matrix of languages that make up the data set for his discussion. See also Kinyalolo (1991) for Kilega and Bokamba (1976) for Dzamba, Likila, and Lingala.

## 4.2 Late insertion and nominal Fin°

The analysis I will present here for these so-called AAEs hinges on three crucial assumptions. First, I assume that subjects are extracted by merging a **nominal Fin°** to satisfy the Subject Criterion, as I argued for in the previous sections of this paper. Second, following Distributed Morphology I adhere to a Late Insertion account of morphology, where phonological forms are inserted late in the derivation, competing for insertion in at a given terminal node based on which phonological form maximally matches the featural specification of that node (Embick and Noyer 2007; Marantz 1997, Halle and Marantz 1993). Finally, and perhaps most controversially, I assume that heads in Bantu probe upwards for a **c-commanding** goal (rather than downward for a **c-commanded** goal), as argued for independently by Baker (2008) (see also Carstens 2005 and Collins 2004). That is, in Bantu, X° agrees with YP, rather than ZP: [ YP [ X° ZP ]

Considering the data in (17) and (18), it is tempting to consider the [o-] subject agreement morpheme that appears in cases of subject extraction to be non-canonical in some way, in that it diverges from the normal (declarative) paradigm. Considering the more complete paradigm in (19), however, it is clear that the opposite is true: the [a-] agreement in class 1 declaratives is the divergent form<sup>12</sup>.

(19) Lubukusu phi-feature agreement (adapted from Wasike 2007)

|   | <u>Class Nominal</u> | <u>Relative Clause</u> | <u>Declarative</u> |                        |
|---|----------------------|------------------------|--------------------|------------------------|
|   | PP-P-noun            | CA-SA-verb             | SA-verb            |                        |
| 1 | <b>o</b> -mu-aana    | <b>o</b> -w-akwa       | <b>a</b> -akwa     | the child (who) fell   |
| 2 | <b>ba</b> -ba-aana   | <b>ba</b> -ba-akwa     | <b>ba</b> -akwa    | children (who) fell    |
| 3 | <b>ku</b> -mu-saala  | <b>ku</b> -kw-akwa     | <b>kw</b> -akwa    | the tree (which) fell  |
| 4 | <b>ki</b> -mi-saala  | <b>ki</b> -ky-akwa     | <b>ky</b> -akwa    | trees (which) fell     |
| 5 | <b>li</b> -li-ino    | <b>li</b> -ly-akwa     | <b>ly</b> -akwa    | the tooth (which) fell |
| 6 | <b>ka</b> -me-eno    | <b>ka</b> -ka-a-kw-a   | <b>ka</b> -akwa    | teeth (which) fell     |

As can be seen in (19), in Lubukusu there is morphological identity between the nominal pre-prefix, C-agreement, and subject agreement in all cases, except for class 1 declarative subject agreement, which is [a-] instead of the (seemingly) expected [o-]. I therefore propose that the canonical class 1 agreement form in Lubukusu is [o-]<sup>13</sup>. The declarative agreement [a-] in class 1 is more highly specified than the [o-] morpheme, as is shown in (20): the featural specification for [a-] includes the feature ANIMATE. The presence of animacy concord in

<sup>12</sup> Though the table in (19) only shows classes 1-6, the correlation holds for classes 7-14 also.

<sup>13</sup> More precisely, this morpheme is underlyingly /u-/, which is realized as [o-] in most cases due to a phonological rule with lowers /u/ to [o] word-initially (see Mutonyi 2000). Evidence of /u/ is seen in extraction of a class 1 NP in a tense that is marked with a vowel-initial morpheme, resulting in the sequence *o-w-*, where the glide *-w-* is formed from underlying /u-/.



Swahili, a related Bantu language, provides tentative support for this analysis, as non-class 1 nouns nonetheless trigger the [a-] agreement on the verb in the case that they denote a human entity (e.g. *dada* ‘sister’)<sup>14</sup>.

(20) Lubukusu Class 1 (verbal) Agreement Morphemes<sup>15,16</sup>

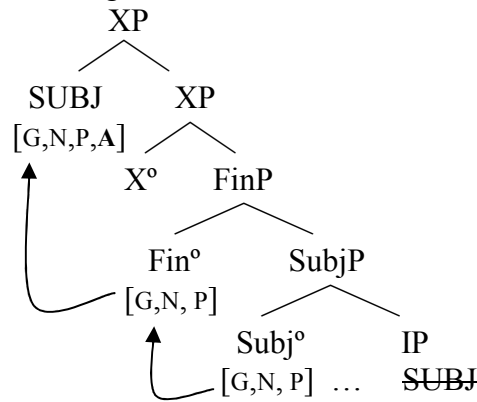
- i. a- ↔ [3<sup>rd</sup> person, singular, class 1, ANIMATE] / {verb}
- ii. o- ↔ [singular, class 1, 3<sup>rd</sup> person]

On this approach the pre-prefix morpheme is specified only for gender and number, together with whatever features they are that give the pre-prefix its nominal qualities, which I simply label NOMINAL here.

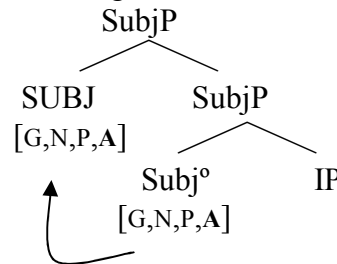
(21) Lubukusu nominal Fin<sup>o</sup>, pre-prefix  
 [GEN, NUM, PN], NOMINAL

The Lubukusu anti-agreement effect follows in this way: because Agree probes upwards rather than downwards in its c-command domain, when a subject is extracted, the nominal Fin<sup>o</sup> intervenes between Subj<sup>o</sup> and the noun phrase subject. Agree therefore targets the phi-features of nominal Fin<sup>o</sup>, not the subject itself. It is this intervening head which ‘bleaches’ the Agree relation of the feature ANIMATE, as Subj<sup>o</sup> agrees with Fin<sup>o</sup>, not directly with the NP subject. This is illustrated in the lack of ANIMATE on the Fin<sup>o</sup> and Subj<sup>o</sup> heads in (22)a:

(22) a. Anti-agreement effects



b. Declarative agreement



<sup>14</sup> The evidence in Lubukusu is not as transparent as the Swahili cases, as I have been unable to find any cases of animacy/class mismatch as those described for Swahili in which to test this.

<sup>15</sup> A keen observer will note that there is redundancy in these Vocabulary items, as “Class 1” as generally understood by Bantuists automatically includes the notion ‘singular’ (if not ‘3<sup>rd</sup> person’ as well). This is an artifact of the Bantuist tradition of separating different numbers within a gender as different noun classes.

<sup>16</sup> Note that this account will also then have to accept that class 2 noun phrases also bear the feature [ANIMATE]. I am forced to claim here that class 2 does not have a more highly specified agreement morpheme for verbal agreement: /ba/ therefore does *not* bear the feature [ANIMATE]: ba- ↔ [3<sup>rd</sup> person, plural, class 2].

The intuition is that anti-agreement effects are a consequence of the structural configuration created by subject extraction, analyzed here as a nominal  $\text{Fin}^\circ$  head intervening between the subject-agreeing head and the (extracted) subject noun phrase itself. Because  $\text{Fin}^\circ$  does not acquire the feature *animate*, neither does  $\text{Subj}^\circ$ , with the result that [o-] (and not [a-]) is inserted for subject agreement in extraction contexts. The assumption is that otherwise, unobstructed Agree would adopt *all* the features of the subject (including ANIMATE), as is shown in (22)b.

### 4.3 Some supporting evidence

This section explores the predictions made by this account, specifically looking at various structural configurations where AAEs are predicted not to occur (and in fact do not), as well as some cases where AAEs might not be expected to occur, but do occur nonetheless. The first prediction is somewhat trivial—that anti-agreement effects should occur only when C-agreement is present. Insofar as I have uncovered no counter-evidence to this claim, I assume that this prediction is upheld. Other specific cases are considered in what follows.

#### 4.3.1 Nominal $\text{Fin}^\circ$ must intervene: Locative inversion and Compound Tenses

A second prediction made by the Criterial Freezing approach to (so-called) anti-agreement effects is that if a *wh*-subject is in a position such that there is no intervention effect created by the C-agreement morpheme (i.e. the nominal  $\text{Fin}^\circ$  head), there is predicted to be no AAE. This holds true of both locative inversion constructions and compound tense constructions.

In locative inversion constructions, the logical subject occurs postverbally and a locative phrase occurs in preverbal subject position. In one type of locative inversion construction in Lubukusu, subject agreement is with the postverbal logical subject. Interestingly, when the subject is extracted in these cases, there is no AAE, as can be seen by the correlation between the locative inversion case in (23)c and the declarative in (23)a, as opposed to the interrogative in (23)b.

- |         |  |                     |          |                           |
|---------|--|---------------------|----------|---------------------------|
| (23) a. | o-mu-haasi                                   | a-kwa               | mu-nju   | <b>Declarative</b>        |
|         | 1-1-woman                                    | 1S.PST-fall         | 18-house |                           |
|         | “a woman fell in the house.”                 |                     |          |                           |
| b.      | naanu  | o-w-a-kwa           | mu-nju ? | <b>Interrogative, AAE</b> |
|         | 1who   | 1C-1S-PST-fall      | 18-house |                           |
|         | “Who fell in the house?”                     |                     |          |                           |
| c.      | mu-nju                                       | <i>pro</i> a-kwa-mo | naanu ?  | <b>LI Interrogative</b>   |
|         | 18-house                                     | 1S.PST-fall-18L     | 1who     | <b>NO AAE</b>             |
|         | “in the house fell who?” (non-echo question) |                     |          |                           |

Because the logical subject does not occur in subject position, there is no need for the nominal  $\text{Fin}^\circ$  subject extraction mechanism, and no AAE as a result.

A second and perhaps more compelling case is found in compound tense constructions (CTs). CTs consist of an auxiliary and a main verb, both of which

are fully inflected for tense/aspect and agreement. Carstens (2001) and Carstens and Kinyalolo (1989) argue for the analysis in (25), where the subject raises Spec-to-Spec through an Aspect Phrase on the way to subject position.

(24) Juma **a-li-kuwa a-me-pika** chakula [Swahili]  
 Juma **1S-PST -be 1S-PRF-cook** 7.food  
 “Juma had cooked food”

(25) [<sub>T'</sub> Juma<sub>i</sub> [<sub>T'</sub> **a-li-kuwa** [<sub>ASP'</sub> **t<sub>i</sub>** [<sub>ASP'</sub> **a-me-pika**<sub>v</sub> [<sub>VP</sub> t<sub>i</sub> [<sub>VP</sub> t<sub>v</sub> chakula ]]]]]]]  
 Juma **1S-PST -be** **1S-PRF-cook** 7.food  
 “Juma had cooked food”

It is important to note is that, on the analysis presented in (25), there is an intermediate landing site for movement in between the main verb and the auxiliary verb. This makes a very specific prediction on the Criterial Freezing analysis: since there is only one SubjP per clause, this intermediate position is not a Criterial position, and as such requires no skipping mechanism in extraction cases. Therefore, C-agreement and AAEs should appear only on the (higher) auxiliary verb, and not on the main verb. This is precisely what we find, with [o-] agreement on the auxiliary verb and [a-] agreement on the main verb:

(26) naanu **o-o-la-ba** ~~naanu~~ **ne-a-kula** ka-ma-tunda<sup>17</sup>  
 1who **1C-1S-fut-be** 1who **NE-1S.PST-buy** 6-6-fruit  
 “Who will be buying fruit?” (\*n-o-kula, \*ne-o-kula)

#### 4.3.2 AAEs not restricted to wh-movement

A third prediction of the Criterial Freezing account as set forth in this paper is that AAEs should not be restricted to cases of wh-movement; rather, any instance of subject extraction from SubjP (i.e. facilitated by nominal Fin<sup>o</sup>C-agreement) will trigger an anti-agreement effect. We find this to be the case in certain subject-to-subject raising constructions in Lubukusu. Consider the familiar paradigm for raising constructions:

- (27) a. It seemed that Tegan fell  
 b. Tegan seemed \_\_\_ to fall  
 c. \*Tegan seemed that \_\_\_ fell

Lubukusu, like many Bantu languages, has a verb meaning “seem” or “appear” that behaves like a raising verb, but allows the equivalent of (27)c rather than (27)b, having a finite embedded verb.

<sup>17</sup> The NE morpheme that appears in compound tenses and in wh-island constructions below seems to be related to the focus marker discussed by Schwarz (2007) and Abels and Muriungu (2008) for Kikuyu and Kitharaka, respectively, but the Lubukusu ‘ne-’ requires further research.

- (28) a. e-fwana oli Tegani a-kwa **Raising constructions**  
 9-seem COMP T. 1S-PST-fall  
 “It seems as if Tegan fell”  
 b. Tegani a-fwana \*(oli) \_\_\_ o-w-a-kwa  
 T. 1S-seem COMP **1C-1S-PST-fall**  
 “Tegan seems (as if/like) she fell”

Example (28)b demonstrates that C-agreement and AAEs are linked with movement out of subject position more generally, whether or not it is wh-movement<sup>18</sup>.

#### 4.3.3 Long Distance (non-movement) Dependencies

Finally, the Criterial Freezing account, like any account linking wh-agreement with movement, operations, predicts that if an instance of subject extraction could be argued *not* to be the product of movement, there is predicted to be no AAE<sup>19</sup>. Evidence for this comes from islands for movement, where arguably the syntactic relation in these cases is one of resumption (by a null pronoun) rather than movement—a ‘fixed subject’ strategy in the terms of Rizzi and Shlonsky (2007).

First I consider relative clauses: it is possible to have a long distance wh-dependency with a gap in a relative clause (29) and an *in situ* wh-subject within a relative clause (30), arguably created by a non-movement dependency (see Adger and Ramchand 2005, and Cinque 1990, among many others). Notice that in both of these cases, C-agreement and AAEs are not present.

- (29) naanu<sub>k</sub> ni-ye Joni a-a-bona [si-i-tabu<sub>i</sub> ni-syo \_\_\_<sub>k</sub> a-a-soma \_\_\_<sub>i</sub>]  
 1.who COMP-1 John 1S-PST-see 7-7-book COMP-7 **1S-PST-read**  
 “Who<sub>i</sub> is it that John saw the book which s/he<sub>i</sub> read (it)?” (\*o-w-a-soma)  
 (1C-1S-PST-read)
- (30) Joni a-a-bona [si-i-tabu<sub>i</sub> ni-syo naanu a-a-soma \_\_\_<sub>i</sub>] (\*o-w-a ...)  
 John 1S-PST-see 7-7-book COMP-7 2.who **1S-PST-read** (1C-1S-PST...)  
 “John saw the book which who read?” (non-echo matrix question)

The same holds for wh-islands, as identified by Wasike (2007). Again, whether the wh-subject is *in situ* or *ex situ*, C-agreement is unacceptable.

<sup>18</sup>An interesting fact here as well is that this construction is also possible *without* C-agreement and anti-agreement effects. This variation is an ongoing matter of research.

i. Tegani a-fwana (oli) \_\_\_ a-kwa  
 T. 1S-seem COMP **1S.PST-fall** “Tegan seems (as if/like) she fell”

<sup>19</sup>This is because if a noun phrase subject (or resumptive pronoun) remains *in situ*, there is no intervening nominal Fin<sup>o</sup> to bleach the animate feature from the Agree operation.

- (31) a. Wafula a-many-ile nga naanu ne-a-ar-a si-kombe?  
 1Wafula 1S-know- ASP how 1who NE-1S-PST-break 7-cup  
 “Who does Wafula know how *t* broke the cup?” (Wasike 2007: 282)
- (32) a. naanu ni-ye Wafula a-many-ile nga *t* ne-a-ar-a si-kombe?  
 1who COMP-1 1Wafula 1S-know- ASP how NE-1S-PST-break 7-cup  
 “Who does Wafula know how *t* broke the cup?”

## 5 Conclusions

This paper has made three main empirical observations. First, extracted subjects in Lubukusu occur with an additional preverbal agreement morpheme (C-agreement); second, (so-called) anti-agreement effects occur in conjunction with C-agreement in Lubukusu, for class 1 NPs (as reported for other Bantu languages); third, these anti-agreement effects are generally obligatory but are at times ruled out by particular structural configurations such as island contexts, inversion contexts, and compound tenses.

I have argued that subject extraction may be accounted for under a theory of “Criterial Freezing,” where C-agreement is analyzed as a nominal  $\text{Fin}^{\circ}$  which satisfies the Subject Criterion, allowing the wh-subject to skip Spec, SubjP. AAEs are the result of the nominal  $\text{Fin}^{\circ}$  intervening between the subject-agreeing head and the wh-subject, and subject agreement is ‘mediated’ in these cases by the nominal  $\text{Fin}^{\circ}$  morpheme. The utility of the “Criterial Freezing” analysis on both of the previous points provides evidence that this is a fruitful approach to subject/non-subject asymmetries cross-linguistically.

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