



# **Raising in Logoori**

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April 22, 2016

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Submitted to the Department of Linguistics and Cognitive Science at Pomona College  
In partial fulfillment of the requirements for the degree of Bachelor of Arts



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# 1 Introduction

Raising constructions are instances where an argument from an embedded clause is realized in a position in the main clause, and have been the subject of intensive cross-linguistic investigation (Rosenbaum, 1967; Postal, 1970, 1974; George and Kornfilt, 1981; Chomsky, 1981; Wurmbrand, 1999; Chomsky, 2000, 2001; Ura, 1994; Holmberg and Hróarsdóttir, 2004; Nevins, 2004; Polinsky and Potsdam, 2006; Davies and Dubinsky, 2008; Kirby et al., 2010; Polinsky, 2013, among many others).

Raising is quite well-studied for perception verbs, where in many languages an embedded subject raises to the main clause subject position. The broadly ‘typical’ cases are the English-like pattern shown in (1) and (2), where raising is necessary from non-finite clauses, but ruled out in cases like (2a) where the embedded clause is finite, which must instead occur with an expletive subject as shown in (2b).

- |        |   |   |
|--------|---|---|
| (1) a. | Tania seems <del>Tania</del> to be sick.    | <b>Raising Allowed from Non-finite Clause</b> |
| b.     | *It seems Tania to be sick.                 |   |
| (2) a. | *Tania seems that <del>Tania</del> is sick. | <b>Raising Not Allowed from Finite Clause</b> |
| b.     | It seems that Tania is sick.                |   |

The pattern that is now becoming familiar from research on Bantu languages, however, is that raising is possible but optional out of finite embedded clauses, as in (4) and (3), respectively, and banned out of non-finite clauses, shown in (5), in stark contrast to the English pattern. The examples below are drawn from Logoori (Bantu, Luyia; Kenya).<sup>1</sup>

- |        |  |   |
|--------|--|---|
| (3)    | ga-rorek-a (ndi) zi-ŋombe zi-r-ŋ<br>6SA-seem-PRES (that) 10-cow 10SA-eat-PST<br>‘It seems that the cows ate.’  | <b>Unraised Form</b>                    |
| (4) a. | zi-ŋombe <b>zi</b> -rorek-a (ndi) <del>zi</del> ŋombe zi-r-ŋ<br>10-cow 10SA-seem-PRES (that) <del>10</del> .cow 10SA-eat-PST<br>‘The cows seem to have eaten.’ | <b>Agreeing Raising</b>                 |
| b.     | zi-ŋombe <b>ga</b> -rorek-a (ndi) <del>zi</del> ŋombe zi-r-ŋ<br>10-cow 6SA-seem-PRES (that) <del>10</del> .cow 10SA-eat-PST<br>‘The cows seem to have eaten.’  | <b>Non-Agreeing Raising</b>             |
| (5)    | *zi-ŋombe zi/ga-rorek-a ku-ri-a<br>10-cow 10SA/6SA-seem-PRES INF-eat-FV<br>‘The cows seem to eat.’   | <b>* Raising from Non-finite Clause</b> |

Note that the raising verb agrees with the raised subject in (4a) (which I will call **agreeing raising**), but there is a distinct subject agreement form in (4b), which I will refer to as **non-agreeing raising**, or **ga-raising**.

There is a growing amount of research on raising in Bantu languages (Ura, 1998; Carstens and Diercks, 2013b; Diercks, 2012; Halpert, 2012, 2015, 2016; Zeller, 2006). Specifically, Halpert focuses on a pattern similar to (4b) in Zulu, the significance of which I will discuss in sections 4 and 6 below.

The traditional explanation for the English-type raising pattern seen in (1) and (2) relies on Case Theory, the Activity Condition, and phases (Chomsky, 2001), though the patterns found in Logoori and other Bantu languages challenge this explanation. The relevant portions of these theories and the issues Logoori raises for them are introduced below:

<sup>1</sup>All data and syntactic judgments in this paper are from Isaac Kilaha Thomas, a Logoori speaker who currently resides in Southern California.

- (6) **Case**  
Case Theory calls for all DPs to have Case. A DP with no Case, or with multiple Cases, is uninterpretable to the phonology and causes the derivation to crash. DPs get case through Agree. (Bobaljik and Wurmbrand, 2008; Chomsky, 2001)
- (7) **Activity**  
The Activity Condition states that only active goals may participate in higher operations. DPs are active if they have uninterpretable phi-features, and once valued, these features are marked for deletion, causing the DP to become inactive. (Chomsky, 2001; Nevins, 2004; Carstens, 2011)
- (8) **Phases**  
The Phase Impenetrability Condition (PIC) states that once a phase is constructed, it is sent to the C-I and S-M interfaces, rendering everything in the complement of the phase head unavailable for future raising. Complementizers are thought to be phase heads, whereas non-finite phrases are not phases. (Chomsky, 2001, 1986; Nevins, 2004)

These three ideas are used in relation to English raising as follows:

Mandatory raising out of English non-finite clauses (1) is usually explained with Case Theory. Only finite T can assign Case, therefore embedded subjects must raise up to the main clause to get their Case valued.

The ban on raising out of finite clauses (2) results both from the Activity Condition and the PIC. After receiving case from the embedded T, embedded subjects become inactive, and thus cannot raise up to the main clause. The PIC also bans this sort of raising, since a finite clause is a phase, and material inside a phase cannot escape. A non-finite phrase, on the other hand, is not a full CP, so the movement to acquire case is allowed.

These conditions are clearly at odds with the Logoori pattern, where raising is banned out of non-finite clauses (5), and possible but optional out of finite clauses (4). I will refer to raising out of finite clauses as **hyper-raising** (following Ura 1998 and Carstens and Diercks 2013b), identified as a construction that shows properties expected of syntactic movement, but in contexts traditionally thought to rule out movement. Furthermore, in these hyper-raising contexts, we see two distinct options for subject agreement on the raising verb (agreeing with the raised subject or taking class 6 *ga-* agreement), another aspect of Logoori raising that the traditional model offers no explanation for. The key questions raised for a model using Case Theory, the Activity Condition, and the PIC are laid out in (9).

- (9) Theoretical questions raised regarding Logoori raising
- a. Why can the raised subject raise out of a presumably Case-licensed position?
  - b. How can the raised subject escape a finite clause, which is presumably a phase?
  - c. What prevents raising out of a non-finite clause, which is presumably *not* a phase?
  - d. What accounts for *ga-* ‘default’ agreement in non-agreeing raising?
    - i. What is triggering ‘subject’ agreement on T?
    - ii. How can a non-agreed-with subject raise to TP? (cf. Baker, 2008; Carstens, 2005)

Several authors have argued against one or more of the conditions in order to explain hyper-raising, including Carstens and Diercks (2013b), who argue that Case is not universal and propose a modified understanding of Activity, and Halpert (2012, 2015, 2016), who does not use Case or Activity, and explains PIC effects through phi-features. Nevins (2004) argues against the existence of the Activity Condition, but only looks at hyper-raising briefly, and does not consider the Bantu patterns.

In this paper, I will demonstrate that neither Carstens and Diercks nor Halpert can fully explain the Logoori patterns, with particular focus on a key issue raised for Halpert. Although I do not provide a theory of my own to answer the questions posed in (9), I will suggest potential avenues of future research on the issue.

Section 2 will look at the theory put forth by Carstens and Diercks (2013b), before section 3 lays out some important questions that must be answered about Logoori to rule out alternative analyses to hyper-raising. In section

4, I use a series of diagnostics to rule out these alternatives and confirm that the apparent raising constructions with *-roreka* in Logoori truly are examples of hyper-raising. I discuss Halpert (2012, 2015, 2016), who gives a unified account of raising to explain both Zulu and English raising patterns, among other languages, in section 5, and test the predictions the theory makes for Logoori, finding that it is initially promising. Section 6 introduces a second raising predicate (*-fwaana*) in Logoori that behaves similarly to *-roreka* in agreeing raising contexts, but crucially differs from *-roreka* in not showing a non-agreeing form. Section 7 discusses the ramifications of this data for Halpert’s theory, which relies on non-agreeing raising to explain hyper-raising in general, and thus leaves hyper-raising with Logoori *-fwaana* unexplained. In section 8 I propose various lines of inquiry for future research on the questions raised by Logoori, and finally I conclude in section 9.

## 2 An initial theory of Bantu raising patterns

Carstens and Diercks (2013b) note hyper-raising structures in two other Luyia languages, Lubukusu (10) and Lusaamia (11), that are similar to the Logoori agreeing raising shown above in (4a), and bring up the same questions about the role of Case and Activity in raising.

- (10) babaandu ba-lolekhana (mbo) ba-kwa [Lubukusu]  
 2people 2SA-seem (that) 2SA.PAST-fall  
 ‘The people seem like they fell/The people seem to have fallen.’
- (11) Ouma a-bonekhana (koti) a-kusa enyumba eyaye [Lusaamia]  
 Ouma 1SA-appear (that) 1SA-sell 9house 9POSS  
 ‘Ouma appears as if he’s selling his house/Ouma appears to be selling his house.’ (both from C&D, 2013b)

Their major claim, supporting the conclusions of Diercks (2012), is that Case must be parameterized – and that Lubukusu and Lusaamia, and likely many Bantu languages, do not in fact have Case. Instead of Case, nominals in these languages use gender (which together with number forms noun class in Bantu) in their Agree relations. Cross-linguistically, gender is a feature of the NP, not the DP, which would make it unavailable for higher operations, however, Bantu languages have N-to-D raising, which brings the gender feature to DPs and allows them to be active goals, despite not having Case.

Like Case, gender in Bantu is uninterpretable, but it crucially differs from Case in being intrinsically valued on all nouns. Recall that an active goal must have one or more uninterpretable features, which after being valued are marked for deletion. Thus, once a goal is part of a phi-complete Agree relation, all its uninterpretable features should be deleted and it should cease to be active. In Bantu languages that use gender rather than Case for agreement, however, gender is already valued when a DP is feature-checked. Carstens and Diercks, following Carstens (2011), argue that it is the process of *valuation*, not merely of feature-checking, that marks a feature for deletion. Since the gender feature is never valued by Agree, it is never deleted, and the DP remains active for future agreement (such as agreement with the matrix T in a raising construction).

Having dealt with Case and Activity, Carstens and Diercks turn to phases. They do not reject the PIC, but instead claim that only some complementizers are phase heads, and show that the use of certain complementizers, such as Lubukusu *-li*, does indeed block hyper-raising out of a finite phrase, seen below in (12). Complementizers that are phase heads, like *-li*, occupy a higher structural position than those that are not, like *mbo*.

- (12) \*Mikaeli a-lolekhana **a-li** a-si-kona [Lubukusu]  
 Michael 1SA-seem that 1SA-PERS-sleep  
 ‘Michael seems to be still sleeping.’ (Carstens and Diercks, 2013b)

To summarize, DPs in Lubukusu and Lusaamia do not have Case, but instead use gender in Agree. Because gender is uninterpretable, the DPs are active, but because it is intrinsically valued, it is never deleted and the DPs are “hyper-

active” for agreement. This allows embedded subjects of finite phrases to raise up to the matrix clause, even though they are already phi-complete.

While I have found no evidence in Logoori to contradict this theory, it leaves open several questions with no clear method of solving them. Though Carstens and Diercks explain why DPs are *able* to move out of a finite embedded clause, they do not discuss the motivation for doing so. Their theory also does not address the ban on raising out of non-finite phrases, nor does it offer an explanation for non-agreeing raising.

Halpert (2012, 2015, 2016) proposes a solution to all of these lingering questions that uses the phi-status of clauses and the EPP to explain hyper-raising in Zulu. Importantly, Halpert claims that her theory accounts for the English raising pattern as well. Rather than treating Bantu raising patterns as exceptional and needing explanation, her theory gives a unified account that should be applicable to any language. Ultimately, I will show that Logoori is problematic for the theory, despite at first seeming to follow the Zulu patterns.

Before discussing Halpert’s proposal in section 5, however, I will turn attention back to Logoori and show the raising patterns in more depth. Crucially, I will show that apparent hyper-raising really is an example of true raising, even in the non-agreeing *ga*-raising forms. This last piece is especially important as non-agreeing raising is the key to Halpert’s theory.

### 3 Alternative analyses to hyper-raising

I have been calling the forms in (4), repeated below as (13), examples of hyper-raising, though this is not the only available analysis of their structure. Both (13a) and (13b) could reasonably be interpreted as copy-raising, and (13b), the non-agreeing raising, could be construed as an example of dislocation with an expletive subject. I will explain these alternative possibilities below, before showing in section 4 that they cannot in fact account for all of the Logoori data, while a hyper-raising analysis can.

- |         |                                |                            |                             |
|---------|--------------------------------|----------------------------|-----------------------------|
| (13) a. | zi-ŋombe <b>zi</b> -rorek-a    | (ndi) ziŋombe zi-r-II      | <b>Agreeing Raising</b>     |
|         | 10-cow 10SA-seem-PRES          | (that) 10.eow 10SA-eat-PST |                             |
|         | ‘The cows seem to have eaten.’ |                            |                             |
| b.      | zi-ŋombe <b>ga</b> -rorek-a    | (ndi) ziŋombe zi-r-II      | <b>Non-Agreeing Raising</b> |
|         | 10-cow 6SA-seem-PRES           | (that) 10.eow 10SA-eat-PST |                             |
|         | ‘The cows seem to have eaten.’ |                            |                             |

#### 3.1 The question of copy-raising vs. hyper-raising

A major question that arises in the analysis of raising constructions in Bantu languages like Logoori is whether they are in fact raising constructions in the sense of (14), or if instead the construction in question is actually a copy-raising construction like the English example in (15).

- |      |  |                     |
|------|--|---------------------|
| (14) | Tania seems <del>Tania</del> to be sick. | <b>True Raising</b> |
| (15) | Tania seems like she is sick.            | <b>Copy-Raising</b> |

Since Logoori is a null-subject language, a raising construction could in fact be something more like (16), where there is no direct syntactic link between the embedded subject position and the main clause subject aside from coreference.

- |      |   |                                       |                              |
|------|---|---------------------------------------|------------------------------|
| (16) | zi-ŋombe <sub>k</sub> zi-rorek-a                                | (ndi) <i>pro</i> <sub>k</sub> zi-r-II | <b>Copy-Raising Analysis</b> |
|      | 10-cow 10SA-seem-PRES   | (that) <i>pro</i> 10SA-eat-PST        |                              |
|      | ‘The cows <sub>k</sub> seem like they <sub>k</sub> have eaten.’ |                                       |                              |

The subjects in copy-raising constructions are not actually raised, but instead base-generated in the main clause, which means that movement-based evidence can distinguish between a hyper-raising and copy-raising analysis. Specifically, to demonstrate that the Logoori constructions are examples of true raising, I will look at connectivity effects that show the subject is represented in both the main and embedded clauses, and at evidence of A-movement, which of course should not happen in a copy-raising analysis. These predictions are listed below in (17).

(17) Predictions of a Hyper-Raising Analysis

	Hyper-Raising	Copy-Raising
Connectivity Effects	yes	no
Properties of A-movement	yes	no

### 3.2 The question of *ga*-raising: expletive + dislocation or something else?

Above in (13b) we saw that there is a form of (apparent) raising where the main clause verb does not agree with the raised subject. This construction is not isolated to Logoori; as mentioned previously, Halpert’s analysis of Zulu depends on non-agreeing raising, and Diercks has noted a similar structure in Lubukusu, though does not discuss it in his proposal to parameterize Case. Examples of non-agreeing raising in these two languages are given below:

(18) Non-Agreeing Raising Across Bantu

- a. uZinhle<sub>i</sub> **ku-** bonakala [ukuthi t<sub>i</sub> u- zo- xova ujeqe] [Zulu]  
 AUG.1Zinhle<sub>i</sub> 17S- seems that t<sub>i</sub> 1S- FUT- make AUG.1steamed.bread  
 ‘It seems that Zinhle will make steamed bread.’ (Halpert, 2015)
- b. Alfredi **ka-**lolekhana mbo a-lwala [Lubukusu]  
 1Alfred 6S-seems that 1S-is.sick  
 ‘Alfred seems like he is sick.’ (Diercks field notes)

As explored by Halpert (2015, 2016), a major question about constructions like this is whether they are instances of an expletive construction with a left-dislocated (apparent) subject as in (19a), or whether they are true hyper-raising constructions that (for some reason) have an alternative subject agreement form, as in (19b).

- (19) a. [ SUBJ<sub>k</sub> [ (expl<sub>i</sub>) ga<sub>i</sub>-seems [CP that t<sub>k</sub> [TP ... ] ] ] ] Expletive + Dislocation Analysis  
 b. [ SUBJ<sub>k</sub> ga<sub>i</sub>-seems [CP that t<sub>k</sub> [TP ... ] ] ] Non-Agreeing Raising Analysis

Halpert (2015, 2016) shows convincingly that Zulu constructions like (18a) are in fact true hyper-raising constructions that simply show an alternative subject agreement form.

Dislocation uses A’-movement rather than A-movement, and should not show connectivity effects, and thus shares the predictions of copy-raising mentioned above in (17). Additionally, the apparent main clause subject should behave like a real subject in hyper-raising contexts, but should not have subject properties if it is merely dislocated.

(20) Broad Predictions of a Hyper-Raising vs. Topic Analysis of *Ga*-Raising

	Hyper-Raising	LD Topic + expletive
‘Raised’ subject shows subject properties	yes	no
Connectivity Effects	yes	no
Properties of A-movement	yes	no

In the next section, I will show that the Logoori predicate *-roreka* should be analyzed as hyper-raising in both its agreeing and non-agreeing forms. However, after discussing Halpert’s theory in section 5, I will introduce another

raising predicate *-fwaana*, which shows a contrast between its agreeing and non-agreeing forms. A hyper-raising analysis is unavailable for non-agreeing raising with *-fwaana*, which poses a challenge to Halpert’s theory.

## 4 *-roreka* as a raising predicate in Logoori

In this section, I use seven different diagnostics to support a hyper-raising analysis over a copy-raising or dislocation analysis for the verb *-roreka* ‘to seem’ in both its agreeing and non-agreeing (*ga-*) forms. The diagnostics are listed in the table below, which I will complete throughout the section.

### (21) Raising Diagnostics by Construction

Diagnostic	<i>-roreka</i> LD Topics	
	AGR-	ga-
Idiomatic reading retained		
Reconstructed reading possible		
Subject-like extraction		
New binding possibilities		
Intermediate in multiple-raising cycle		
Can be new information		
Possible inside RC?		

### 4.1 Connectivity effects show Logoori raising is hyper-raising

The first two diagnostics show connectivity effects between the main and embedded clauses of raising constructions, a prediction of the hyper-raising analysis.

#### 4.1.1 *-roreka* retains idiomatic readings

It has long been noted that raising predicates like *seem* in (22a) retain the idiomatic readings of whole-clause idioms whose subject is raised to subject position, whereas non-raising predicates like *hope* do not retain idiomatic readings, as shown in (22b).

- (22) a. The cat seems [ ~~the cat~~ to be out of the bag ] = the secret seems to have been revealed  
 b. The cat hopes [ PRO to be out of the bag ] ≠ the secret ought to be revealed

The assumption is that in order to retain their idiomatic interpretation, idioms must (at some point in the derivation) be merged into the structure as a unit. Therefore, (22a) is generated via movement of *the cat* from the lower clause to the main clause, whereas *the cat* is base-generated in (22b) .

Throughout this paper, I use the Logoori idiom given in (23)<sup>2</sup>, and shown with *-roreka* in (24), to investigate this property.

<sup>2</sup>I have found two other idioms in Logoori, but both use class 6 subjects, making it impossible to distinguish between agreeing and non-agreeing raising. *Magaanda gakuuunduka* literally means ‘the beans spilled’ and has the idiomatic meaning ‘the word is out’. *Maaze gakuuunduka* means ‘the water spilled’, with the idiomatic reading ‘there is nothing you can do about it’.

- (23) mu-doga gu-simuk-i **Idiom**  
 3-car 3SA-depart-PST  
 ‘The car left.’  
 Idiomatic interpretation: ‘It’s too late’ (similar to English ‘the ship has sailed.’)
- (24) ga-rorek-aa ndi mu-doga gu-simuk-i **Unraised Form with Idiom**  
 6SA-seem-PRES that 3-car 3SA-depart-PST  
 ‘It seems that the car departed.’  
 ‘It seems that it is too late.’

When the subject of the embedded idiom is raised, the idiomatic reading is retained for both agreeing (25a) and non-agreeing (25b) constructions. This should only happen if the subject *mudoga* enters the structure in the embedded clause.

- (25) a. mu-doga gu-roreka (ndi) ~~mu-doga~~ gu-simuk-i **Agreeing Raising with Idiom**  
 3-car 3SA-seems (that) 3SA-depart-PST  
 ‘The car seems to have departed.’  
 ‘It appears to be too late.’ *Idiomatic Meaning Retained*
- b. mu-doga ga-roreka (ndi) ~~mu-doga~~ gu-simuk-i **Non-Agreeing Raising with Idiom**  
 3-car 6SA-seems (that) 3SA-depart-PST  
 ‘The car seems to have departed.’  
 ‘It appears to be too late.’ *Idiomatic Meaning Retained*

Notably, the subject of an embedded sentential idiom cannot be left-dislocated and retain the idiomatic interpretation, as is evident in (26b):

- (26) a. suuvir-a ndi mu-doga gw-aku-simuk-a **Embedded Idiom**  
 1sgSA.believe that 3-car 3SA-PST-depart-FV  
 ‘I believe that the car has left.’  
 ‘I believe that it is too late.’
- b. mu-doga, suuvira ndi gw-aku-simuk-a **\*Left-dislocation with Idiom**  
 3-car 1sgSA.believe that 3SA-PST-depart-FV  
 ‘The car, I believe that it has left.’  
 ‘\*I believe that it is too late.’ *Idiomatic Meaning Unavailable*

The contrast between (26b) and (25b) give us our first piece of evidence suggesting that *ga*-raising patterns with other raising constructions and not with left-dislocated constructions. This initial evidence also suggests that both the agreeing and non-agreeing raising constructions are instances of hyper-raising, rather than copy-raising constructions.

To verify the validity of the diagnostic, it is clear that not all apparent raising constructions allow such continuity effects. Below is a construction using the verb *kwikora* ‘act like, pretend’ which has a similar syntactic appearance to *-roreka* but which does not retain idiomatic readings in the same way, and appears to be an example of copy-raising.

- (27) mu-doga gw-ikoraa ndi gw-aku-simuk-a **Copy-Raising with Idiom**  
 3-car 3SA-acts.like that 3SA-PST-depart-FV  
 ‘The car is acting like it left.’<sup>3</sup>  
 ‘\*it looks like it is too late’ *Idiomatic Meaning Unavailable*

<sup>3</sup>This is not a strange sentence in Logoori, since cars can be talked about as actors on their own, rather than immediately discussing the drivers.

#### 4.1.2 *-roreka* allows reconstructed readings

Another diagnostic that has been employed to distinguish copy-raising from true raising is whether reconstructed readings are possible. Potsdam and Runner (2001) show that in a copy-raising construction, since the matrix subject is base-generated, the sentence is necessarily an observation about the subject, which requires it to be a perceptual source, while in a true raising construction, the matrix subject can be reconstructed in its embedded position, allowing for the sentence to be a general observation. This leads copy-raising sentences like (28b) to be infelicitous when no perceptual source is available, whereas this is not the case for instances of true raising (28a). Carstens and Diercks (2013b) show that this diagnostic readily distinguishes copy-raising and hyper-raising in Lusaamia and Lubukusu (Luyia, Bantu).

- (28) *Situation: Having stocked the fridge in the morning, you come home to find an empty fridge, but see nobody else in sight:*
- a. Somebody seems to have eaten all the food!                      **Reconstructed Reading Available with Raising**
- b. # Somebody seems like they have eaten all the food!              **Need Perceptual Source for Copy-Raising**

Logoori allows for both agreeing and non-agreeing raising in situations where a perceptual-source reading is unavailable. In (29), the person who cut down the tree is both unseen and unknown, making it impossible for them to be a perceptual source. Both (29a) and (29b) therefore seem to have the same structure as the English example of true raising (28a). If the embedded clause merely had a null subject coreferential with the main clause subject, we would expect the sentences to be infelicitous, like the English (28b).

- (29) *Situation: On your walk to the store, you notice a tree on the ground that wasn't there yesterday:*
- a. mu-undu a-rorek-a            (ndi) a-tem-i            mu-saara              **Recons Reading Avail w/ Agr Raising**  
 1-person 1SA-seem-PRES that 1SA-cut-PST 3-tree  
 'Someone seems to have cut down the tree.'
- b. mu-undu ga-rorek-a            (ndi) a-tem-i            mu-saara              **Recons Reading Avail w/ Non-agr Raising**  
 1-person 6SA-seem-PRES that 1SA-cut-PST 3-tree  
 'Someone seems to have cut down the tree.'

These constructions therefore pattern with the English, Lubukusu, and Lusaamia raising constructions in retaining idiomatic interpretations and allowing for reconstructed readings of the subject. These connectivity effects suggest that *-roreka* in Logoori is an instance of a hyper-raising predicate and not copy-raising.

## 4.2 Raised subjects extract like subjects in relative clauses

The next diagnostic shows that apparent hyper-raised subjects of *-roreka* behave like true subjects of the main clause, another prediction of the hyper-raising analysis.

Like many Bantu languages, Logoori shows a consistent morphosyntactic distinction between subject and object extraction in constructions like relative clauses. Non-subject relative clauses (30b) are formed with a complementizer that agrees with the extracted element, whereas no complementizer is used in subject relative clauses (30a).<sup>4</sup>

- (30) a. N-dor-i            mw-aana (\*w-a)    \_\_\_ a-kony-aa            Fii.                      **Subj Relative Clause**  
 1sgSA-see-PST 1-child (\*1-REL)    REL. 1SA-help-PRES 1Fii  
 'I saw the child who is helping Fii.'
- b. N-dor-i            mw-aana w-a    Jabu a-kony-aa            \_\_\_\_\_.                      **Non-Subj Relative Clause**  
 1sgSA-see-PST 1-child 1-REL 1Jabu 1SA-help-PRES  
 'I saw the child who Jabu is helping.'

<sup>4</sup>A tonal difference distinguishes subject relative clauses from declarative clauses, the analysis of which is still underway.

The examples in (31) show that relative clauses headed by raised subjects of *-roreka* lack this agreeing complementizer, giving evidence for the subject status of the raised element in both agreeing and non-agreeing constructions.

- (31) a. N-dor-i      mu-kaari (\*w-a)      a-roreka-aa      ndr a-gur-i      i-baakuuli.      **Agreeing Raising**  
 1sgSA-see-PST 1-woman (\*1-COMP) 1SA-seem-PRES that 1SA-buy-PST 9-bowl  
 ‘I saw the woman who looks like she bought a bowl.’      *Raised Element Extracts like Subj*
- b. N-dor-i      mu-kaari (\*w-a)      ga-roreka-aa      ndr a-gur-i      i-baakuuli.      **Non-agr Raising**  
 1sgSA-see-PST 1-woman (\*1-COMP) 6SA-seem-PRES that 1SA-buy-PST 9-bowl  
 ‘I saw the woman who looks like she bought a bowl.’      *Raised Element Extracts like Subj*

These first three diagnostics are summarized in the table below.

(32) **Raising Diagnostics by Construction**

Diagnostic	-roreka		LD Topics
	AGR-	ga-	
Idiomatic reading retained	✓	✓	*
Reconstructed reading possible	✓	✓	n/a
Subject-like extraction	✓	✓	n/a

### 4.3 Subjects raised via A-movement

My next two diagnostics show evidence of A-movement in the derivation of raising constructions, the third prediction of the hyper-raising analysis. Left dislocation, recall, is predicted to show evidence of A'-movement instead.

#### 4.3.1 Raised subjects create new binding possibilities

One well known property of A-movement is that it generates new binding possibilities (i.e. binding occurs from surface positions) whereas A'-movement does not (i.e. binding reflects underlying positions).

Halpert (2016) shows that in Zulu, a raised pronominal subject creates a principle C binding violation that is not present in an unraised construction, suggesting that raising is A-movement to subject position.

(33) Zulu binding violation: (from Halpert (2016))

- a. ku-fanele      [ukuthi [ngo-buhlakana      bukaSipho<sub>i</sub>]      pro<sub>i</sub> a-m-siz-e      uThemba]  
 17S-necessary that      NGA-AUG.14wisdom 14ASSOC.1Sipho pro 1SJC-10-help-SJC AUG.1Themba  
 ‘It’s necessary that out of Sipho<sub>i</sub>’s wisdom, he<sub>i</sub> helps Themba.’
- b. \*pro<sub>i</sub> u-fanele      [ukuthi [ngo-buhlakana      bukaSipho<sub>i</sub>]      t<sub>i</sub> a-m-siz-e      uThemba]  
 pro 1S-necessary that      NGA-AUG.14wisdom 14ASSOC.1Sipho 1SJC-10-help-SJC AUG.1Themba

Logoori shows the same pattern in (34) and (35), where *pro* loses its ability to refer to *Jabu* when it is raised (35).

- (34) ga-roreka-a      ndr mu-ri-haana      ry-a      Jabu<sub>k</sub> pro<sub>kfi</sub> a-kony-aa      Fii.      **Unraised**  
 6SA-seem-FV that 18-5-generosity 5-ASSOC 1Jabu pro 1SA-help-PRES Fii  
 ‘It seems that in Jabu<sub>k</sub>’s generosity, he<sub>kfi</sub> is helping Fii.’      *Coreference Allowed*

- (35) *pro*\*<sub>k/i</sub> a-rorek-a ndi mu-ri-haana ry-a Jabu<sub>k</sub> t a-kony-aa Fii. **Agreeing Raising**  
*pro*\*<sub>k/i</sub> 1SA-seem-FV that 18-5-generosity 5-ASSOC 1Jabu<sub>k</sub> t 1SA-help-PRES Fii  
 ‘He\*<sub>k/i</sub> seems in Jabu<sub>k</sub>’s generosity to be helping Fii.’ *Coreference Unacceptable*

In *ga*-raising, a *pro* subject is not clearly referenced (given the subject agreement form) but a weak pronoun is still possible in such a construction. Notably, it generates the same unacceptable coreference that agreeing raising does:

- (36) ye\*<sub>k/i</sub> ga-rorek-a ndi mu-ri-haana ry-a Jabu<sub>k</sub> t a-kony-aa Fii. **Non-agreeing Raising**  
 ye\*<sub>k/i</sub> 6SA-seem-FV that 18-5-generosity 5-ASSOC 1Jabu<sub>k</sub> t 1SA-help-PRES Fii  
 ‘He\*<sub>k/i</sub> seems in Jabu<sub>k</sub>’s generosity to be helping Fii.’ *Coreference Unacceptable*

This suggests that *ga*-raising with *-roreka* is in fact A-movement (to subject position), rather than a topicalization construction, since raising creates new binding possibilities.

### 4.3.2 Cyclic raising with statives

In order to further distinguish A-movement from A'-movement, I use the common assumption that A'-movement cannot feed A-movement (Chomsky, 2008; Obata and Epstein, 2011). If non-agreeing raising were an instance of A'-movement (topicalization), it should not be able to undergo additional A-movement.

For this diagnostic, I rely on the assumption that agreeing raising is an example of true raising that uses A-movement and show that a subject can cyclically raise over *-roreka* and another stative verb. Statives, marked by the stative suffix *ek/ik*, are a larger class of verbs of which *-roreka* is a member, and generally show similar raising properties to *-roreka*<sup>5</sup>. An unraised example of *-roreka* with the stative verb *-amanyikana* ‘to be known’ is shown below.

- (37) **ga**-amany-ikan-a ndi **ga**-rorek-aa kuri mu-doga gw-aku-simuka. **Unraised**  
 6SA-know-STAT-PRES that 6SA-seem-PRES that 3-car 3SA-PST-depart-FV  
 ‘It is known that it seems like the car departed.’  
 ‘It is known that it seems to be too late.’

The embedded subject can cyclically raise to the subject position of the highest clause, as shown in (38), which involves two instances of agreeing raising. Class 3 subject agreement in the intermediate clause shows that the subject *mudoga* must have initially raised to that clause. The fact that it could then raise a second time supports the claim that the sentence is derived through A-movement, since A'-movement would block further raising.

- (38) mu-doga **gwa**-amany-ikan-a ndi **gu**-rorek-aa kuri gw-aku-simuka. **AGR, AGR**  
 3-car 3SA-know-STAT-PRES that 3SA-seem-PRES that 3SA-PST-depart-FV  
 ‘The car is known to seem to have departed.’  
 ‘It is known that it seems to be too late.’ *Idiomatic Meaning Retained*

Crucially, cyclic raising is available even when the intermediate clause is a non-agreeing raising construction. If the intermediate non-agreeing raising were formed with A'-movement, we would not expect the subject to be able to raise a second time through A-movement. This example is shown in (39) with both agreeing and non-agreeing main clauses, and once again suggests that non-agreeing *ga*-raising is an instance of true hyper-raising, not dislocation.

- (39) a. mu-doga **ga**-amany-ikan-a ndi **ga**-rorek-aa kuri gw-aku-simuka. **ga-, ga-**  
 3-car 6SA-know-STAT-PRES that 6SA-seem-PRES that 3SA-PST-depart-FV  
 ‘The car is known to seem to have departed.’  
 ‘It is known that it seems to be too late.’ *Idiomatic Meaning Retained*

<sup>5</sup>The raising properties of statives are still under investigation. Some initial data can be found in the appendix.

- b. mu-doga **gw**-amany-ikan-a ndi **ga**-rorek-aa kuri gw-aku-simuka. AGR, **ga**-  
 3-car 3SA-know-STAT-PRES that 6SA-seem-PRES that 3SA-PST-depart-FV  
 ‘The car is known to seem to have departed.’  
 ‘It is known that it seems to be too late.’ *Idiomatic Meaning Retained*

What’s more, the examples above utilize an idiom diagnostic, showing again that even in long-distance raising contexts, an idiomatic reading is retained.

At this point all three predictions of a hyper-raising analysis have been borne out by the Logoori data. Both agreeing and non-agreeing raising constructions show connectivity effects and evidence for A-movement, and the raised subject behaves like a true subject. These diagnostics are summarized below:

(40) **Raising Diagnostics by Construction**

Diagnostic	-roreka		LD Topics
	AGR-	ga-	
Idiomatic reading retained	✓	✓	*
Reconstructed reading possible	✓	✓	n/a
Subject-like extraction	✓	✓	n/a
New binding possibilities	✓	✓	TBD
Intermediate in multiple-raising cycle	✓	✓	n/a

#### 4.4 Two contrasts between non-agreeing *ga*-raising and topicalization

I now present two additional diagnostics that utilize properties of left dislocation in Logoori to show further distinctions between non-agreeing raising and topicalization. These diagnostics confirm that *ga*-raising patterns with agreeing raising rather than dislocation, and should be analyzed with the structure in (41a), not (41b).

- (41) a. [ SUBJ<sub>k</sub> **ga**<sub>i</sub>-seems [CP that t<sub>k</sub> [TP ... ] ] ] **Non-Agreeing Raising Analysis**  
 b. [ SUBJ<sub>k</sub> [ (**expl**<sub>i</sub>) **ga**<sub>i</sub>-seems [CP that t<sub>k</sub> [TP ... ] ] ] ] **Expletive + Dislocation Analysis**

##### 4.4.1 Topics need to be old information: *ga*-raised subjects can be new information

Left-dislocated phrases must be familiar information, and don’t serve well as the answer to a content question. Examples (43a)-(43c) are all relatively natural answers to the question in (42), including (43c) where the answer to the question is the embedded subject. In contrast, left-dislocating (topicalizing) the embedded subject that answers the question results in infelicity (43d).

- (42) Ni **vwaha** y-aa-tany-i ri-dirisha? **wh-Question**  
 be 1who 1SA-PST-break-PST 5-window  
 ‘Who is it that broke the window?’
- (43) a. **Jabu** ni-ye y-aa-tany-i ri-dirisha. **Cleft Answer**  
 1Jabu COP-1 1SA-PST-break-PST 5-window  
 ‘Jabu is the one who broke the window.’
- b. **Jabu** y-aa-tany-i ri-dirisha. **Declarative Answer**  
 1Jabu 1SA-PST-break-PST 5-window  
 ‘Jabu broke the window.’

- c. Suuvir-a            ndi **Jabu** y-aa-tany-i            ri-dirisha.            **Embedded Answer**  
 1sgSA.believe-FV that 1Jabu 1SA-PST-break-PST 5-window  
 ‘I think/believe that Jabu broke the window.’
- d. # **Jabu**, suuvir-a            ndi y-aa-tany-i            ri-dirisha.            **#Left-Dislocated Answer**  
 1Jabu 1sgSA.believe-FV that 1SA-PST-break-PST 5-window  
 ‘As for Jabu, I believe that he broke the window.’

Left-dislocated phrases must be familiar information, but in raising contexts, subjects in both agreeing raising and non-agreeing raising can serve well as answers to a subject wh-question. Both (44a) and (44b) are comfortable answers to the same question from above, further evidence that neither construction is an instance of dislocation.

(44) *In response to (42):*

- a. **Jabu** ga-rorek-a    ndi y-aa-tany-i            ri-dirisha.            **Non-Agreeing Raising Answer**  
 1Jabu 6SA-seem-FV that 1SA-PST-break-PST 5-window  
 ‘Jabu seems like he broke the window.’
- b. **Jabu** a-rorek-a    ndi y-aa-tany-i            ri-dirisha.            **Agreeing Raising Answer**  
 1Jabu 1SA-seem-FV that 1SA-PST-break-PST 5-window  
 ‘Jabu seems like he broke the window.’

The crucial contrast is between (44a) and (43d). If non-agreeing raising were a left-dislocating construction, we would expect (44a) to be infelicitous, just like (43d). The felicity of the *ga*-raising example, however, shows that it behaves like true raising.

#### 4.4.2 Left-dislocation is not possible inside a RC: *ga*-raising IS possible

This final diagnostic looks at the possibility of dislocation versus raising inside a relative clause, again showing a distinction between dislocated topics and *ga*-raising constructions. A core example of a left dislocated object is shown in (45b):

- (45) a. Jabu y-a-yaanza    ri-booso  
 1Jabu 1SA-PRES-like 5-ugali  
 ‘Jabu likes ugali.’
- b. ri-booso, Jabu y-a-ri-yaanza            **Left-dislocated Object**  
 5-ugali 1Jabu 1SA-PRES-5OM-like  
 ‘Ugali, Jabu likes it.’

As is clear from the example in (46b) below, left-dislocation is impossible inside a relative clause:

- (46) a. n-zizuriz-aa            ma-diku g-a    Jabu y-a-yaanza    ri-booso.  
 1sgSA-remember-PRES 6-day    6-COMP 1Jabu 1SA-PRES-like 5-ugali  
 ‘I remember the days when Jabu liked ugali.’
- b. \* n-zizuriz-aa            ma-diku g-a    **ri-booso**, Jabu y-a-ri-yaanza            **\*Left-dis Obj in RC**  
 1sgSA-remember-PRES 6-day    6-COMP 5-ugali 1Jabu 1SA-PRES-5OM-like  
 ‘I remember the days when ugali, Jabu liked it.’

In contrast, both agreeing (47a) and non-agreeing raising (47b) can occur readily inside a relative clause, unlike the left dislocation in (46b) above.

- (47) a. n-zizuriz-aa            ma-diku g-a        **Jabu ya-a-rorek-a**            ndr ya-a-ri            y-a-yaanza  
 1sgSA-remember-PRES 6-day    6-COMP 1Jabu 1SA-PRES-seem-FV that 1SA-PRES-be 1SA-PRES-like  
 ri-booso  
 5-ugali  
 ‘I remember the days when Jabu seemed to like ugali.’  
**Agreeing Raising in RC**
- b. n-zizuriz-aa            ma-diku g-a        **Jabu ga-a-rorek-a**            ndr ya-a-ri            y-a-yaanza  
 1sgSA-remember-PRES 6-day    6-COMP 1Jabu 6SA-PRES-seem-FV that 1SA-PRES-be 1SA-PRES-like  
 ri-booso  
 5-ugali  
 ‘I remember the days when Jabu seemed to like ugali.’  
**Non-agreeing Raising in RC**

This is once again evidence that the raised subject in non-agreeing *ga*-raising is behaving like a subject, not a left-dislocated topic, showing that non-agreeing raising is a hyper-raising construction that is not significantly different from the agreeing raising construction.

#### 4.5 Intermediate summary

In this section I have used seven diagnostics to consistently show that *-roreka* shows the properties of raising (as opposed to copy-raising) in both its agreeing and non-agreeing forms. With respect to non-agreeing (*ga*-) raising in particular, it shows crucial distinctions with topicalization in multiple instances (instead patterning with agreeing raising). This suggests that *ga*-raising is not an instance of dislocation with expletive agreement, but is instead an instance of hyper-raising (to subject position) with an alternative subject agreement. The diagnostics are summarized below:

(48) **Raising Diagnostics by Construction**

Diagnostic	<b>-roreka</b>		<b>LD Topics</b>
	<b>AGR-</b>	<b>ga-</b>	
Idiomatic reading retained	✓	✓	*
Reconstructed reading possible	✓	✓	n/a
Subject-like extraction	✓	✓	n/a
New binding possibilities	✓	✓	TBD
Intermediate in multiple-raising cycle	✓	✓	n/a
Can be new information	✓	✓	*
Possible inside RC?	✓	✓	*

This data reinforces the questions raised by Logoori about Case, Activity, and phases. Since I have not been able to explain the data with a copy-raising or dislocation analysis, the initial issues remain. The next section looks at Halpert’s analysis of similar facts in Zulu, showing that her theory is initially promising for Logoori. Section 6, however, introduces an apparent *ga*-raising construction in Logoori with the raising verb *-fwaana*, which challenges Halpert’s account.

## 5 Accounting for the theoretical consequences of Logoori raising

Recall from section 1 the theoretical questions raised by Logoori:

(49) Theoretical Questions on Logoori Raising

- a. What motivates raising if not the need for Case – and how can a nominal that already has Case A-move?
- b. If the Logoori CP is a phase, why is an embedded subject available to higher operations?
- c. What prevents raising out of a non-finite clause, which presumably is not a phase?
- d. How can the raised subject in agreeing raising constructions control subject agreement in both the embedded and main clauses?
- e. In non-agreeing raising constructions with *-roreka*, what triggers the *ga-* subject agreement?

Carstens and Diercks (2013b) proposed a solution that answers (49b) and (49d) for Lubukusu and Lusaamia, and partially answers (49a), but does not address the other questions. In this section, I examine a more comprehensive theory based on Zulu from Halpert (2015, 2016), before applying the theory to Logoori in section 5.2 and seeing how the predictions of the theory hold up.

### 5.1 Halpert on Zulu raising

Zulu shows very similar patterns to Logoori. I repeat (18a) from above as (50), which shows a Zulu non-agreeing raising construction. The only major difference from Logoori is the use of class 17 for subject agreement rather than class 6.

- (50) uZinhle<sub>i</sub>      **ku-**bonakala [ukuthi t<sub>i</sub> **u-**zo-xova      ujeqe]      [Zulu]  
AUG.1Zinhle<sub>i</sub> 17S-seems that t<sub>i</sub> 1S-FUT-make AUG.1steamed.bread  
'It seems that Zinhle will make steamed bread.'  
(Halpert, 2015)

Halpert challenges the idea that English-like raising is the 'typical' kind and that the raising patterns found in Zulu and other Bantu languages are extraordinary and require special explanation. Recall that in English, subjects must raise out of non-finite clauses, and cannot raise out of finite CPs. Again, the usual explanation for this relies on Case as the motivating factor for raising out of non-finite clauses and the Phase Impenetrability Condition and the Activity Condition as preventative factors for raising out of finite clauses. Infinitival phrases are not phases, thus the main clause T can probe inside them and raise the subject, which needs to get Case. CPs, on the other hand, are phases, and thus material inside them (such as the subject, which is inactive and doesn't need Case anyway) is unavailable for further operations.

Halpert uses phi-features and the EPP, rather than Case, Activity, and the PIC, to motivate and explain raising. She claims that the effects attributed to the PIC can actually be explained by the phi-status of clauses. In an Agree relation, the probe will find the structurally nearest appropriate goal. While this is often a DP, if a clause has phi-features, it too can act as a goal. Specifically, Halpert argues that English finite clauses have phi-features and can thus be goals for T, as shown by the ability to use a finite CP as a subject in (51).

- (51) That the world is round seems likely.      **CP Subject Acceptable**  
(52) \*The world to be round seems likely.      **Inf Subject Unacceptable**

As (52) shows, however, a non-finite clause cannot act as a subject in English, because it is not a phi-goal. Thus, (53) is ungrammatical not because T can't probe inside a phase, but because T can't probe past the available CP phi-goal to find the embedded subject. The grammatical (54) poses no such problem, since the non-finite clause does not have phi-features (and not because it is not a phase).

(53) \*The world seems likely [<sub>CP</sub> \_\_\_ that is round ] .

**Raising from Finite Clause Unacceptable**

(54) The world seems likely \_\_\_ to be round.

**Raising from Finite Clause Acceptable**

While using phi-features rather than the PIC may seem inconsequential, it proves to be very important when considering how the EPP can be satisfied in a language, the other piece to Halpert's theory. Zulu finite clauses have phi-features, just as in English, shown by the object agreement with the CP in (55).

(55) *ngi-ya-ku-cabanga* [ *ukuthi uMlungisi u-ya-bhukuda u-manje* ]  
 1SG-YA-17O-think that AUG.1Mlungisi 1S-YA-swim now  
 'I think that Mlungisi is swimming now.'

[Zulu]

(Halpert, 2015)

However, unlike English, Zulu finite clauses cannot fulfill the EPP (i.e., they cannot be subjects). Halpert argues that T still finds and agrees with the embedded CP when it probes, but because of this restriction on the EPP, it cannot raise the CP to the main clause and the EPP remains unsatisfied. This first step in deriving the raising constructions in (56) is illustrated in (57).

(56) a. *uZinhle<sub>i</sub> ku-bonakala* [ *ukuthi t<sub>i</sub> u-zo-xova ujeqe* ]  
 AUG.1Zinhle<sub>i</sub> 17S-seems that t<sub>i</sub> 1S-FUT-make AUG.1steamed.bread  
 'It seems that Zinhle will make steamed bread.'

[Zulu]

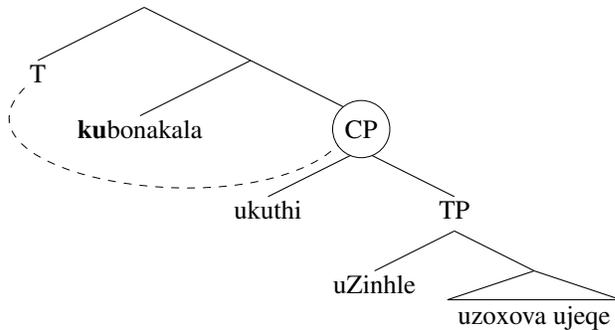
(Halpert, 2015)

b. *uZinhle<sub>i</sub> u-bonakala* [ *ukuthi t<sub>i</sub> u-zo-xova ujeqe* ]  
 AUG.1Zinhle<sub>i</sub> 1S-seems that t<sub>i</sub> 1S-FUT-make AUG.1steamed.bread  
 'It seems that Zinhle will make steamed bread.'

[Zulu]

(Halpert, 2015)

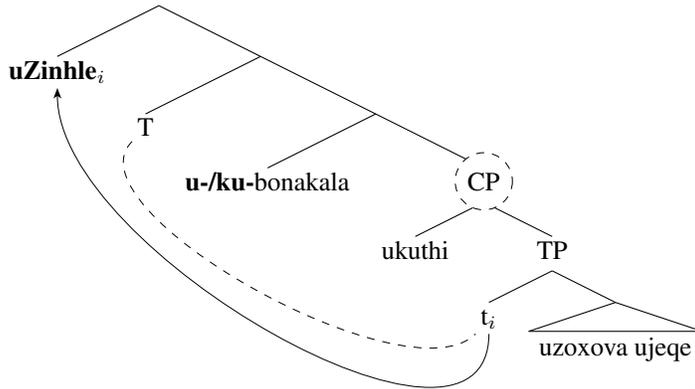
(57) **Step 1 in raising-to-subject: T agrees with embedded CP**



At this point in the derivation, T has acquired class agreement (gender and number features), but needs to probe a second time for something to satisfy the EPP. Initially, T could not probe for the embedded subject because the CP intervened as a phi-goal. Halpert relies on Rackowski and Richards (2005), however, to claim that this intervention effect is obviated after the initial agreement. In other words, when T probes a second time, rather than agreeing again with the CP, it can now look inside the CP and find the embedded subject. There is a second instance of Agree, and the subject is raised to satisfy the EPP, since Zulu DPs *can* satisfy the EPP, unlike finite clauses.

Because T has agreed twice, the subject agreement that surfaces can match either the raised subject (from the second instance of Agree), or the entire embedded CP (from the first instance), which in Zulu gives class 17 agreement. This second step is illustrated in (58), which shows that either subject agreement marker is possible.

(58) **Step 2 in raising-to-subject: T agrees with and fronts embedded subject**



Thus, the non-agreeing raising construction, rather than merely being a curiosity, results from the initial agreement with CP that allows T to get around the apparent ‘phase’ effects (which Halpert explains with phi-features) and raise the embedded subject. Importantly, this CP agreement occurs in both agreeing and non-agreeing raising – the difference is only in which class agreement ends up surfacing.

In contrast, infinitival clauses *can* satisfy the EPP in Zulu, so T never needs to probe a second time inside of one. T can get phi-features and satisfy the EPP all in one go, explaining the restriction on raising out of such phrases. Rather than probing again to find and raise the embedded subject, non-finite clauses themselves can act as subjects.

To recap, Halpert replaces the PIC with facts about the featural status of phrases. What we call phases in English are actually impenetrable because they have phi-features, which blocks T from probing inside them. However, not every phi-goal can satisfy the EPP in any given language, so T may be forced to probe a second time after an initial agreement with a clause. This initial agreement obviates intervention effects of the clausal phi-goal, allowing T to probe inside and raise the embedded subject, resulting in ‘hyper’-raising.

The Zulu and English raising patterns contrast because of differences in phi-features and the EPP: non-finite clauses in Zulu have phi-features, whereas they do not in English (finite clauses have phi-features in both), and CPs can satisfy the EPP in English, while they cannot in Zulu.

## 5.2 A Halpert-style approach to Logoori raising

Zulu and Logoori appear to have very similar raising patterns, where raising is possible but optional out of finite clauses, and there are two options for subject agreement on the main verb when the embedded subject is raised. Both languages also prohibit raising out of non-finite clauses. This suggests that the two languages have the same properties with regards to the featural status of clauses and how the EPP can be satisfied.

Applying Halpert’s analysis of Zulu to Logoori, we expect the theoretical questions raised at the beginning of the section in (49) to be answered as follows:

(59) Theoretical Questions on Logoori Raising – with Answers

- a. What motivates raising if not the need for Case – and how can a nominal that already has Case A-move?  
→ *The EPP motivates raising. Halpert follows Carstens and Diercks (2013a) in setting aside Activity.*
- b. If the Logoori CP is a phase, why is an embedded subject available to higher operations?  
→ *Apparent phase effects are due to phi-features. The effects are obviated after agreement.*
- c. What prevents raising out of a non-finite clause, which presumably is not a phase?  
→ *Non-finite clauses can satisfy the EPP.*

- d. How can the raised subject in agreeing raising constructions control subject agreement in both the embedded and main clauses?  
 → *Activity does not play a role, so multiple agreement is allowed.*
- e. In non-agreeing raising constructions with *-roreka*, what triggers the *ga-* subject agreement?  
 → *Agreement with the CP. This agreement occurs in agreeing raising as well, but does not surface.*

One benefit of Halpert’s theory is to give several testable predictions about a language on patterns outside of raising. The answers provided in (59) lead to the following predictions about Logoori clauses:

- (60) Predictions of a Halpert-style analysis of Logoori
- Finite clauses can control agreement, and give class 6 (*ga-*) agreement.
  - Non-finite clauses can also control agreement.
  - Finite clauses cannot satisfy the EPP.
  - Non-finite clauses can satisfy the EPP.

I have found evidence to support (60b) and (60d), exemplified by (61). The subject of both (61a) and (61b) is an infinitival clause, and there are two options for subject agreement (*ga-* or *ku-*).

- (61) a. [ *va-ana ku-deeka mu-cheere* ] *ku-veereriz-i* Chazima **Non-finite Clause as Subject**  
 [ 2-child INF-cook 3-rice ] 15SA-sadden-PST Chazima  
 ‘For the children to cook rice saddened Chazima.’
- b. [ *va-ana ku-deeka mu-cheere* ] *ga-veereriz-i* Chazima  
 [ 2-child INF-cook 3-rice ] 6SA-sadden-PST Chazima  
 ‘For the children to cook rice saddened Chazima.’

However, although (61) shows that non-finite clauses can be subjects, meaning they can both satisfy the EPP and control agreement, as predicted above, the choice of subject agreement is puzzling. Class 15 *ku-* agreement clearly corresponds to the infinitive marker and thus looks to be agreement with the non-finite clause, while the source of class 6 agreement is less obvious. It’s possible that class 6 *ga-* agreement comes from something other than agreement with the clause, both in (61b) and importantly in non-agreeing raising out of *finite* clauses. This would challenge Halpert’s theory of hyper-raising, which calls for initial clausal agreement to obviate the PIC-like intervention effects of the finite clause.

Adding to this uncertainty is the fact that evidence for (60a) and (60c) has been harder to come by. Because we do not expect to find CPs in subject position, since they shouldn’t be able to satisfy the EPP, object marking is the only environment outside of raising to see whether they have phi-features. Initial evidence suggests that a class 6 object marker *cannot* be used to refer to a discourse-familiar CP, the opposite of the prediction in (60a). In (62b), a response to (62a), the class 6 object marker is acceptable if it refers to the class 6 noun *maṛṛaana* ‘words’, as in ‘I already said those words’, but cannot be used to refer to the clause itself in (62a).

- (62) a. A: *Jabu a-kony-aa* Fii  
*Jabu* 1SA-help-PRES Fii  
 ‘Jabu is helping Fii’
- b. B: *nd-ari neṅ-ga-voor-i*  
 1sgSA-AUX 1sgSA-6OA-say-PST  
 ‘I already said those.’ (where ‘those’ refers to ‘words’)  
 \*‘I already said that.’ (where ‘that’ refers to 62a)

As for their ability to be subjects, Halpert’s predictions appear to be upheld, as CPs headed by *ndi* are consistently unable to occur in subject position, as in the ungrammatical (63).

- (63) \**ndi* *i-mbwa* *i-rum-i* *ri-juungu* *ga-roreka* **Finite Clause Cannot be Subject**  
 that 9-dog 9SA-bit-PST 5-rat 6SA-seems  
 intended: ‘It seems that the dog bit the rat.’

To sum up, Halpert’s theory predicts that in Logoori raising constructions, the main clause T will probe and find an embedded clause. If the clause is non-finite, T can agree with it and raise it to satisfy the EPP, giving no opportunity for subjects to raise out of non-finite clauses. If, however, the clause is finite, Agree can still occur, but the finite CP will not be able to satisfy the EPP. Thus, T must probe a second time, and can now look inside the CP. The embedded subject is agreed with and raised to satisfy the EPP, leaving two possibilities for the surface subject agreement of the raising verb – either class 6 agreement from the initial probe of the whole embedded CP (what we have been calling non-agreeing raising), or agreement with the noun class of the raised subject from the second probe (agreeing raising).

The theory is promising for its ability to solve the theoretical issues brought up by Logoori and other Bantu languages, though I have not yet found any evidence to support the prediction about the phi-status of Logoori finite clauses (60a). This lack of evidence is not in itself enough to discount the theory, but combined with the questions about *ga-* agreement brought up by non-finite clauses, it is certainly concerning for the theory, and as we will see in the next section, a second raising verb *-fwaana* provides a serious issue for Halpert.

## 6 *-fwaana* and an expletive + dislocation construction

This section explores another raising verb in Logoori (*-fwaana* ‘to appear’), showing that it is a hyper-raising predicate that shares the features of *-roreka* in various ways, but lacks the non-agreeing *ga-*raising construction discussed above. I will use the same seven diagnostics from section 4 to demonstrate that agreeing *-fwaana* raising patterns with *-roreka* raising, while *ga-fwaana* constructions should be analyzed with the structure in (64b), unlike *ga-roreka* constructions which I showed in section 4 have the structure in (64a).

- (64) a. [ SUBJ<sub>k</sub> *ga<sub>i</sub>*-appears [CP that t<sub>k</sub> [TP ... ] ] ] **Non-Agreeing Raising Analysis**  
 b. [ SUBJ<sub>k</sub> [ (expl<sub>i</sub>) *ga<sub>i</sub>*-appears [CP that t<sub>k</sub> [TP ... ] ] ] ] **Expletive + Dislocation Analysis**

A basic example of *-fwaana* in both an unraised and agreeing raising construction is shown below:

- (65) *ga-fwaan-aa* *ndi* *Jabu* *a-ziiy-i* *kare.* **Unraised Form**  
 6SA-appear-PRES (that) 1Jabu 1SA-leave-PST early  
 ‘It appears that Jabu left early.’
- (66) *Jabu* *a-fwaan-aa* (*ndi*) *a-ziiy-i* *kare.* **Agreeing Raising**  
 1Jabu 1SA-appear-PRES (that) 1SA-leave-PST early  
 ‘Jabu appears to have left early.’

### 6.1 Initial evidence that agreeing *-fwaana* raising is true hyper-raising

This short section previews three of the diagnostics with agreeing raising, to demonstrate that *-fwaana* really is a hyper-raising predicate before showing the lack of non-agreeing raising.

### 6.1.1 Agreeing *-fwaana* retains idiomatic interpretations

As we saw with *-roreka*, it appears that agreeing raising with *-fwaana* is indeed true raising. For example, the subject of an embedded sentential idiom may be raised with *-fwaana* and retain its idiomatic reading.

- (67) mu-doga gu-fwaan-aa ndi gw-aku-simuka. **Agreeing Raising with Idiom**  
 3-car 3SA-appear-PRES that 3SA-PST-depart  
 ‘The car appears to have departed.’  
 ‘It appears to be too late.’ *Idiomatic Meaning Retained*

This corresponds to the behavior of *-roreka* in the idiom diagnostic from section 4.1.1, suggesting that agreeing raising with *-fwaana* is true hyper-raising.

### 6.1.2 Agreeing *-fwaana* allows reconstructed readings

Likewise, raised subjects do not have to be perceptual sources in agreeing raising with *-fwaana*. A reconstructed reading is acceptable, shown by (68b), which is felicitous even when there are no animals to serve as perceptual sources. This is indicative of true raising rather than copy-raising, as discussed in section 4.1.2.

- (68) *Context: You are in a game park driving around looking for animals, but you see no animals:*
- a. ga-fwaan-aa ndi zi-nyama zy-umburimu zi-gon-aa. **Unraised Form**  
 6SA-appear-PRES that 10-animal 10-wild 10SA-sleep-PRES  
 ‘It appears that the wild animals are sleeping.’
- b. zi-nyama zy-umburimu zi-fwaan-aa ndi zi-gon-aa. **Recons. Reading Available**  
 10-animals 10-wild 10SA-appear-PRES that 10SA-sleep-PRES  
 ‘The wild animals appear to be sleeping.’ (acceptable with no direct visual evidence)

These two diagnostics confirm the connectivity effects of agreeing raising with *-fwaana*, one of the predictions of a hyper-raising, rather than copy-raising analysis.

### 6.1.3 Agreeing *-fwaana* extracts like a usual subject

The subject properties of the apparent raised subject are also retained in agreeing *-fwaana* constructions, further supporting the hyper-raising analysis. Recall from section 4.2 that non-subject relative clauses are formed with an agreeing complementizer while subject relative clauses are not. As is true for *-roreka*, a raised subject with agreeing *-fwaana* extracts like a subject, shown in (69) where the relative clause headed by the raised subject does not take an agreeing complementizer.

- (69) n-dor-i mu-kaari (\*w-a) a-fwaan-aa (ndi) a-gur-i i-baakuuli **Agreeing Raising**  
 1SG-see-PST 1-woman (\*I-REL) 1SA-appear-PRES (that) 1SA-buy-PST 9-bowl  
 ‘I saw the woman who looks like she bought a bowl.’ *Raised Element Extracts like Subj*

### 6.1.4 Agreeing *-fwaana* behaves distinctly from *ga-fwaana*

There are stark differences between *-roreka* and *-fwaana*, however. Specifically, non-agreeing raising is strongly ruled out with *-fwaana* in the same contexts where *ga-roreka* is fine:

- (70) #Jabu ga-fwaan-aa ndi a-ziiy-i kare. **#Non-Agreeing Raising**  
 1Jabu 6SA-appear-PRES that 1SA-leave-PST early  
 ‘Jabu appears to have left early.’



### 6.2.2 Reconstructed readings not possible with *ga-fwaana*

The reconstructed reading diagnostic can show that a construction is not copy-raising, but cannot distinguish between hyper-raising and dislocation, since in both cases, the apparent subject can be reconstructed to the embedded clause. I showed above that a reconstructed reading is acceptable with agreeing *-fwaana* raising, indicating that it is not copy-raising. Below in (75), it looks as though the reconstructed reading is ruled out with non-agreeing *-fwaana*, though in fact the sentence is acceptable if you're back from your drive and somebody asks "mariporti?", even when there are no animals available as perceptual sources. This indicates that non-agreeing *-fwaana* is not copy-raising, though the infelicity in a non-prompted context shows that it still contrasts with examples of true raising.

(75) *Context: You are in a game park driving around looking for animals, but you see no animals:*

# zi-nyama zy-u-mburimu ga-fwaan-aa ndi zi-gon-aa.  
 10-animal 10-of-bush 6SA-appear-PRES that 10SA-sleep-PRES  
 'The wild animals, the evidence appears that they are sleeping.'

The idiom and reconstructed reading diagnostics both show a lack of connectivity effects with *ga-fwaana*, supporting the dislocation analysis.

### 6.2.3 Fronted subjects with *ga-fwaana* don't extract like subjects

We again see that the fronted subject of an agreeing *-fwaana* construction can extract like a true subject in (76b). The fronted subject in a *ga-fwaana* construction cannot be extracted at all (76c), however, in contrast to the facts that we saw for *ga*-raising with *-roreka* previously in section 4.2.

- (76) a. n-dor-i mw-aana (\*w-a) a-kony-aa Fii.  
 1sgSA-see-PST 1-child (\*1-REL) REL.1SA-help-PRES 1Fii  
 'I saw the child who is helping Fii.'
- b. n-dor-i mw-aana (\*w-a) a-fwaan-aa ndi a-kony-aa Fii. **Agreeing Raising**  
 1sgSA-see-PST 1-child (\*1-REL) REL.1SA-appear-PRES that 1SA-help-PRES 1Fii  
 'I saw the child who appears to be helping Fii.' *Raised Element Extracts like Subj*
- c. \* n-dor-i mw-aana (w-a) ga-fwaan-aa ndi a-kony-aa Fii. ***ga-fwaana* Fronting**  
 1sgSA-see-PST 1-child (1-REL) REL.6SA-appear-PRES that 1SA-help-PRES 1Fii  
 'I saw the child who appears to be helping Fii.' *Fronted Element Cannot be Extracted*

It is unclear why exactly extraction is not possible in (76c), since non-subjects should still be able to extract using the agreeing complementizer. Regardless, there is a crucial distinction between agreeing and non-agreeing *-fwaana* raising with respect to extraction, with this diagnostic showing that the apparent subject of a *ga-fwaana* construction does not in fact show subject properties, and should therefore not be considered an instance of real raising.

### 6.2.4 *ga-fwaana* construction does not create new binding possibilities

Recall from section 4.3.1 that A-movement creates new binding possibilities from the surface form, whereas A'-movement reconstructs. If *ga*-'raising' does *not* consist of A-movement to matrix subject position, we expect it to not create new binding possibilities, which is what we see below in (77c). In the unraised form (77a), the weak pronoun *ye* is bound by and can corefer with *Jabu*. We see in (77b) that agreeing *-fwaana* raising changes the binding relationships, and *ye* can no longer corefer with *Jabu*, but the original binding is preserved in (77c), indicating a lack of A-movement in *ga-fwaana* constructions.

- |      |    |  |  |
|------|----|--|--|
| (77) | a. | ga-fwaan-aa    ndi mu-ri-haana    ry-a Jabu <sub>k</sub> ye <sub>k/i</sub> a-kony-aa    Fii.<br>6SA-appear-PRES that 18-5-generosity 5-of 1Jabu <sub>k</sub> s/he <sub>k/i</sub> 1SA-help-PRES 1Fii<br>'It looks like in Jabu <sub>k</sub> 's generosity, he <sub>k/i</sub> is helping Fii.'   | <b>Unraised</b><br><i>Coreference Allowed</i>        |
|      | b. | (ye <sub>i</sub> ) a-fwaan-aa    ndi mu-ri-haana    ry-a Jabu <sub>k</sub> a-kony-aa    Fii.<br>s/he <sub>k*/i</sub> 1SA-appear-PRES that 18-5-generosity 5-of 1Jabu <sub>k</sub> 1SA-help-PRES 1Fii<br>'It looks like in Jabu <sub>k</sub> 's generosity, he <sub>k*/i</sub> is helping Fii.' | <b>Agreeing Raising</b><br><i>Coreference Banned</i> |
|      | c. | ye <sub>k/i</sub> ga-fwaan-aa    ndi mu-ri-haana    ry-a Jabu <sub>k</sub> a-kony-aa    Fii.<br>s/he <sub>k/i</sub> 6SA-appear-PRES that 18-5-generosity 5-of 1Jabu <sub>k</sub> 1SA-help-PRES 1Fii<br>'It looks like in Jabu <sub>k</sub> 's generosity, he <sub>k/i</sub> is helping Fii.'   | <b>Fronted Subject</b><br><i>Coreference Allowed</i> |

It takes a particular situation to make a sentence like (77c) acceptable. Particularly, one in which the referent of the pronoun – Jabu here – is quite familiar from discourse, as well as one in which a general account of events has been solicited in some way. If such a context is constructed, however, the crucial fact is that coreference between the raised pronoun and *Jabu* is acceptable, in contrast with what we find for agreeing *-fwaana* raising in (77b), which shows evidence of A-movement, just like both agreeing and non-agreeing raising with *-roreka*.

These sentences demonstrate that agreeing *-fwaana* raising creates new binding possibilities while the *ga-fwaana* construction does not, which is consistent with an analysis of the preverbal element in *ga-fwaana* constructions being a left-dislocated topic rather than a true subject in an A-position.

### 6.2.5 *ga-fwaana* construction cannot feed further raising

Unsurprisingly at this point, *ga-fwaana* also does not show evidence of A-movement in cyclic raising constructions, while agreeing raising with *-fwaana* does. Previously in section 4.3.2 we saw that both agreeing and non-agreeing raising with *-roreka* readily allowed further raising to subject. To test this with *-fwaana* I again use a stative in the higher clause, which we assume uses A-movement to raise an embedded subject.

First, I show that intermediate raising is acceptable for both agreeing and non-agreeing *-fwaana* raising. Given my line of argumentation to this point, I would presume that (78b) consists of a left-dislocated topic in the left periphery of the embedded clause:

- |      |    |   |
|------|----|---|
| (78) | a. | ga-amany-ik-aa    ndi <b>Jabu</b> a-fwaan-aa    ndi a-kony-aa    Fii.<br>6SA-know-STAT-PRES that 1Jabu 1SA-appear-PRES that 1SA-help-PRES 1Fii<br>'It is known that Jabu appears to be helping Fii.'  |
|      | b. | ga-amany-ik-aa    ndi <b>Jabu</b> ga-fwaan-aa    ndi a-kony-aa    Fii.<br>6SA-know-STAT-PRES that 1Jabu 6SA-appear-PRES that 1SA-help-PRES 1Fii<br>'It is known that Jabu appears to be helping Fii.' |

Crucially for this diagnostic, however, (and in contrast to what was seen in non-agreeing *ga*-raising with *-roreka*) a *ga-fwaana* construction in the intermediate clause cannot feed agreeing raising to the main clause, seen in (79b). Further raising is perfectly acceptable from the agreeing *-fwaana* construction in the intermediate clause of (79a), on the other hand.

- |      |    |  |                                |
|------|----|--|--------------------------------|
| (79) | a. | <b>Jabu</b> y-amany-ik-aa    ndi a-fwaan-aa    ndi a-kony-aa    Fii.<br>1Jabu 1SA-know-STAT-PRES that 1SA-appear-PRES that 1SA-help-PRES 1Fii<br>'It is known that Jabu appears to be helping Fii.'    | <b>Cyclic Agreeing Raising</b> |
|      | b. | * <b>Jabu</b> y-amany-ik-aa    ndi ga-fwaan-aa    ndi a-kony-aa    Fii.<br>1Jabu 1SA-know-STAT-PRES that 6SA-appear-PRES that 1SA-help-PRES 1Fii<br>'It is known that Jabu appears to be helping Fii.' | <b>*Cyclic Raising w/ ga-</b>  |

Agreeing *-fwaana* raising continues to pattern with *-roreka*, showing evidence for A-movement, while the *ga-fwaana* construction again looks to be generated by fronting the subject through left-dislocation, with some other syntactic

element (e.g. a null expletive triggering class 6 agreement) in subject position. A'-movement (the dislocation) in the intermediate clause cannot feed A-movement into a higher clause, blocking *Jabu* from raising to the main clause in (79b).

The previous five diagnostics confirmed that agreeing *-fwaana* raising shows connectivity effects and A-movement, and the raised subject behaves like a real subject, evidence that agreeing raising with *-fwaana* is true raising, like both agreeing and non-agreeing raising with *-roreka*. Non-agreeing *ga-fwaana* constructions did not show connectivity effects or evidence of A-movement, however, and the apparent subject did not demonstrate subject properties, which are the predictions of the dislocation analysis. These diagnostics, for both *-fwaana* and the *-roreka* data from section 4 are summarized in the table below:

(80) **Raising Diagnostics by Construction**

Diagnostic	<b>-roreka</b>		<b>-fwaana</b>		LD Topics
	AGR-	ga-	AGR-	ga-	
Idiomatic reading retained	✓	✓	✓	*	*
Reconstructed reading possible	✓	✓	✓	n/a	n/a
Subject-like extraction	✓	✓	✓	*	n/a
New binding possibilities	✓	✓	✓	*	TBD
Intermediate in multiple-raising cycle	✓	✓	✓	*	n/a
Can be new information	✓	✓			*
Possible inside RC?	✓	✓			*

**6.2.6 Fronted subject in *ga-fwaana* construction cannot be new information**

I now finish off the set of diagnostics from section 4 to further demonstrate this contrast between agreeing *-fwaana* raising and *ga-fwaana* dislocation.

The fronted subject in *ga-fwaana* constructions cannot be new information, in contrast to the facts for non-agreeing *ga-roreka* raising discussed in section 4.4.1. Agreeing *-fwaana* raising is acceptable in response to a subject question in (81b), whereas a *ga-fwaana* construction is infelicitous in (81c).

- (81) a. Ni vwaha a-kony-aa Fii? **wh-Question**  
 is 1who 1SA-help-PRES 1Fii  
 'Who is helping Fii?'
- b. **Jabu** a-fwaan-aa ndi a-kony-aa Fii. **Subj Can be Answer in Agr Raising**  
 1Jabu 1SA-appear-PRES that 1SA-help-PRES Fii  
 'Jabu appears to be helping Fii.'
- c. # **Jabu** ga-fwaan-aa ndi a-kony-aa Fii. **Subj Cannot be Answer in Non-Agr Raising**  
 1Jabu 6SA-appear-PRES that 1SA-help-PRES Fii  
 'Jabu appears to be helping Fii.'

The subject in a *ga-fwaana* construction therefore patterns with left-dislocated topics, rather than subjects in general, which in raising constructions are readily compatible with a new information reading. This again shows a crucial contrast between *ga-fwaana*, which appears to be left-dislocation, and *ga-roreka*, which patterns with agreeing raising in being true hyper-raising.



As we would expect, a raised subject in an agreeing construction cannot corefer with an object marker of the same class, mirroring the effect in (84). This is true for the agreeing forms of both predicates, *-roreka* and *-fwaana*.

- (86) a. Jabu<sub>k</sub> a-mu<sub>\*k/i</sub>-rorek-er-aa ndi a-kony-aa Fii. **Agreeing Raising w/ -roreka**  
 1Jabu<sub>k</sub> 1SA-OM<sub>\*k/i</sub>-seem-APPL-PRES that 1SA-help-PRES 1Fii  
 ‘Jabu<sub>k</sub> seems to him<sub>\*k/i</sub> to be helping Fii.’ *Coreference w/ Obj Unacceptable*
- b. Jabu<sub>k</sub> a-mu<sub>\*k/i</sub>-fwaan-er-aa ndi a-kony-aa Fii. **Agreeing Raising w/ -fwaana**  
 1Jabu<sub>k</sub> 1SA-OM-appear-APPL-PRES that 1SA-help-PRES 1Fii  
 ‘Jabu<sub>k</sub> appears to him<sub>\*k/i</sub> to be helping Fii.’ *Coreference w/ Obj Unacceptable*

However, a contrast emerges in the *ga-* forms. Raising with *ga-roreka* creates non-coreference with the object marker, as is expected if *ga-roreka* consists of raising to subject position. The distinction that arises is with *ga-fwaana* in (87b), where coreference is in fact possible:

- (87) a. Jabu<sub>k</sub> ga-mu<sub>\*k/i</sub>-rorek-er-aa ndi a-kony-aa Fii. **Non-agreeing Raising w/ -roreka**  
 1Jabu<sub>k</sub> 1SA-OM<sub>\*k/i</sub>-seem-APPL-PRES that 6SA-help-PRES 1Fii  
 ‘Jabu<sub>k</sub> seems to him<sub>\*k/i</sub> to be helping Fii.’ *Coreference w/ Obj Still Unacceptable*
- b. Jabu<sub>k</sub> ga-mu<sub>k/i</sub>-fwaan-er-aa ndi a-kony-aa Fii. **Non-agreeing Raising w/ -fwaana**  
 1Jabu<sub>k</sub> 6SA-OM-appear-APPL-PRES that 1SA-help-PRES 1Fii  
 ‘Jabu<sub>k</sub>, (the evidence) seems to him<sub>k/i</sub> that he is helping Fii.’ *Coreference w/ Obj Allowed*

This is exactly as expected if the ‘raised’ subject in (87b) is in fact left-dislocated, as left-dislocated phrases regularly corefer with object markers.

## 6.4 Summary of *-fwaana* as a raising verb

In this section I applied the same seven diagnostics from section 4 to the verb *-fwaana*, and added one final diagnostic in 6.3. These diagnostics consistently showed that agreeing *-fwaana* raising patterns with *-roreka* and is indeed an instance of hyper-raising. The *ga-fwaana* construction, on the other hand, did not show the properties of raising, instead patterning as an instance of left dislocation with expletive agreement. The diagnostics are summarized in the table below:

### (88) Summary: Raising Diagnostics by Construction

Diagnostic	-roreka		-fwaana		LD Topics
	AGR-	ga-	AGR-	ga-	
Idiomatic reading retained	✓	✓	✓	*	*
Reconstructed reading possible	✓	✓	✓	n/a	n/a
Subject-like extraction	✓	✓	✓	*	n/a
New binding possibilities	✓	✓	✓	*	TBD
Intermediate in multiple-raising cycle	✓	✓	✓	*	n/a
Can be new information	✓	✓	✓	*	*
Possible inside RC?	✓	✓	✓	*	*
Coreferent with matrix OM	*	*	*	✓	✓

## 7 Implications of non-agreeing *ga-fwaana*

The key finding of the previous section is that not all instances of hyper-raising in Logoori show the non-agreeing form. The systematic distinction between *ga-fwaana* topicalization constructions and the three raising constructions (agreeing *-fwaana*, and agreeing and non-agreeing *-roreka*) helps support the conclusion that hyper-raising exists in Logoori, and particularly that the non-agreeing *ga-roreka* constructions are examples of raising to subject despite the lack of subject agreement.

While the diagnostics have already shown that *ga-roreka* constructions behave like real raising, the comparison to *ga-fwaana* reinforces the fact that subjects of *ga-roreka* do not behave like left-dislocated topics, and are in fact real subjects. By showing what dislocation looks like, and that it clearly contrasts with the raising constructions, *ga-fwaana* helps confirm the findings of Zeller (2006), Halpert (2012, 2016), Diercks (2012), and Carstens and Diercks (2013b) that true (hyper-)raising out of finite clauses exists in Bantu languages. Halpert in particular is supported in her conclusion that non-agreeing raising exists and is real hyper-raising despite the lack of subject agreement, though I have shown that not all apparent examples of non-agreeing raising should be analyzed as such.

The lack of non-agreeing raising with *-fwaana* does, however, challenge Halpert's theory of raising. Agreeing hyper-raising is only able to occur, according to Halpert, after the main clause T first agrees with the CP, obviating the intervention effects caused by the CP being a phi-goal. It is this initial agreement with the CP that allows T to probe inside the clause and raise the embedded subject to fulfill the EPP.

With *-fwaana*, however, the lack of non-agreeing raising indicates that T never agrees with the embedded CP – if it did, we would see the same kind of *ga*-raising with *-fwaana* as we do with *-roreka*. Importantly, the problem is not in the topicalization constructions, where we assume that *ga*-agreement is with an expletive, just like in unraised examples. Rather, the problem is that T never agrees with the embedded CP even in agreeing raising. Without obviating the intervention effects of the CP through agreement, the embedded subject should be stuck inside a phi-goal (the CP), yet agreeing raising is still allowed.

The only way around this in Halpert's model is to suggest that the embedded finite phrase in *-fwaana* sentences does not actually have phi-features, and is thus transparent to probing, like English non-finite clauses. This would allow T to find the embedded subject with its first probe in an agreeing *-fwaana* construction. Recall from section 5.2 that I have as of yet been unable to find evidence of Logoori CPs controlling agreement, which supports this idea.

The problem with this solution, however, lies in the fact that *-roreka* DOES have non-agreeing raising, and the two verbs can select identical embedded clauses, as seen in (89):

- (89) a. *ga-roreka* [ *ndi i-mbwa i-rum-i ri-juungu* ]  
6SA-seems that 9-dog 9SA-bit-PST 5-rat  
'It seems that the dog bit the rat.'
- b. *ga-fwaana* [ *ndi i-mbwa i-rum-i ri-juungu* ]  
6SA-appears that 9-dog 9SA-bit-PST 5-rat  
'It appears that the dog bit the rat.'

Either finite clauses in Logoori *do* have phi-features, as in Zulu, which would leave us the mystery of why there is no non-agreeing raising with *-fwaana*, or finite clauses do *not* have phi-features, which would leave us needing to explain where non-agreeing raising with *-roreka* comes from. Halpert's theory does not leave room for the pattern seen in Logoori where some instances of hyper-raising (*-roreka*) are accompanied by a choice in subject agreement, while others (*-fwaana*) are not.

The one way for Halpert's theory to apply unchanged to Logoori is to claim that the two raising predicates select for different types of CPs. The *-roreka* CP would be like finite clauses in Zulu – having phi-features but unable to satisfy the EPP – while the *-fwaana* CP would not have phi-features. This explanation seems unlikely, though, as there

is no obvious reason outside of the raising facts why they should be different, and as shown above, the CPs for these verbs are identical on the surface.

Thus, the *-fwaana* data leaves us without any satisfactory explanation for hyper-raising in Logoori. The traditional explanations of Case, Activity, and phases are based on an English model and have no way of deriving raising out of finite clauses, much less non-agreeing raising. Carstens and Diercks (2013b) propose a model that allows for raising out of finite clauses, but fails to address the motivation for such raising, the ban on raising out of non-finite clauses, and where *ga*-agreement comes from in non-agreeing raising. Finally, Halpert (2012, 2015, 2016) seemed to provide the most promising and comprehensive theory, as it had answers for all the theoretical questions surrounding hyper-raising in Logoori. However, the difference between the raising patterns of *-roreka* and *-fwaana* seems to be an insurmountable challenge to her feature and EPP based proposal. We are therefore left needing a new theory of hyper-raising to explain the Logoori data. Unfortunately, coming up with such a theory is beyond the scope of my time-constrained undergraduate thesis, but I do offer some initial thoughts on potential analyses in the next section.

## 8 Potential theories for future research

Though I do not offer up my own theory to account for Logoori hyper-raising, in this section I will suggest several ideas for future research on the matter that will hopefully bring us closer to a satisfactory explanation.

Of the three theories of raising I considered, the traditional explanation and Halpert's theory were both contradicted by my data. The proposal put forth by Carstens and Diercks (2013a), however, was not contradicted, it merely could not answer several of the questions Logoori raises. Thus, it seems promising to use their theory as a starting block for a more comprehensive theory that includes explanations for non-agreeing raising and the lack of raising out of non-finite clauses.

Nevins (2004), who, like Carstens and Diercks (2013a) and unlike Halpert, does not reject the PIC as a fundamental component of the grammar, suggests a way for embedded subjects to escape a phase by proposing an additional projection above TP besides CP. This is similar to the claim in Carstens and Diercks (2013a) that there are several types of complementizers that occur in different structural positions, only some of which are phase heads. The idea of multiple CPs or other higher projections is promising for Logoori, since embedded clauses can occur with two distinct complementizers at the same time, shown in (90).

- (90) *ga-rorek-a ndɪ kuru in-guvu ne in-zilu* **Double Complementizer Construction**  
 6SA-seem-PRES **that like** 9-clothing COP 9-wet  
 'It seems like the clothing is wet.'

The precise manner of escaping a phase would still need to be investigated, however, and it is unclear whether this could help elucidate the difference between *-roreka* and *-fwaana*, since both verbs can take these double complementizer constructions, and the differences are present even when only *ndɪ* is used, as shown throughout this paper. It also remains unclear how this theory could account for non-agreeing raising, though it does seem a promising alternative to the feature-based phase effects of Halpert, especially since Logoori CPs don't seem to control agreement.

One theory that *could* explain non-agreeing raising is that there are actually two positions that subjects can get to through A-movement, an idea hinted at by Miyagawa (2010). In this model, we would say that non-agreeing raising really does show expletive agreement, but that we still get raising effects because true raising of the embedded subject actually does occur, with the landing site in the second subject position. Though this theory could explain non-agreeing raising, and combined with the two complementizer idea could get around phase effects, it still does nothing to help us understand the difference between *-roreka* and *-fwaana*, since it offers no systematic explanation for why raising to the second subject position is available for *-roreka* but not for *-fwaana*.

My final suggestion, and the one I think may be most promising, relies on the fact I have alluded to several times throughout the paper that *-roreka* seems to be part of a larger class of statives that all allow hyper-raising. In discussing

the problems caused by *-fwaana* for Halpert, I noted that there is a way out – to suggest that *-roreka* and *-fwaana* take different types of CPs that contrast in their phi-status. While that seems unlikely, it is possible that the difference comes not from the CP, but from the verb itself. Carstens and Diercks (2013a) have shown distinctions between raising with a *-fwaana*-like verb and a *-roreka*-like one in Lubukusu with regards to operator agreement, supporting the idea that statives and non-statives contrast in important ways when it comes to raising. It seems promising to suggest that whatever allows for non-agreeing raising correlates in some way with the properties of stative verbs.

The addition of the stative suffix to a verb changes its argument structure, and it does not seem unreasonable that it could change how the verb interacts with embedded clauses as well. For instance, maybe Logoori CPs aren't normally licit phi-goals, but can become phi-goals for a stative verb. This would allow T to probe inside an embedded CP of *-fwaana* on its first try, eliminating non-agreeing raising, while the derivation of *-roreka* raising constructions would proceed as described by Halpert, giving us the alternative agreement option. John Gluckman and Margit Bowler have researched the stative construction extensively in Logoori, so potential clues might be found in their work.

None of these ideas are well-developed, but I believe that they could all prove useful in the continued exploration of raising constructions in Logoori and in Bantu languages more generally.

## 9 Conclusions

### 9.1 Empirical conclusions

This paper has made a number of empirical contributions to the documentation of Logoori and to our knowledge of hyper-raising constructions in Bantu languages. I have shown that the Logoori raising pattern contrasts with English in allowing for raising out of finite clauses and prohibiting raising out of non-finite clauses. I demonstrated that raising out of finite clauses with *-roreka* produces two options for subject agreement in the main clause – a form that agrees with the raised subject (agreeing raising) and one that uses class 6 subject agreement (non-agreeing *ga*-raising). This non-agreeing form correlates to the Zulu non-agreeing raising discussed by Halpert (2012, 2015, 2016), adding to the evidence that such constructions exist in Bantu and need to be accounted for in theories of raising. Through a number of diagnostics, I have shown that both agreeing and non-agreeing constructions should be considered true examples of raising to subject, despite the traditional ideas on raising not giving accommodation for raising out of finite clauses.

This contrasts with the pattern seen for another raising verb *-fwaana*. While the agreeing raising constructions with *-fwaana* behave like *-roreka* and appear to be instances of true raising, *-fwaana* lacks a form of non-agreeing raising. Using the same diagnostics, I demonstrated that apparent examples of *ga-fwaana* raising constructions should actually be interpreted as examples of left-dislocation with expletive subject agreement, and that while hyper-raising certainly exists in Bantu, not all instances of apparent subject raising out of finite clauses should automatically be assumed to be hyper-raising.

### 9.2 Theoretical conclusions

While my discussion of theoretical issues has been less conclusive, I have reiterated the need for an alternative theory of raising to capture the facts from Bantu languages. Specifically, I support many authors in questioning the role of Case (Diercks, 2012; Halpert, 2016), Activity (Nevins, 2004; Carstens and Diercks, 2013a), and phases (Carstens and Diercks, 2013b; Halpert, 2016) in the derivation process, as well as questioning the nature of agreement in non-agreeing raising constructions, as there is a divergence between what is in subject position, and what the subject marker agrees with (cf. Carstens, 2005; Baker, 2008; Collins, 2004).

Ultimately, I have shown that none of the current theories can fully account for the Logoori data without modification. Logoori does not directly contradict Carstens and Diercks (2013b), but their proposal leaves many theoretical

questions open, and doesn't explain all the empirical facts – specifically how non-agreeing raising is derived. Halpert (2012, 2015, 2016) has a more comprehensive theory, but the lack of non-agreeing raising with *-fwaana* contradicts a key component in her process of deriving hyper-raising constructions.

I have not proposed my own solution to account for all of the theoretical questions raised by Logoori, but I have suggested several paths of future inquiry.

## 10 Acknowledgments

This project would be nowhere without the work of my collaborator and Logoori language consultant Isaac Kilaha Thomas. I have been honored to partner with him in the description and analysis of his language, and have greatly enjoyed my time spent with him over the last two and a half years.

I am also indebted to my advisor Mike Diercks for his help on my thesis over the course of this year, and for his guidance throughout my time at Pomona. After taking Syntax with Mike in my freshman year, I knew I would major in linguistics, and it remains one of the most valuable classes I have taken at college. Beyond his enormous influence on my education, his impact on this project was direct: he is responsible for most of the data on *-fwaana*, and coauthored a presentation of our research for ACAL 47, which forms the basis of this document.

I would like to express my gratitude to generous funding from Pomona College's Summer Undergraduate Research Program and the Pomona College Department of Linguistics and Cognitive Science, as well as an NSF Collaborative Research Grant (Structure and Tone in Luyia: BCS-1355749). In addition, I want to thank John Gluckman, Meredith Landman, Ken Safir, David Odden, Michael Marlo, Leonard Muaka, and Becca Shipan for various discussions about Logoori. Special thanks go to Claire Halpert for her critiques and suggestions at an early stage of this research, and to Vicki Carstens for helping me realize the problems my data causes for Claire's theory.

All errors that remain are my own.

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## 12 Appendix: Statives

As mentioned several times in this paper, *-roreka* appears to be just one of many stative verbs that share the same raising properties. Like *-roreka*, and unlike *-fwaana*, stative verbs show both agreeing and non-agreeing raising, and I suggested in section 8 that the properties of stativeness may be correlated to their ability to have non-agreeing *ga*-raising.

Below, I present initial data on statives using the same diagnostics from sections 4 and 6. My examples use three different stative verbs, *-voreka* ‘to be said’, *-suuvirika* ‘to be believed’, and *-amanyika* ‘to be known’, formed by affixing the stative suffix *ek/ik* to a root verb, and show that statives conform to the predictions of a hyper-raising analysis, rather than a copy-raising or dislocation analysis. I do not discuss the data extensively in this appendix, so please compare to the *-roreka* examples from section 4 to see how the diagnostics apply to the data and the significance of the results.

### 12.1 Statives show connectivity effects

#### 12.1.1 Idioms

Statives retain idiomatic meanings in both agreeing (92a) and non-agreeing (92b) raising, showing connectivity effects between the main and embedded subject position.

- (91) *ga-vor-ek-aa* (ndɪ) *mu-doga gw-aku-simuk-a* **Unraised w/ Idiom**  
 6SA-say-STAT-PRES (that) 3-car 3SA-PST-depart-FV  
 ‘It is said that the car left.’  
 ‘It is said that it is too late.’
- (92) a. *mu-doga gu-vor-ek-aa* (ndɪ) *gw-aku-simuk-a* **Agreeing Raising w/ Idiom**  
 3-car 3SA-say-STAT-PRES (that) 3SA-PST-depart-FV  
 ‘The car is said to have left.’  
 ‘It is said that it is too late.’ *Idiomatic Reading Retained*
- b. *mu-doga ga-vor-ek-aa* (ndɪ) *gw-aku-simuk-a* **Non-agreeing Raising w/ Idiom**  
 3-car 6SA-say-STAT-PRES (that) 3SA-PST-depart-FV  
 ‘The car is said to have left.’  
 ‘It is said that it is too late.’ *Idiomatic Reading Retained*

#### 12.1.2 Reconstructed Readings

Both agreeing (94a) and non-agreeing (94b) raising with statives allows for reconstructed readings and is felicitous even when the raised subject is not a perceptual source, supporting a hyper-raising over copy-raising analysis.

- (93) *ga-vor-ek-aa* ndɪ *mu-undu a-suund-i* ri-gma **Unraised**  
 6SA-say-STAT-PRES that 1-person 1SA-move-PST 5-stone  
 ‘It is said that someone moved the stone.’ (*it didn’t fall or roll there, e.g.*)
- (94) *Context: A stone is on the path, but you don’t know how it got there.*
- a. *mu-undu a-vor-ek-aa* ndɪ *a-suund-i* ri-gma **Agreeing Raising**  
 1-person 1SA-say-STAT-PRES that 1SA-move-PST 5-stone  
 ‘Someone is said to have moved the stone.’ *Reconstructed Reading Available*
- b. *mu-undu ga-vor-ek-aa* ndɪ *a-suund-i* ri-gma **Non-agreeing Raising**  
 1-person 6SA-say-STAT-PRES that 1SA-move-PST 5-stone  
 ‘Someone is said to have moved the stone.’ *Reconstructed Reading Available*



The availability of coreference in (98) is evidence of dislocation, while the lack of coreference in (99) where dislocation is ruled out by a *wh*-question is evidence of hyper-raising. Thus, it seems that both structures are initially acceptable without additional context. It may even be the case that the dislocation analysis is always available with *ga*-raising, but that it is usually much less accessible than it is in the context of these sentences. Regardless, (99) shows that stative *ga*-raising *can* be hyper-raising with A-movement, even if it doesn't *have* to be.

### 12.3.2 Stative raising can feed further raising

Subjects raised to an intermediate stative clause through both agreeing and non-agreeing raising can be further raised to the main clause. If the intermediate raising were derived through A'-movement, it would not be able to feed further A-movement, ruling out a dislocation analysis. In (100), I show an unraised construction with two raising verbs – *-fwaana* in the main clause and a stative verb in the intermediate clause.

- (100) *ga-fwaan-aa*    *ndi ga-amany-ik-aa*    *Jabu a-kony-aa*    *Fii*  
 6SA-appear-PRES that 6SA-know-STAT-PRES 1Jabu 1SA-help-PRES *Fii*  
 'It appears that it is known that Jabu is helping Fii.'

In (101) below, I show that the embedded subject of the lowest clause *Jabu* can cyclically raise up to the main clause. Both sentences show agreeing *-fwaana* raising in the highest clause, which as discussed in section (6) uses A-movement. The intermediate clause shows agreeing stative raising in (101a) and non-agreeing stative raising in (101b), supporting the claim that both agreeing and non-agreeing raising with statives uses A-movement.

- (101) a. *Jabu a-fwaan-aa*    *kuri y-amany-ik-aa*    *ndi a-kony-aa*    *Fii*    **AGR-, AGR-**  
 1Jabu 1SA-appear-PRES like 1SA-know-STAT-PRES that 1SA-help-PRES *Fii*  
 'It appears that it is known that Jabu is helping Fii.'
- b. *Jabu a-fwaan-aa*    *kuri ga-amany-ik-aa*    *ndi a-kony-aa*    *Fii*    **AGR-, ga-**  
 1Jabu 1SA-appear-PRES like 6SA-know-STAT-PRES that 1SA-help-PRES *Fii*  
 'It appears that it is known that Jabu is helping Fii.'

## 12.4 Non-agreeing raising with statives is not dislocation

### 12.4.1 Raised subjects can be new information

Raised subjects in stative raising can be new information, whereas topicalized elements must be familiar. Below I show that the raised subject in both agreeing (103a) and non-agreeing (103b) stative raising can serve as the answer to a *wh*-question (102).

- (102) *Ni vwaha a-kony-aa*    *Fii?*    **wh-Question**  
 is 1who 1SA-help-PRES 1Fii  
 'Who is helping Fii?'
- (103) a. **Jabu** *y-amany-ik-aa*    *ndi a-kony-aa*    *Fii.*    **Subj Can be Answer in Agr Raising**  
 1Jabu 1SA-know-STAT-PRES that 1SA-help-PRES *Fii*  
 'Jabu is known to be helping Fii.'
- b. **Jabu** *ga-amany-ik-aa*    *ndi a-kony-aa*    *Fii.*    **Subj Can be Answer in Non-Agr Raising**  
 1Jabu 6SA-know-STAT-PRES that 1SA-help-PRES *Fii*  
 'Jabu is known to be helping Fii.'



and to potentially develop a theory of raising in Logoori that encompasses all the data presented in this paper. I show the results of all eight diagnostics in the table below:

(106) **Raising Diagnostics by Construction**

<b>Diagnostic</b>	<b>-roreka</b>		<b>Statives</b>		<b>-fwaana</b>		<b>LD Topics</b>
	<b>AGR-</b>	<b>ga-</b>	<b>AGR-</b>	<b>ga-</b>	<b>AGR-</b>	<b>ga-</b>	
Idiomatic reading retained	✓	✓	✓	✓	✓	*	*
Reconstructed reading possible	✓	✓	✓	✓	✓	n/a	n/a
Subject-like extraction	✓	✓	✓	✓	✓	*	n/a
New binding possibilities	✓	✓	✓	✓	✓	*	TBD
Intermediate in multiple-raising cycle	✓	✓	✓	✓	✓	*	n/a
Can be new information	✓	✓	✓	✓	✓	*	*
Possible inside RC?	✓	✓	✓	*	✓	*	*
Coreferent with matrix OM	*	*	TBD	TBD	*	✓	✓