Title: Lubukusu complementizer agreement as a logophoric relation
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Abstract:
This paper introduces a new complementizer agreement relation to the theoretical literature, in which a declarative-embedding complementizer agrees with the subject in its selecting clause in Lubukusu, a Bantu language of Kenya. The agreement relation is extensively documented in a wide variety of syntactic contexts, establishing the empirical generalization that the complementizer agrees with its most local superordinate subject. The claim is then set forth that the complementizer agreement relation is essentially a logophoric phenomena, where a null logophor operator within the embedded CP triggers the complementizer agreement relation. The paper proposes that this logophoric operator is a subject-oriented anaphor, explaining the subject-orientation of complementizer agreement, and that logophoric operators cross-linguistically vary in their syntactic nature, explaining cross-linguistic differences in logophoric phenomena. It is shown that the agreeing complementizer occurs with all clause-selecting verbs with the exception of emotive factive verbs and that the agreeing complementizer has a specific evidential interpretation; both facts are explained by appealing to previously-established left-peripheral structures of logophoricity and evidentality. Additional empirical contexts which are discussed include subject-to-subject raising, raising-to-object, causative constructions, alternative agreement effects, passives, agreement in CP-complements of NPs, intervention effects, and subject inversion contexts, among others.

Keywords: Bantu, Lubukusu, complementizer agreement, Agree, logophoricity

1   Introduction

Lubukusu (Bantu, J.30) is spoken in the Western province of Kenya, along the Ugandan border.[1] It is one of a collection of language varieties that are subsumed under the term "Luyia"; Luyia is termed a macrolanguage in the Lewis (2009), of which Lubukusu is one of its constituent languages.[2,3] Lubukusu displays a typologically interesting and theoretically challenging form of complementizer agreement where the complementizer shows full phi-feature agreement (gender, number, and person) with the subject of the matrix clause, as demonstrated in (1):

(1) a. baba-ndu ba-bol-el-a   Alfredi **ba**-li   a-kha-khil-e
        2-people   2S-said-AP-FV   1Alfred 2-that   1S-FUT-conquer
        'The people told Alfred that he will win.'

     b. Alfredi   ka-bol-el-a   baba-ndu   **a**-li   ba-kha-khil-e
        1Alfred   1S-said-AP-FV   2-person   1-that   2S-FUT-conquer
        'Alfred told the people that they will win.'

The agreement relation between the complementizer and the matrix subject is evident in (1), as the subject of the lower clause (null in these cases) is coreferent with the objects in the matrix clauses, but the complementizer shows a different noun class agreement, which can only correspond to the matrix subjects.[4]

1.1   Theoretical Implications and Roadmap

This construction is particularly relevant in the present state of Minimalist syntactic theory, as it presents an agreement configuration that is highly problematic to explain. The most salient problematic property is the fact that the complementizer agrees with a structurally higher noun phrase. The Agree relation is generally assumed to hold between a head and a goal which is c-commanded by the head, as part of a derivational structure which builds syntactic structures from the bottom (Chomsky 2000, 2001). While there is some work proposing so-called 'upward' probing (e.g. Baker 2008), as will be demonstrated in what follows, Lubukusu complementizer agreement diverges in important ways from the properties of Agree, even an upward-probing Agree. It is this core puzzle that occupies most of the focus of this paper.

There are, however, additional theoretical puzzles raised by this construction. First, the complementizer agreement relationship in Lubukusu intersects in critical ways with phase theory. Note that while the head of CP is argued to be the edge of the phase and accessible to higher operations (Chomsky 2008, among others), the verb in (1) is clearly a transitive verb which would necessarily possess a *v*P projection, which is commonly thought to be a phase and which intervenes between the lower CP and the position of the matrix subject. Furthermore, in recent years the idea has taken hold that T does not possess phi-features of its own, but rather inherits its phi-features from C (Chomsky 2008, Ouali 2008, among others). Complementizer agreement relations have in fact been drawn on as evidence feature inheritance, as certain West Germanic varieties display complementizer agreement with an embedded subject. At least on a simplistic view of CP as a single projection Lubukusu seems to provide direct counter-evidence for this claim, as instead of displaying a relationship between C and embedded T it displays what appears to be more akin to a relationship between C and matrix T. In the course of the argumentation, however, I provide a more fine-grained view of the Lubukusu CP that may shed some light on this broader feature-inheritance question.

While the analysis provided in this paper is not specifically designed to explain all of these theoretical difficulties, it nonetheless provides important insight into addressing these problems. This paper therefore has dual purposes: the first is to extensively document the Lubukusu complementizer agreement construction, and the second

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[1] Lubukusu has also been reclassified from its Guthrie classification of E31c to J30 in Lewis (2009), and JE31c in Maho (2008).

[2] It is often said that Lubukusu is a dialect of Luyia, but the Ethnologue's terminology recognizes that there is no standard "Luyia" language, but rather, each Luyia speaker speaks one of its varieties. There are estimated to be 17-23 Luyia languages, all with varying degrees of mutual intelligibility (Lewis 2009, Marlo 2009).

[3] For more on Lubukusu, see (Austen 1974b, Austen 1974a, Bell 2004, Bell and Wasike 2004, de Blois 1975, Diercks 2010, Marlo 2009, Marlo, et al. 2008, Wasike 2002, Wasike 2007)

[4] This issue has only been briefly noted by Wasike (2007) for Lubukusu, but has not been addressed in the broader theoretical literature, either for Lubukusu or for other languages, apart from a brief mention in Baker (2008). The limited typological work on this pattern is noted in what follows.

is to examine the theoretical impact of the analysis of the construction. The core analysis which I propose is that Lubukusu complementizer agreement is in fact not a long-distance agreement relation, but rather, is a local agreement relation between the complementizer and a null logophoric operator.

(2)   Complementizer agreement in Lubukusu (simplified version)

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            VP
          /    \
        V°      CP
              /    \
       [OP_Log]     \
              ↖  C°      TP
              AGR-li    /\
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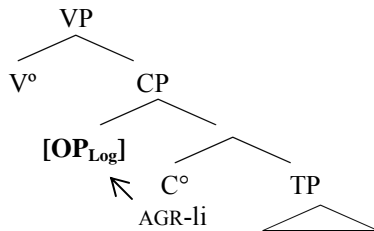
On this analysis of the Lubukusu CP the agreement relation is reduced to a local phenomenon, and the core question is shifted from the properties of agreement to the properties of the null operator, specifically, why it must be coreferential with the matrix subject. In this regard, I claim that logophoric operators across languages vary with respect to their featural content, and that the Lubukusu logophoric operator is in fact a subject-oriented anaphor.

　　　This paper proceeds in the following manner: §2 lays out the core syntactic properties of complementizer agreement in Lubukusu, establishing the major empirical generalization that the complementizer agrees with the most local superordinate subject. §3 then relates these facts to logophoric phenomena, claiming that the Lubukusu agreeing complementizer is at its core a logophoric phenomenon. In this section the basic analysis in (2) is motivated, and a number of empirical supporting arguments are presented. In §4 additional empirical contexts for complementizer agreement are addressed, and §5 then tackles the question of the nature of the null logophoric operator in Lubukusu. §6 addresses questions of the lexical and discourse distribution of complementizer agreement, adopting a more fine-grained analysis of the Lubukusu CP, and §7 concludes.

1.2   Complementizer agreement cross-linguistically

Complementizer agreement is relatively rare: Baker's (2008: 182-184) survey reports that at most 9 languages out of the 100 examined exhibited complementizer agreement. Of that small minority of languages, the best-researched cases of complementizer agreement are the West Germanic complementizer agreement constructions where a complementizer agrees with the embedded subject (Carstens 2003, Fuß 2005, Haegeman 1992, Hoekstra and Smits 1998, Shlonsky 1994, Watanabe 2000, Zwart 1997, among others).

(3)   Kpeinzen   *da-j*   (gie)   morgen   goat   [West Flemish]
       I-think   that-you   (you)   tomorrow   go
       'I think that you'll go tomorrow'

(4)   Kvinden   *dan*   die boeken   te   diere   zyn
       I-find   that-PL   the books   too   expensive   are
       'I find those books too expensive.'   (Haegeman 1992, as cited in Carstens 2003: 393)

As is evident in (3) and (4), the complementizer bears agreement morphology that agrees with the embedded subject. A number of analyses for this phenomenon have been set forth in the literature cited above, but it is evident from comparing the West Flemish examples in (3) and (4) to the Lubukusu examples in (1) that the nature of the Lubukusu agreement is starkly different: whereas in West Flemish complementizer agreement there is a local relation between the complementizer and its agreement trigger, the embedded subject, the agreement in Lubukusu is a longer-distance relationship with the matrix subject. Lokaa (Benue-Congo) and Kinande (Bantu) have been reported by Baker (2008: 120) to have similar properties to Lubukusu, though the construction is given only limited treatment there.[5]

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[5] I should note that anecdotal evidence suggests to me that the agreement relation reported here for Lubukusu may be much more widespread within the Bantu languages, at least the eastern Bantu languages. It appears that some form of this agreement is present in related Luyia dialects (e.g. Luwanga), and may also occur in languages in

Kawasha (2007) reports on 4 additional languages which show this matrix subject-oriented complementizer agreement relation: Chokwe, Luchazi, Lunda, and Luvale, Bantu languages which are spoken in northwest Zambia and some adjacent parts of Angola and the Democratic Republic of Congo. As in the Lubukusu case, each of these languages shows agreement on a complementizer that is controlled by the matrix subject. An example from Chokwe is given in (5):

(5) Ka-na-amb-e   ngwenyi   mw-angana   h-a-f-w-a   [Chokwe]
     1S-TAM-say-FV   COMP1   1-chief   TAM-1S-die-FV
     'He said that the chief is dead.'

Based on the descriptive work by Kawasha (Kawasha 2007), these languages appear to have similar properties to the Lubukusu agreement relation, though much more research is necessary to confirm the extent of their similarities.

An additional case where a similar agreement relation has been reported is in the Mande languages of West Africa. Idiatov (2009) reports that Jula of Samatiguila (Ivory Coast), Jowulu (Mali and Burkina Faso), the Yaba dialect of Southern San (Burkina Faso), Tura (Ivory Coast), and the Ko dialect of Mende (Sierra Lione) all display some degree of agreement between a complementizer and an argument in the matrix clause.[6] An example from the Ko dialect of Mende is given in (6) (Idiatov 2009: 18).

(6) Ngí   ndé-ìlɔ̀   ngì   má   ngê   í   wá   [Mende]
     1stSG 3rdSG\say-PST 3RDSG.POSS on   1stSG.COMP 3rdSG.SBJ   come
     'I told him to come' (lit.: 'I said it to him that he should come') (Innes 1971: 139)

Idiatov notes that while in some languages the complementizer agreement targets an argument in the matrix clause, at least two of the reported languages show agreement with a non-subject in certain contexts. For example, in Jula of Samatiguila and Tura the agreement is semantics-/discourse-controlled, in that the controller must be the source of the reported discourse.

Idiatov's study is mainly typological and historical in nature, demonstrating interesting historical relationships between the complementizers and verbs of speech (and their pronominal arguments). Similarly, (Kawasha 2007) is mainly a descriptive work, addressing the four Bantu languages mentioned above, and (Baker 2008) gives a very limited theoretical treatment to complementizer agreement in Kinande and Lokaa. Therefore, the full nature of these complementizer agreement phenomena is still very much in question, and our knowledge of theoretically-relevant data is still relatively limited.

2   (Syntactic) Properties of Lubukusu Complementizer Agreement

This section examines in depth the syntactic properties of the complementizer agreement relation. The main generalization that comes to light in this section is that agreement on the complementizer is triggered by the subject in its selecting clause, which is demonstrated using a variety of syntactic contexts.

2.1   Lubukusu Complementizer Inventory

A summary of the inventory of complementizers in Lubukusu is given in (7). Note that these are all embedding complementizers which embed declarative clauses; relative complementizers or focus-related complementizers are excluded (for some discussion of these other complementizers in Lubukusu see Diercks 2010, Wasike 2007).

Western Tanzania. Obviously, much more work needs to be done to properly evaluate the relative rarity (or non-rarity) of these agreement patterns.

[6] For the works in the individual languages, see Braconnier (1987-1988) on Jula, Carlson (1993) on Jowulu, Paré (1998) on the Yaba dialect of Southern San (Burkina Faso), Bearth (1971) on Tura (Ivory Coast), and Innes (1971) on the Ko dialect of Mende (Sierra Lione).

(7)   Lubukusu (Declarative-Embedding) Complementizers

mbo	generic embedding complementizer
Ø	Generic embedding complementizer similar to *mbo*
nga	'because', 'as', 'that'
oli	Comparative: 'like', 'as if' (also appears with certain perception verbs)
bali	'that'; reporting unreliable information
AGR-li	'that'; agrees with main-clause subject

The complementizer *mbo* is a generic complementizer, with perhaps the least-restricted distribution of the embedding complementizers.[7] The null complementizer is similar to *mbo*: in most basic embedding contexts an overt complementizer is not obligatory. The complementizers *nga* and *oli* are somewhat more restricted in their distributions. *Nga* tends to carry meanings of 'because' and 'as', but can also be used in more general contexts that might translate to the English *that*.[8] *Oli* tends to be used as a comparative complementizer akin to *like* and *as if* in English. It also appears with certain raising verbs, as reported in (Carstens and Diercks to appear).

The table in (7) notes that the complementizer *bali* can occur in situations where it does not agree with the subject of the matrix clause (cf. the 3rd plural agreeing complementizer form *ba-li*). This non-agreeing *bali* has at least two different evidential-like readings, affecting the interpretation as to what is the source of the information that is reported in the embedded CP (see §6.1).

The agreeing complementizer agrees in person, number, and gender with the matrix subject: the different forms are given in (8):

(8)   Forms of the Lubukusu Agreeing Complementizer[9]

	Singular	Plural
1st person	n-di	khu-li
2nd person	o-li	mu-li
3rd person	a-li	ba-li
Noun class *N*	*N*-li	*N*-li

The agreement forms on the complementizer here are identical to the subject-agreement forms that appear on verbs (and the noun-class markers *N* are identical to the pre-prefix that occurs on nominals, which in most cases is identical to the subject agreement morphology).[10]

2.2   Complementizer Agreement is not (Wholly) Semantically Controlled

One of the reported patterns in Idiatov (2009) for complementizer agreement (for Jula of Samatiguila and Tura, West African languages) is that the complementizer agrees with the source of the information that is reported in the embedded clause. This is a reasonable null hypothesis for the Lubukusu case, given the general surface similarity of the complementizer agreement phenomena.

(9)   <u>Hypothesis (to be rejected)</u>:   The Lubukusu agreeing complementizer agrees with the
                                                                             source of the information reported in the embedded clause

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[7] Though it should be noted that speakers have mixed responses to *mbo*. Some speakers feel it is not originally Lubukusu and was perhaps borrowed from a neighboring language, but all speakers that I encountered used it productively.

[8] The use of *nga* requires the morpheme *ne-* to be prefixed to the verbal form embedded under *nga*. The exact nature of this *ne-* morpheme is still unknown, though it appears in a wide variety of contexts in Lubukusu (see Wasike 2007).

[9] Note that 3rd person singular and plural in this chart are what are generally referred to (descriptively) as class 1 and class 2, terms which I use throughout the text.

[10] Class 1 is the exception to this rule: the class 1 pre-prefix is [o-], whereas class 1 subject agreement is [a-]. As noted in the chart, class 1 (3rd person singular) complementizer agreement patterns with subject agreement rather than the pre-prefix.

This section shows, however, that the agreement properties of the Lubukusu agreeing complementizer cannot be explained solely in terms of a semantic/pragmatic analysis like that in (9). That is to say, despite the fact that semantic and pragmatic contexts do influence the selection of the agreeing complementizer (as is discussed in section 6.1 below), the trigger of the complementizer agreement relation is not necessarily the source of the information that is reported in the lower clause.

2.2.1 VERBS OF HEARING

The first piece of evidence comes from verbs of hearing. As is shown in (10), the C complement of *-aula* 'hear' can agree with the subject of the matrix clause, despite the fact that the subject is not in any way the source of the reported information.

(10) khw-aulile   khu-li   ba-limi   ba-funa   ka-ma-indi
      1stPL-heard   1stPL-that   2-farmers   2S-harvested   6-6-maize
      'We heard that the farmers harvested the maize.'

In addition, when the source of the reported information is included in the main clause as an oblique, it is evident that agreement does not track the source, but rather tracks the subject of the sentence (as shown in (11)).

(11) khw-a-ulile   khukhwama   khu Sammy   khu-li (*ali)   ba-limi   ba-a-funa   ka-ma-indi
      1stPL-PST-hear   from   LOC 1Sammy   1stPL-that   2-farmers   2S-PST-harvest   6-6-maize
      'We heard from Sammy that the farmers harvested the maize.'

What this suggests is that agreement on the complementizer is triggered structurally, in a manner that appears to be syntactic in nature, a conclusion which is supported by additional data.

2.2.2 NEGATION DOES NOT AFFECT COMPLEMENTIZER AGREEMENT

If the complementizer agreement was controlled by the source of information reported in the embedded clause as proposed in (9), one might also expect some interaction with matrix negation. That is, if that the matrix clause were negated so that the subject was in fact *not* the source of the reported information, complementizer agreement might be affected. As is shown below, however, the presence of negation does not affect the ability of the complementizer to agree with the subject.

(12) a. n-a-bol-el-a   Nelsoni   n-di   ba-keni   ba-a-cha
        1stSG-PST-say-AP-FV   1Nelson   1stSG-that   2-guests   2S-PST-go
        'I told Nelson that the guests left.'

    b. se-n-a-bol-el-a   Nelsoni n-di   ba-keni ba-a-cha ta
        NEG-1stSG-PST-say-AP-FV   1Nelson   1stSG-that 2-guests   2S-PST-go   NEG
        'I didn't tell Nelson that the guests left.'

As above, I take this as further evidence that the evidentiary properties of a clause do not determine the agreement on the complementizer.

2.2.3 PASSIVE BY-PHRASES

The role of configurational properties in the complementizer agreement relation is even more evident in the case of passivization. If the hypothesis in (9) held, passive by-phrases would be predicted to control complementizer agreement. As shown in (13) and (14), however, the demoted agent in a passive by-phrase does not trigger complementizer agreement.[11]

(13) Nelson   ka-bolel-wa   nende   ese   mbo (*ndi)   ba-keni   ba-a-cha
      1Nelson   1S-told-PASS   by   me   that 1stSG   2-guests   2S-PST-go
      'Nelson was told by me that the guests left.'

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[11] Note that the generic non-agreeing complementizer *mbo* is used in this case – this aspect of the construction is discussed in more depth in §4.1.2.

(14) ba-sasi   ba-bol-el-wa   nende   Sammy   mbo (*ali)   ba-keni   ba-a-rekukha
     2-parents   2S-say-AP-PASS   by   1Sammy that   2-guests 2S-PST-leave
     'The parents were told by Sammy that the guests left.'

This lack of agreement with the demoted subject in the by-phrase is despite the fact that in the non-passive versions of these sentences the matrix subject triggers complementizer agreement: compare (13) and (15).

(15) (ese) n-a-bol-el-a   Nelsoni   **nd-i**   ba-keni   ba-a-cha
      (I)   1stSG-PST-say-AP-FV 1Nelson   1stSG-that   2-guests   2S-PST-go
      'I told Nelson that the guests left.'

An additional point relevant to the discussion at this point is that (in the absence of a by-phrase) the derived subject of a passive can itself trigger complementizer agreement. This is shown in (16):

(16) Alfred   a-subisi-bwe   a-li   ba-keni   khe-b-eecha
      1Alfred   1S-cause.believe-PASS   1-that 2-guests PRG-2S-come
      'Alfred was made to believe that the guests are coming.' (very recently)

This agreement (and the influence of the by-phrase) is discussed further below in §2.3.2 and §4.1, but let it suffice for the moment to note that the possibility of agreement with a derived subject in a passive (and the impossibility of agreeing with a by-phrase) supports a structural approach to the trigger of agreement (i.e. that subjects trigger agreement) rather than a semantic/pragmatic approach based on the source of the reported information.

       The facts discussed in this section lead me to the conclusion that the trigger of complementizer agreement cannot be completely explained by an evidentially-motivated semantic analysis. The last fact noted in (16), that derived subjects in passives can trigger complementizer agreement, instead suggests that some sort of syntactic analysis is in order. The next section addresses the syntactic conditions in this complementizer agreement relation.

2.3   Syntactic Properties of Complementizer Agreement

This section examines the syntactic properties of complementizer agreement, arguing for the generalization that the complementizer agrees with the subject of its selecting clause, that is, the most local super-ordinate subject. The next sub-section looks at some evidence to show that complementizer agreement is a productive relation, section 2.3.2 shows that agreement is only with subjects, and section 2.3.3 addresses the question of locality.

2.3.1   COMPLEMENTIZER AGREEMENT IS PRODUCTIVE

It is a relevant concern to demonstrate that the agreement relation on the complementizer is in fact productive, and that the forms which appear are not a restricted morphological set. In fact, the agreement forms that appear on the complementizer are identical to the agreement forms that appear as subject agreement on verbs, and are not morphologically or syntactically limited. An example of person agreement on the complementizer is given in (17), though see (10) and (12) above for additional examples.

(17) Ninywe mu-mw-a-bol-el-a   Nelsoni   mu-li   ba-keni   ba-a-cha
      you(PL) 2ndPL-2ndPL-PST-say-AP-FV   1Nelson   2ndPL-that   2-guests 2S-PST-go
      'It is you (pl) who told Nelson that the guests left.'

In addition, in the event that a plausible situation can be constructed where a non-animate noun class may be used as a subject of a verb with a complement clause, the complementizer bears full noun class agreement with that subject. In the case of (18) it is the locative class 18 on 'face', and in the case of (19) it is the class 9 noun *ebarua* 'letter', triggering class 18 and class 9 agreements on the complementizers, respectively.[12]

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[12] It is important to note that inclusion of the author of the letter and the person whose face/appearance are being reporting is important for complementizer agreement to be licit. This relates to the logophoric properties of complementizer agreement, as discussed in §3.

(18) Mu-moni   mw-a   Nelson   mw-ekesie   **mu-li**   o-mu-sangafu
      18-face   18-of   1Nelson   18S-show   **18**-that 1-1-happy.person
      'Nelson's face has shown that he is a happy person.'

(19) e-barua   y-a   Nelsoni   y-ekesie   **e-li** (*ali)   ka-sangaala
      9-letter   9-of   1Nelson   9S-showed   **9**-that   1S-be.happy
      'Nelson's letter showed that he is happy.'

In story-telling contexts it is possible to get non-human nouns (i.e. other than class 1 and 2) as subjects of verbs of speech. In (20) the class 9 *ekhutu* 'tortoise' triggers class 9 agreement on the complementizer (*e-li*). In (21) class 10 *chimbwa* 'dogs' triggers class 10 agreement on the complementizer.

(20) Nyanga ndala e-khutu   y-a-hingania   waasio **e-li**   e-nyala y-akhila waasio chimbilo
      day   one   9-tortoise 9S-PST-challenge eagle **9**-that 9-could 9-defeat eagle   running
      'One day the tortoise challenged the eagle that he could run faster than the eagle.'
                                                              (de Wolf and de Blois 2005: story #13, line 2)

(21) chi-mbwa   ch-a-loma   **chi-li**   chi-ngokho   che-lukha
      10-dogs   10S-PST-say   **10-that**   10-chickens   10S-escaped
      'The dogs said that the chickens escaped.'

Other influences on normal agreements (like subject agreement) also affect complementizer agreement. Example (22) has a conjoined subject, where the conjuncts are from different noun classes. As seen in the subject agreement form, this conflict of agreement features is resolved by inserting a default agreement form: Lubukusu uses class 8 subject agreement in this case, and the complementizer likewise bears class 8 agreement.

(22) e-mbwa   ne   omu-ndu   by-a-loma   **bi-li**   omu-keni   k-ool-ile
      9-dog   and   1-person   8S-PST-say   **8-that**   1-guest   1S-arrive-PST
      'the dog and the person said that the guest arrived.'

Not all cases of conjoined subjects trigger class 8 agreement, however. Some cases trigger closest-conjunct agreement, as can be seen in (23).[13] As is evident in this case as well, the same agreement that is triggered on the verb is also triggered on the complementizer, in this case class 6 agreement:

(23) ki-mi-rongoro   nende ka-ma-ua   ka-a-loma   **ka-li**   e-fula   y-a-kwa
      4-4-trees   and   6-6-flowers   6S-PST-say   **6-that**   9-rain   9S-PST-fall
      'Trees and flowers said that the rain fell.'

I will allow these examples to suffice as evidence that the phi-feature agreement that appears in Lubukusu complementizer agreement is fully productive, free to bear agreement with any subject, and in many ways mimics the agreement properties of subject agreement (e.g. in resolution of conjoined subject feature-conflicts).[14]

2.3.2 COMPLEMENTIZER AGREEMENT TARGETS SUBJECTS ONLY

This section begins to address the generalization that the complementizer can only agree with subjects, and cannot agree with a non-subject. Some of the evidence for this conclusion was already discussed above, such as that the complementizer cannot agree with an agent in a passive by-phrase (see (13)) and that the complementizer cannot agree with the non-subject "source" of information in a verb of hearing (see (11)).

The first piece of evidence for this conclusion is found in ditransitive verbs, where an indirect object intervenes between the complementizer and the subject. As is shown in the data below, objects in ditransitive verbs like *-bola* 'tell' and *-ombelesya* 'convince' do not allow their object to control complementizer agreement.

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[13] I leave for future research the question of what principles govern agreement with conjoined phrases in Lubukusu.
[14] See §3.5 for data demonstrating that though complementizer agreement agrees in a similar fashion to T, C is not directly dependent on T for its agreement features.

(24) ewe   w-abol-el-a   Nelsoni   **o-li** (*ali)   ba-keni   ba-rekukha
      you   2nd SG.S-say-AP-FV   1Nelson   2nd SG-that   2-guests   2S-left
      'you told Nelson that the guests left.'

(25) ba-ba-ana   ba-a-ombelesya   Sammy   ba-li (*ali)   ba-keni   ba-a-rekukha
      2-2-children   2S-PST-convince   1Sammy   2-that   2-guests   2S-PST-leave
      'The children convinced Sammy that the guests left.'

The indirect object noun phrase in the examples in (24)-(25) intervenes between the complementizer and the subject, but nonetheless, only the subject of the sentence may trigger agreement on the complementizer, and the indirect object never can. These data point towards a generalization that only subjects can trigger agreement on the complementizer.

　　　Causative constructions are on the surface quite similar to ditransitives, as the 'causee' noun phrase intervenes between the subject and the complementizer. As (26) and (27) show, even in these cases, agreement is with the subject of the sentence, and not with the 'causee' argument.

(26) n-a-suubi-sya   Alfredi   **n-di** (*ali)   ba-keni   khe-b-eecha
      1st SG-PST-believe-CAUS   1Alfred   1st SG-that   2-guests   PRG-2S-coming
      'I made Alfred believe that the guests are coming.'

(27) John   ka-sindu-sia   ba-baana   **a-li**   bakeni   b-ol-ile
      1John   1S-surprise-CAUS 2-children   1-that   guests   2S-arrive-PST
      'John caused the children to be surprised that guests arrived.'

Causatives are especially interesting given that the intervening 'causee' noun phrase is plausibly the argument that takes some sense of ownership over the reported speech in the embedded clause (e.g. Alfred is the believer of the reported information in (26)), yet the subject of the sentence still triggers complementizer agreement.

　　　As was mentioned in §2.2.3, the derived subject of a passive verb is capable of triggering complementizer agreement, demonstrating that the structural position of the triggering phrase is an integral component of the determination of complementizer agreement.

(28) Sammy   ka-bol-el-wa   **a-li**   ba-keni   b-ola
      1Sammy   1S-say-AP-PASS   1-that   2-guests   2S-arrived
      'Sammy was told that the guests arrived.'

(29) Sammy   a-a-biyis-we   **a-li**   a-fun-ile   lu-u-sala
      1Sammy   1S-PST-blame-PASS   1-that   1S-break-PST   11-11-stick
      'Sammy was blamed for breaking the stick.'

(30) Mikaeli   ka-a-subisi-bwa   **a-li**   o-mu-saale   wewe   a-likho   k-echa
      1Michael   1S-PST-promise-PASS   1-that   1-1-friend   1his   1S-PRG   1S-come
      'Michael was promised that his friend was coming.'

Examples (28)-(30) provide further evidence the matrix subject is what triggers complementizer agreement. Whereas previous evidence relied strongly on how non-subjects which might plausibly trigger complementizer agreement in fact did not, the fact that the complementizer agrees with the subject of a passive provides positive evidence for a generalization for complementizer agreement which relies on some structural notion of the agreement trigger.

　　　It is important to note, however, that there are at least two sorts of passive constructions which do not allow complementizer agreement: passive-raising constructions and passives of raising-to-object (RtO) verbs. Both of these cases are discussed in §3.6.1 and §3.6.2 below. Additional passive-related evidence is also discussed in §4.1 below, in reference to a collection of intervention effects. It is sufficient at present, however, to note that the structural subject position is relevant for the trigger of complementizer agreement, evidenced by the presence of complementizer agreement with the derived subject of a passive verb.

　　　In anaphoric relations it is at times possible for a pronominal form to have a split antecedent, but Lubukusu complementizers can only agree with the subject. The verb *fukilisiana* 'agree' has a relatively symmetrical

interpretation, where if X agrees with Y, X and Y are agreeing together. Therefore the English sentences in (31) are all roughly synonymous:

(31) a. Alfred agreed with me that the guest arrived.
 b. I agreed with Alfred that the guest arrived.
 c. Alfred and I agreed that the guest arrived.

As the Lubukusu evidence shows, however, agreement on the complementizer is only possible with the element that is in subject position. In (32) and (33), therefore, this rules out agreement with the comitative phrase, and also rules out split-antecedence of the agreement by the comitative phrase and the subject, demonstrated by the unacceptability of the first person plural agreement in both (32) and (33):

(32) Alfredi ka-fukilisian-e ne-nase **a-li** omu-keni k-ool-ile (*khu-li / *n-di)
 1Alfred 1S-agreed-PST with-me **1-that** 1-guest 1S-arrive-PST (*1stPL-that / *1stSG-that)
 'Alfred agreed with me that the guest arrived.'

(33) ese fukilisanie ne Alfredi **n-di** omu-keni k-ool-ile (*khu-li / *a-li)
 I 1stSG.agreed with 1Alfred **1stSG-that** 1-guest 1S-arrive-PST (*1stPL-that / *1-that)
 'I agreed with Alfred that a guest arrived.'

The only case in this context where the first person plural agreement is possible is when both of the agreeing parties are expressed within the phrase in subject position, in this case the conjoined subject *Alfred ne nase* 'Alfred and I'.

(34) Alfred ne nase khw-a-fukilisian-e **khu-li** omu-keni k-ool-ile
 1Alfred and I 1stPL.S-PST-agree-PST **1stPL-that** 1-guest 1S-arrive-PST
 'Alfred and I agreed that the guest arrived.'

I interpret these facts as further evidence that complementizer agreement is the result of some sort of direct syntactic relationship with the subject. That is to say, elements that are not associated with subject position do not enter into the calculation of complementizer agreement. We saw this same fact with causatives, passive by-phrases, indirect objects, and sources of hearing verbs, all of which point to the conclusion that complementizers only agree with clausal subjects.

2.3.3 COMPLEMENTIZER AGREEMENT TARGETS THE MOST LOCAL SUBJECT

While the previous section demonstrated that the agreeing complementizer only agrees with (super-ordinate) subjects, and not non-subjects, this section shows evidence that complementizer agreement must be with the most local subject.[15]

As we saw above, despite the fact that the DP 'causee' of a causative verb is the AGENT or EXPERIENCER of the lexical verb (i.e. the subject of that verb in non-causative settings), the 'causer' argument that is the subject of the sentence triggers complementizer agreement, and the 'causee' cannot (see (26) and (27) also).

(35) ba-sasi ba-many-isya Sammy **ba-li** (*ali) ba-keni b-a-cha
 2-parents 2S-know-CAUS 1Sammy 2-that (*1-that) 2-guests 2S-PST-leave
 'The parents informed (made-know) Sammy that the guests left.'

As is evident in (36), however, when the causative is formed periphrastically, the 'causee' necessarily triggers complementizer agreement, and not the higher 'causer' argument. This is seen in the fact that *babaana* 'children' triggers class 2 agreement on the complementizer in the example below, but the complementizer cannot bear class 1 agreement (with the matrix class 1 subject *Sammy*).

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[15] I mean locality in a relative sense: whereas in a strict sense the embedded subject is the most local subject, this agreement relation is necessarily with a structurally higher element, not a structurally lower one (as is typical for Bantu languages; see Baker 2008, Carstens 2005, Collins 2004), and therefore the lower subject is irrelevant to this construction.

(36) Sammy ka-ingil-ile   baba-ana   ba-búule **ba-li** ba-limi   ba-funile   ka-ma-indi   (*a-li)
      1Sa.   1S-forced-PST   2-children 2S-reveal 2-that   2-farmers 2S-harvested 6-6-maize   (*1-that)
      'Sammy forced the children to reveal that the farmers harvested the maize.'

Comparing the morphological causative in (35) to the periphrastic causative in (36), the crucial difference is the subjecthood of the 'causee' argument. In (36) this argument is a subject, triggering subject agreement, whereas the 'causee' is a non-subject in the morphological causatives (e.g. (35)).
    This same pattern is evident in cases of recursive embeddings. When there are multiple embedded clauses, a lower complementizer can only agree with the most local subject (i.e. the subject of the immediately superordinate clause), not the higher matrix subject.

(37) Alfredi ka-a-loma   a-li   ba-ba-andu ba-mwekesia **bali** (*ali) o-mu-keni   k-ola
      1Alfred 1S-PST-say   1-that 2-2-people 2S-revealed 2-that   1-1-guest   1S-arrived
      'Alfred said people revealed that the guest arrived.'

Crucially, in (37) the lower complementizer can cannot appear as class 1 *ali*, meaning that agreement with the matrix subject *Alfredi* is ruled out. All of the facts discussed above support the generalization that the complementizer agrees with the subject of the clause that selects it. This generalization is given in (38), and forms the basis of the analysis given in this paper.

(38) Lubukusu Complementizer Agreement Generalization:
      Complementizers agree only with the most local superordinate subject

3   Correlations with Logophoricity

As this section demonstrates, Lubukusu complementizer agreement shows some parallels with the properties of logophoric predicates and logophoric pronouns that lead me to believe that this complementizer agreement relation is a logophoric phenomenon. This section demonstrates these properties, and will propose a structure for complementizer agreement in Lubukusu based on previous approaches to logophoricity.

3.1   Being a Subject is not Enough

As the generalization in (38) states, complementizers in Lubukusu may only agree with subjects, and never with non-subjects. As it turns out, however, there is an important caveat to be made, as not all subjects are capable of triggering complementizer agreement. Take the example in (39), for example, where agreement with a non-human subject is degraded:

(39) Chi-sale   khu-mesa   chy-a-subi-sya   Alfred   ___   chi-mbeba   chi-li   mu-nju
      10-mark   16-table   10-PST-believe-CAUS   1Alfred COMP   10-rat   10-be   18-house
      'The marks on the table made Alfred believe that rats were in the house'
                a. ✓ mbo   that
                b. ??chi-li   10-that
                c. *a-li   '1-that'

The example in (39) is consistent with the previous examples of causatives, in that complementizer agreement with the class 1 non-subject 'causee' *Alfred* is completely unacceptable. Notable here, however, is that the 'causer' argument in this case is a non-human, non-sentient thing, 'marks on the table', and agreement with that subject is degraded in this case.
    The example in (39) suggests several things: first, there is some sort of sentience requirement on complementizer agreement (more on this below). Second, even when the matrix subject is not a good candidate for complementizer agreement, a non-subject is nonetheless incapable of triggering complementizer agreement, despite that non-subject's plausible candidacy to trigger the agreement (i.e *Alfred* is the 'believer'). This reinforces the generalization in (38) that only subjects may trigger complementizer agreement. It is apparent from (39), however, that being a subject is not solely sufficient for triggering complementizer agreement. Rather, the subject which triggers complementizer agreement must be capable of having a 'point of view', that is, it must have a mind to report (c.f. "logophoric center" of Sells 1987, "seat of knowledge" of Tenny and Speas 2003).

This raises an important question regarding some of the data that were introduced earlier. Recall examples (18) and (19) from section 2.3.1, which are repeated as (40) and (41) below:[16]

(40)   Mu-moni   mw-a   Nelson   mw-ekesie   mu-li / a-li   o-mu-sangafu
        18-face   18-of   1Nelson   18s-show   18-that/1-that 1-1-happy.person
        'Nelson's face has shown that he is a happy person.'

(41)   e-barua   y-a   Nelsoni   y-ekesie   e-li   (*a-li)   ka-sangaala
        9-letter   9-of   1Nelson   9s-show   9-that (*1-that) 1s-be.happy
        'Nelson's letter showed that he is happy.'

These examples seem at odds with the example in (39), as the complementizer agrees with non-sentient subjects in these cases (a locative 'face' in one case, and 'letter' in another). Taking the example in (41), however, noting that the acceptable agreement from (41) is degraded in the event that the author of the letter is removed:

(42)   E-barua   y-ekesya   mbo   (??e-li)   Nelsoni   a-sangaala
        9-letter   9s-showed   that   (??9-that)   Nelson   1s-is.happy
        'The letter said that Nelson is happy.'

In (42) the generic non-agreeing complementizer *mbo* is preferred to the agreeing complementizer, a similar effect to what is seen in (39). In some way, then, the close association of the non-sentient subject with a person enables the complementizer agreement. This influence of a vaguely defined "association" is seen also in the alternative agreements that are shown in (40) and (41). The example in (40) with the subject *mumwoni mwa Nelson* 'face of Nelson' allows for class 1 agreement (apparently with the 'possessor' in the subject NP), and speakers report this acceptability due to the intuition that the subject DP refers to all of Nelson—his entire countenance. On the other hand, the same sort of agreement with the possessor in (41) is unacceptable, perhaps because a letter is wholly distinct from a person, whereas a person's face is in fact a part of their body. In both cases, however, the presence of a human as a possessor of the noun phrase enables agreement with the head noun of the subject NP, despite the fact that neither a 'face' or a 'letter' is sentient on its own. I presume, however, that the ability to closely associate each of these elements with sentience enables them to be appropriate triggers of complementizer agreement (a person's face/countenance displays their emotions, while writing is a means of communicating a person's thoughts).
        There are therefore two conditions that must be met in order for complementizer agreement to be licit. First, the controller of agreement must be a subject (as agreement with non-subjects is never licit), and second, the controller of agreement must be capable of establishing a "point of view", that is, it must either be sentient (in the normal cases, human) or at least capable of reporting a mind—including a face displaying emotions, or a letter communicating language (of an identified person).

(43)   Conditions to trigger complementizer agreement:
            a. Controller of agreement is a subject
            b. Controller of agreement can establish a "point of view", i.e. has a mind to report[17]

As will be discussed in the next section, both of the properties in (43) are reminiscent of logophoric phenomena, and analyses of logophoric phenomena offer a precedent for the analysis which I will offer for complementizer agreement.

3.2   A Logophoric Analysis

The subject-oriented properties of complementizer agreement in Lubukusu are similar to another (at times) subject-oriented phenomenon, namely, logophoric reference. Culy (1994a: 1057) describes a logophoric domain as a "[stretch] of discourse in which a person's words, thoughts, knowledge, or emotions are being reported," and in a

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[16] Note the addition of some additional agreement forms not included in the previous examples.
[17] Some speakers do allow agreement with what are apparently (null) expletive subjects, though a number of factors are unclear, including how widespread this phenomenon is (as a number of speakers outright reject it), the conditions under which it is possible, and the true nature of the empty category apparently playing the role of an expletive in those contexts. This is an important area for future research.

similar fashion logophoric pronouns are often described as coreferent with the matrix argument whose thoughts, knowledge, or emotions are being reported. For example, in (44) from Adesola (2006: 2069), the logophoric pronoun *oun* is obligatorily coreferent with the matrix subject.

(44) Olú$_j$ ti kéde pé **òun$_j$** má a wá nî òla [Yoruba]
      Olu ASP announced that he will come at tomorrow
   'Olu has announced that he will come tomorrow.'

Similar effects have been described for a variety of African languages (and usually West African languages), including Ewe (Clements 1975), Abe (Koopman and Sportiche 1989), Donno Sɔ (Culy 1994b), Banda-linda (Cloarec-Heiss 1986), Aghem (Hyman 1979), and Gokana (Hyman and Comrie 1981), among many others (see Culy 1994a for an excellent typological overview). The core characteristic of logophoric pronouns is that their reference is necessarily determined by an argument in a higher clause.[18]

A common analysis for such logophoric phenomena is that there is a null operator in Spec,CP of the embedded clause whose reference is controlled by a lexically specified argument in the matrix clause (see Adesola 2005, 2006, Koopman and Sportiche 1989, Speas 2004, among others). I won't review the various analyses here, but rather schematize the analyses generally in (45):

(45) [SUBJ$_k$ … [$_{CP}$ OP$_k$ C [$_{IP}$ … LOG$_k$ …]]]

The analysis in (45) accounts for the apparently long-distance binding relationship that occurs between logophoric pronouns and their antecedents, as the binding relationship is actually more local, between the logophoric pronoun and the null operator in the embedded CP. It is in the spirit that I propose that there is a null logophoric operator in the left periphery of embedded clauses in Lubukusu that triggers agreement with the complementizer (see Baker 2008, for a similar analysis of Lokaa).

(46) Complementizer agreement in Lubukusu (first approximation)
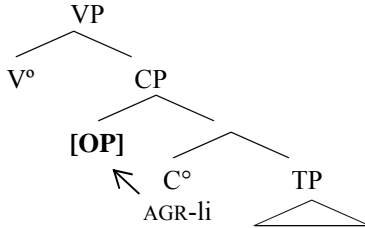
I assume, in fact, that this operator that triggers complementizer agreement in Lubukusu is the same sort of operator that occurs in West African languages and binds logophoric pronouns, with two main differences. First, Lubukusu has an agreeing complementizer which agrees with the null operator, and does not have any logophoric pronouns (at least, to my knowledge; I am not aware of any narrow Bantu languages with logophoric pronouns). Presumably, if Lubukusu did in fact have logophoric pronouns, a logophoric pronoun would always be coreferent with the controller of agreement on the complementizer. Second, the precise theoretical nature of the empty category is different in different languages: in Lubukusu its reference is anaphorically dependent on the dominating subject, whereas in many West African logophoric contexts, the reference of the operator is determined by a control relationship determined by the matrix predicate. These issues are addressed in more depth in section 5; the next two sections discuss some potential evidence in favor of a logophoric analysis of this sort.

3.3   Supporting Evidence: Where Agreement is Required
As was discussed in the introduction, there are various complementizers which are interchangeable in Lubukusu, but there are select syntactic and discourse contexts which create a preference for one over the other. Section 6

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[18] Culy (1994a) distinguishes these pronouns from the sorts of 'logophoric' pronouns that occur in Japanese, Icelandic, and Italian (for example), which are reflexive pronouns that may be bound either inside their clause or outside of their clause (see Sells 1987, among others). Culy refers to these latter pronouns in their "logophoric" uses as non-clause-bounded reflexives (NCBRs), and refers to the former as "pure" logophoric pronouns.

discusses a collection of contexts in which the agreeing complementizer is prohibited, the implications of which are discussed at that point. There is, however, at least one instance where the agreeing complementizer is largely preferred to any non-agreeing complementizers, namely, when the matrix verb is reflexive.

(47) Joni   a-e-bolela   a-li   a-li   omu-kesi   (??mbo/??bali)
      1John   1S-RFM-told   1-that 1s-be   1-intelligent   (??that /??that)
      'John told himself that he's intelligent.'

I interpret the effect in (47) as essentially an intensification of the logophoric center of the clause—not only is the subject *Joni* the logophoric center, but the indirect object in this case is coreferential with the logophoric center (the subject *Joni*). I claim that it is this intensification of the logophoric center which in turn creates a strong preference for a logophoric complementizer, the agreeing complementizer in Lubukusu.

3.4   Supporting Evidence: Non-Logophoric Domains

Another piece of supporting evidence for a logophoric analysis of Lubukusu complementizer agreement is the lack of complementizer agreement in *because*-phrases. As observed by Culy (1994a), in many languages with logophoric pronouns causal clauses such as those in (49) - (51) are not logophoric domains. As (49) and (51) demonstrate, the agreeing complementizer may not appear in *because*-phrases (despite the fact that non-agreeing complementizers are possible, as shown in (50)).

(48) Sina sikila Mikaeli   n-a-rekukha?
      what reason 1Michael   NE-1S-leaving
      'Why is Michael leaving?'

(49) … sikila   mbo (*ali)   a-likho   a-elekesia   Tegani
        reason   that (*1-that) 1S-PRG   1S-escort   1Tegan
      '…because he is escorting Tegan.'

(50) Mikaeli   a-likho   a-cha   sikila   mbo/bali   a-likho   a-elekesia   Tegani
      1Michael   1S-PRG   1S-go   because   that   1S-PRG   1S-escort   1Tegan
      'Michael is leaving because he is escorting Tegan.'

(51) *Mikaeli   a-likho   a-cha sikila   a-li   a-likho   a-elekesia   Tegani
      1Michael   1s-PRG   1s-go because   1-that 1S-PRG   1S-escort   1Tegan
      'Michael is leaving because he is escorting Tegan.'

The lack of complementizer agreement in *because*-phrases in Lubukusu is consistent with logophoric domains in other languages, which again is supportive of an analysis of Lubukusu complementizer agreement as essentially a logophoric phenomenon.

A similar circumstance arises in conditional clauses. It is not clear whether these would be classified as non-logophoric domains or not, but are included here for the sake of thorough documentation. As can be seen in (52), the complement clause begins with the sequence *(ne) kaba*, which roughly correlates to English *if*, after which a non-agreeing complementizer is possible, but the agreeing complementizer is ruled out.

(52) Alfred   ka-reba   Sammy   ne kaba   mbo (*ali)   bakeni   ba-ache
      1Alfred   1S-asked   1Sammy   if   that   2-guests   2S-went
      'Alfred asked Sammy if the guests left.'

It is unclear whether these *if*-clauses fall into a natural class of non-logophoric domains or not, and this remains an issue for future research.

3.5   Supporting Evidence: Mismatched Agreements

Another potential source of evidence for the preliminary analysis set forth in (46) is when matrix subject agreement takes a different form than the complementizer agreement form; the first example is the lack of anti-agreement effects on complementizer agreement. When a subject in noun class 1 is extracted, it triggers an alternative

agreement effect (AAE) where subject agreement is deficient in person features and appears as [o-] instead of the normal declarative [a-][19] (Diercks 2009, Henderson 2009a, 2009b, Schneider-Zioga 2007).[20]

(53) a. Naliaka **a**-li   mu-nju   (Wasike 2007)
        1Naliaka **1S**-be 18-house
        'Naliaka is in the house.'

     b. Naanu **o**-li   mu-nju?
        who   **1S**-be 18-house
        'Who is in the house?'

In (Diercks 2010) I argued in a manner similar to Henderson (2009a, 2009b) that alternative agreement effects in Lubukusu are in fact realizations of agreement, but that this agreement is deficient in PERSON features. Both Henderson (2009a, 2009b) and (Diercks 2010) claim that the nature of extracting from subject position triggers this alternative agreement, though with different theoretical implementations.

   This analysis makes an interesting prediction with respect to complementizer agreement, however. If agreement were in some way dependent on the matrix inflectional complex (i.e. subject agreement features as they arise on T), we would expect to see alternative agreement effects arising on the complementizer in cases of subject extraction. On the analysis proposed here, in contrast, the agreement relation is a local relation with a null logophoric operator, and therefore the processes of subject extraction should have no bearing on the form of the agreeing complementizer. As (54) shows, the prediction of the analysis in (46) is upheld, as subject extraction does not trigger alternative agreement effects on the complementizer, despite the alternative agreement effects on the matrix verb:

(54) naanu   **o**-manyile   **a**-li   (*o-li)   Alfred   a-l-ola
      who   **1S**-knows   **1**-that (*AAE-that)   1Alfred   1S-FUT-arrive
      'Who knows that Alfred will arrive?'

(55) Alfred   ni-ye   **o**-many-ile   **a**-li   (*o-li)   ba-ba-ana   ba-l-ola
      1Alfred PRED-1 **1S**-know-PRS **1**-that (*AAE-that)   2-2-children 2S-FUT-arrive
      'Alfred is the one who knows that children will arrive.'

I interpret these data as support for the analysis proposed in (46), namely, that complementizer agreement consists of an agreement relation that occurs below the level of matrix-clause inflection. This is certainly not the only analysis of complementizer agreement that is consistent with this lack of AAEs, but it does rule out alternative analyses where the complementizer agrees directly with matrix inflection.

   While not as directly indicative as the previous argument, complementizer agreement in imperatives makes a similar (albeit superficial) point that the realization of complementizer agreement does not rely on the overt realization of subject agreement. Commands in Lubukusu (as in many Bantu languages) consist of the basic verb stem with no tense/aspect morphology and no subject agreement. When an imperative form of a verb takes a CP as a complement, however, it is still possible for that embedded CP to take an agreeing complementizer, as shown in (56) and (57).

(56) Suubisye   o-li   o-kh-eche   muchuli
      promise   2nd-SG-that   2nd-SG-FUT-come   tomorrow
      'Promise me that you (sg) will come tomorrow.'

(57) Loma mu-li   orio   muno
      say   2nd-PL-that thank you   very much
      'say thank you very much.'   (pl)

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[19] Or sometimes [ka-] in Lubukusu.

[20] Note that the term "alternative agreement effect" is adopted here, a slight modification of the more familiar term "anti-agreement effect" which is adopted in the general literature on such phenomena (see Diercks 2010). This is due to the fact that this effect is not a lack of agreement, but rather a feature-deficient agreement form (cf. Diercks 2010, Henderson 2009a, Henderson 2009b).

While the imperative case is not as demonstrative as AAEs and the non-logophoric domains, these data do at least show that complementizer agreement is not dependent on (overt) subject agreement in Lubukusu, and demonstrates that there may be mismatches in the realized agreement forms between subject agreement and complementizer agreement.

3.6 Complementizer Agreement in Raising Contexts

3.6.1 SUBJECT-TO-SUBJECT RAISING

The observations in this section rely heavily on Carstens and Diercks (to appear), which addresses the properties and theoretical implications of subject-to-subject raising constructions in Luyia languages, focusing on Lusaamia and Lubukusu (though I restrict my comments to Lubukusu here).

It is first necessary to review the basic facts of Lubukusu raising: as shown in (58)a, perception verbs in Lubukusu (like many languages) allow for a non-thematic expletive subject, with a finite complement clause. In (58)b we see a major contrast with English: both English and Lubukusu allow for the subject to raise to matrix subject position in these constructions, but the Lubukusu construction has a finite and agreeing embedded clause (potentially with an overt complementizer, though judgments vary between speakers).

(58) a. Ka-lolekhana   (mbo)   Joni   ka-a-kwa   [Lubukusu]
        6S-seems   (that)   1John   1S-PST-fell
        'It seems that John fell.'

     b. Joni   a-lolekhana   (mbo)   ka-a-kwa
        1John   1S-seems   (that)   1S-PST-fell
        'John seems like he fell/John seems to have fallen.'

Note that the Lubukusu in (58)b is the equivalent of the English *John seems that fell*, demonstrating a crucial contrast between the languages. Carstens and Diercks (to appear) provide a variety of interpretive diagnostics to demonstrate that these constructions are genuinely instances of subject-raising from the embedded clause to the matrix clause. I refer the reader to that paper for the details of the analysis, particularly related to the questions of Case and Activity that these constructions raise.

Though not accepted by everyone, for some speakers it is possible for the non-raising (i.e. expletive) perception-verb construction to have complementizer agreement with the non-thematic subject, as shown in (59) and (60):[21]

(59)   Ka-lolekhana   ka-li   Tegani   ka-a-kwa
        6S-seems   6-that   1Tegan   1S-PST-fell
        'It seems like Tegan fell.'

(60)   Li-lolekhana   li-li   Sammy   a-likho   a-lwala
        5-seems   5-that   1Sammy   1S-PROG   1S-is.sick
        'It seems like Sammy is sick.'

Notable, however, is the fact that when the subject has raised to subject position, the presence of complementizer agreement is ruled out for all speakers, as is shown in (61) and (62):

(61)   Sammy   a-lolekhana   mbo (*a-li)   a-likho   a-lwala
        1Sammy   1S-appears   that (*1-that) 1S-PROG   1S-be.sick
        'Sammy appears to be sick.' (lit. "Sammy seems that is sick")

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[21] The precise nature of the empty category in these expletive constructions is very much an open question. Different verbs necessarily trigger different noun class agreement in these "expletive" contexts, and speakers feel strongly that these constructions trigger an interpretation along the lines of "the evidence seems that …". So it is not clear that these are truly expletive constructions in the sense that their subjects have no role except fulfilling the EPP. That being said, they nonetheless demonstrate the raising properties relevant to our discussion here.

(62) Michael a-lolekhana mbo (*ali) a-si-kona
      1Michael 1S-appears that (*1-that) 1S-PERS-sleep
      'Michael appears that he is still sleeping.'

A similar phenomenon shows up in passive-raising constructions. In certain cases where a verb with a complement clause is passivized, the subject of the embedded clause may raise to subject position.[22]

(63) Ekhaafu e-buli-khe mbo (*e-li) e-fw-ile.
      9cow 9S-reveal-STAT that (*9-that) 9S-die-PFV
      'A cow was revealed that it died.'

(64) O-mu-keni ka-suubil-wa mbo (*a-li) k-ola.
      1-1-guest 1S-believe-PASS that (*1-that) 1S-arrived
      'The guest was believed to have arrived.'

Diercks and Carstens (to appear) argue that the reason behind this prohibition of the agreeing complementizer in raising constructions had to do with the phasal properties of different complementizer heads, assuming that the agreeing complementizer occurs in a higher position than the non-agreeing complementizer. The data introduced in (61) - (64) are consistent with the analysis that the agreeing complementizer is a phase head, whereas this is not the case for the other non-agreeing complementizers. This conclusion is brought into question in the next section, however, on account of the properties of Raising-to-Object verbs (RtO). I propose an analysis of this puzzle at the end of the next section, and therefore I put off my observations regarding the full significance of these data until considering the data in the next section.

3.6.2 PASSIVES OF RAISING-TO-OBJECT VERBS
The agreeing complementizer also occurs with so-called Raising to Object (RtO) verbs, where there is a licensing relationship between the matrix verb and the embedded subject. This realized in English by the presence of accusative case-marking on the embedded subject:

(65) They wanted him to succeed (*he)

While there is not case-marking on noun phrases in Bantu languages, many languages display this licensing relationship between the verb and the embedded subject by allowing the embedded subject to be object-marked on the matrix verb, as shown in (66).

(66) Ba-ba-andu ba-mw-enya a-ch-e
      2-2-people 2S-1O-want 1S-go-SBJ
      'People want him to leave.'

There is also evidence that overt NPs may raise to matrix object position, as evidenced by the possibility of producing the embedded subject to the left of the complementizer, presumably raised out of the embedded clause. Note that complementizer agreement is possible even in the case in (68) where Raising-to-Object has occurred.

(67) N-enya n-di Barack Obama a-khil-e
      1stSG-want 1stSG-that 1Barack.Obama 1S-win-SBJ
      'I want Barack Obama to succeed.'

(68) N-enya Barack Obama n-di a-khil-e
      1stSG-want 1Barack.Obama 1stSG-that 1S-win-SBJ
      'I want Barack Obama to succeed.'

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[22] Here, as above, the embedded clause is tensed and agreeing, potentially headed by a complementizer (*mbo* in (63)).

I assume that the embedded subject has raised to the matrix object-licensing position in (66) and (68) (which I assume to be the Transitivity Phrase of Bowers 2002). These data are therefore problematic for the assumption in (Carstens and Diercks to appear) that raising out of the embedded clause is impossible with the agreeing complementizer because the complementizer is a phase head. Note, however, the data in (69) and (70), which show that when a RtO verb is passivized and the raised object becomes the subject, complementizer agreement with that derived subject is impossible.
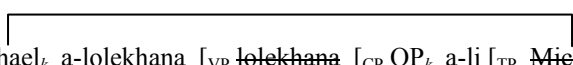
(69)   Barack Obama   k-enyi-bwa   (*ali)   a-khil-e
        1Barack.Obama   1S-want-PASS   (*1-that)   1S-win-SBJ
        'Barack Obama is wanted to succeed'

(70)   Sammy   k-enyi-bwa   mbo   (*ali)   a-ch-e   khu-soko
        1Sammy   1S-want-PASS   that   (*1-that)   1S-go-SBJ   17-market
        'Sammy is wanted to go to the market (now)'

It is important to note that these sentences are ruled out despite the fact that complementizer agreement is possible with derived subjects more generally, as evidenced by examples (28) - (30). The facts in (68) - (70) suggest, together with the facts in the preceding section, that A-raising out of an embedded CP with an agreeing complementizer is in fact possible (i.e. not restricted by phasal properties of the agreeing complementizer). Otherwise it would be impossible to raise the OM to matrix object position as in (66), or to raise the overt NP there as in (68). The question arises, then, as to what restricts complementizer agreement in the passive constructions in (69) and (70), and in the raising-to-subject cases in the preceding section?

    Together with the raising-to-subject constructions discussed in the preceding section, the empirical generalization is that complementizers can agree with a derived (matrix) subject only in the event that it originated in the matrix clause, and did not originate in the embedded clause.

(71)   <u>Empirical Generalization</u>:   Complementizer agreement is only possible with a subject that originated in the matrix clause.

There is in fact a promising analytical approach to the generalization in (71) based on the first approximation of an analysis of Lubukusu complementizer agreement given in (46), that complementizer agreement is triggered locally by a null operator in Spec, CP. Consider this outline of the ungrammatical raising construction (with complementizer agreement) from (62):

(72)   [$_{TP}$ Michael$_k$ a-lolekhana [$_{VP}$ ~~lolekhana~~ [$_{CP}$ OP$_k$ a-li [$_{TP}$ ~~Michael$_k$~~ a-si-kona   Michael
                      1S-appears   1-that   1S-PERS-sleep
        'Michael appears that he is still sleeping.'

As you can see, this raising operation consists of a DP raising over a coindexed operator, as schematized in (73):

(73)   * … XP$_k$ …[OP$_k$ … [~~XP$_k$~~ …

It is well-documented, in fact, that such configurations where a phrase has moved over a co-indexed phrase are regularly unacceptable. Rizzi (1986) accounted for these restrictions with his Chain Condition, where ungrammaticality results if a co-indexed phrase intervenes in the chain that is formed between a phrase's Case position and its (c-commended) theta-position.

(74)   <u>Chain Condition</u> (Rizzi 1986)
            * … XP$_i$ …[YP$_i$ … e$_i$ …

The Chain condition accounts for data such as those presented in (75) which show a restriction on reflexive clitics. In (75)a, the direct object raises over the dative clitic to subject position, but this same movement is ruled out in the case of a reflexive clitic such as in (75)b. That is, when the clitic is co-indexed with the raised DP, the resulting configuration is ruled out by the Chain condition in (74).
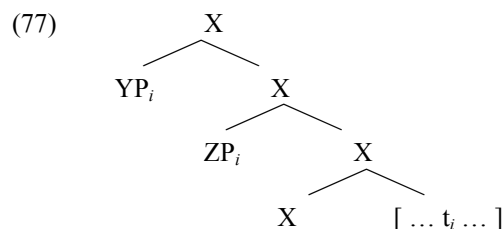
(75) a. Gianni$_i$ gli$_j$ è   stato   affidato   e$_j$ e$_i$ [Italian]
      Gianni   him.DAT   was   been   entrusted   Rizzi (1986: 70)
      'Gianni$_i$ was entrusted to him$_j$.'
   b. *Gianni$_i$ si$_i$ è   stato   affidato   e$_j$ e$_i$
      Gianni   self   was   been   entrusted
      'Gianni$_i$ was entrusted to himself$_i$.'

As pointed out by McGinnis (2004), however, there are a number of counter-examples to the empirical generalization codified in the constraint in (74), where raising to subject position over a co-indexed phrase is in fact acceptable. One of McGinnis' examples from Dutch is given in (76), as the derived subject binds the internal argument.

(76)   Jan$_i$ werd   zichzelf$_i$ t$_i$ getoond   [Dutch]
       Jan   becomes   himself   shown
       'Jan was shown to himself.'

McGinnis (2004) sets forth a new analysis accounting for both the generalization captured by Rizzi's Chain Condition and the counter-examples which she discusses. She claims that the "a moved phrase must be unambiguously linked with its copy at LF," and that ambiguous linking is lethal, leading to unacceptability (47). Abstracting away from some of the details of her account, she claims that a moved element must be identified with its lower copies at LF, and that this identification is accomplished by assigning an address to a moved element that is derived from its syntactic position. That is to say, when movement occurs, "the address of the moved element is indexed onto its copy," and this information together with indexation allows a moved element to be linked with its lower copy (67). [23] Following a suggestion by Chomsky (1995), McGinnis assumes that this "address" is identified by the sister of the moved element, and therefore two specifiers of the same head have the same address, whereas phrases in the specifiers of two different heads will have different addresses.

    If this is the case, then, a lethal ambiguity arises in the case of a syntactic configuration such as that in (77), since YP cannot be unambiguously linked with its lower copy, as it shares an index and an address with ZP (McGinnis 2004: 47):

(77)   X
              ┌─────────┴─────────┐
           YP$_i$ X
                        ┌────────┴────────┐
                      ZP$_i$ X
                               ┌─────────┴─────────┐
                              X   [… t$_i$ …]

This analysis allows McGinnis to account for Rizzi's Chain Condition, while simultaneously accounting for the counter-examples: lethal ambiguity occurs when YP has raised through the specifier of XP, whereas if YP had raised past XP instead of landing in its specifier, it would have created no ambiguity in LF linking, and the sentence would be acceptable. McGinnis claims that these two options for raising correlate with whether XP is a phase – if it is a phase, long-distance raising necessitates that YP land in the phase edge in order to be accessible to the higher phase. If XP is not a phase, on the other hand, YP can raise past it, creating no ambiguity. Therefore the variation between constructions (illustrated with the Italian reflexive in (75) and the Dutch reflexive in (76)) can be explained by whether there is an intermediate phase head. [24]

    Returning to the point at hand—the restrictions on the agreeing complementizer in the Lubukusu raising constructions—it is apparent that McGinnis' formulation of Lethal Ambiguity provides a natural explanation for

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[23] McGinnis (2004) clarifies that these indexes are numeration indexes rather than referential indices.
[24] On McGinnis' (2004) analysis, this difference correlates with whether the movement in question is Case-drive or EPP-driven, a correlation which is borne out in the type of Applicative heads are realized in a particular (double object) construction. I approach this argumentation from the perspective of the phase-edge requirement, especially since the context of the ambiguity in the Bukusu complementizer agreement cases is at the CP-level, not the ApplP-level. I refer the reader to McGinnis (2004) for the full details of her account.

why complementizer agreement is ruled out in cases when an argument is raised out of the embedded clause to subject position. If we are to assume that CP is a phase (with CP in fact being the quintessential phase: Chomsky 2000, Chomsky 2001, Chomsky 2008), for the embedded subject to raise out it would be expected to be merged into the edge of the CP phase. This would yield a structure like (78) for the cases where the raised phrase ends up in subject position in the matrix clause:[25]

(78)   *$[_{TP}$ XP$_k$ … $[_{CP}$ ~~XP~~$_k$ $[_{CP}$ OP$_k$ AGR-C $[_{TP}$ ~~XP~~$_k$ …

As is evident from comparing (78) with (77), this raising configuration is precisely the configuration which McGinnis claims creates a Lethal Ambiguity, and is therefore ungrammatical. This explains both of the problematic cases discussed in this section where complementizer agreement is ruled out: subject-to-subject raising and cases of raising-to-object where the matrix verb is passive, so that the raised-object in fact raises all the way to subject position. And in fact, it also explains why complementizer agreement is *not* ruled out in standard cases of raising-to-object such as in example (68), repeated here as (79).

(79)   N-enya   Barack Obama   n-di   a-khil-e
         1stSG-want   1Barack.Obama   1stSG-that   1S-win-SBJ
         'I want Barack Obama to succeed.'

In this case the raising process is assumed to be the same as what was schematized in (78), with a critical distinction: the operator in (78) is coindexed with the raised phrase, which is the matrix subject, due to the anaphoric relationship between the subject and the operator (see section 5.1 below). In the example in (79), in contrast, while the operator is still co-indexed with the matrix subject, the critical point is that the raised phrase is not the matrix subject and therefore the logophoric operator is not co-indexed with the matrix subject. Therefore the resultant configuration is the one in (80):

(80) $[_{TP}$ ZP$_i$ … $[_{vP}$ … XP$_k$ … $[_{CP}$ ~~XP~~$_k$ $[_{CP}$ OP$_i$ AGR-C $[_{TP}$ ~~XP~~$_k$ …

Again comparing this schematized raising configuration to McGinnis' formulation of Lethal Ambiguity in (78), it is clear that no ambiguity arises here because the raised phrase XP and the logophoric operator have different indexes. We therefore have a strong explanation for paradigms of raising constructions with respect to complementizer agreement in Lubukusu.

In terms of evaluating the current analysis of Lubukusu complementizer agreement, while this Lethal Ambiguity analysis is not direct evidence for the presence of the logophoric operator in CP, it is nonetheless promising that the operator-based analysis of complementizer agreement can explain the restrictions on complementizer agreement in raising contexts. Without reference to an operator in the embedded CP it is not clear how to explain the restriction of complementizer agreement in cases of raising out of the embedded clause to cases where there is raising-to-object, but not raising-to-subject.

This still leaves unanswered the question of why and how exactly the operator is co-indexed with the subject. This topic will be taken up in section 5. First, however, the next section addresses some additional empirical properties of complementizer agreement that are relevant to a theory of the subject-operator relationship.

4   Additional Empirical Contexts
This section addresses several additional syntactic contexts relevant to establishing the full empirical properties of complementizer agreement, after which §5 tackles the nature of the subject-operator relationship.

4.1   Intervention Effects
The previous sections have laid out the basic conditions under which complementizer agreement is possible, coming to the two conditions on complementizer agreement provided in (43), that complementizers agree only with the most local superordinate subject, and that the subject must be an appropriate logophoric antecedent (i.e. it must have a 'mind to report). This led to the analysis offered in (46), that agreement is triggered locally by a null logophoric

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[25] I set aside the problematic issue of whether this Spec, CP position is an A'-position (leading to an improper movement chain where A'-movement feeds A'-movement to matrix subject position), though for discussion of this issue in a related language see (Obata and Epstein To appear).

operator. There are, however, certain cases where complementizer agreement with a subject can be blocked by an intervening subject-like element.

4.1.1 COMPLEMENTIZER AGREEMENT OUT OF NPS

One context for complementizer agreement which has not been discussed to this point is the noun phrase. As is shown in the examples that follow, complementizers heading clausal complements of nouns may bear agreement with the subject of the matrix clause.

(81)　n-a-ulila　　　　li-khuwa　**nd-i**　　　Sammy　ka-a-kula　li-tunda
　　　 1stSG.S-PST-hear　5-word　　**1stSG-that**　1Sammy　1s-PST-buy　5-fruit
　　　 'I heard the rumor that Sammy bought the fruit.'

(82)　Sammy　a-li　　nende li-manya　**a-li**　li-sna　lyewe　bali　'mzungu'
　　　 1Sammy　1S-be　with　5-belief　**1-that**　5-name　5your　be　mzungu
　　　 'Sammy has the belief that your name is 'mzungu'.'

(83)　n-a-bon-e　　　　li-khendekha　n-di　　　Sammy　k-eng-ile　　mu-nju
　　　 1stSG-PRS-see-PRS　5-jealousy　　1stSG-that　1Sammy　1S-enter-PST　18-house
　　　 'I am jealous that Sammy entered the house.'

In the case that a noun phrase has a plausible subject, however, this agreement is degraded, as shown in the example below. (84) shows that if a noun phrase has a plausibly subject, the sentence is acceptable with a non-agreeing complementizer, but not with an agreeing complementizer, noting that the complementizer may agree with neither the subject of the noun phrase nor the main-clause subject.

(84)　M-bona　　bu-ng'ali　bw-a　Alfredi　**mbo** ba-ba-ana　b-ewe　ba-kha-khil-e　(*a-li / *n-di)
　　　 1st-PRS.see　14-certainty　14-ASS.1Alfred　*that* 2-2-children　2-his　2S-FUT-win-FUT (*1-that/*1st-that)
　　　 'I see Alfred's certainty that his children will win.'

It could be argued, perhaps, that some property of either the verb *bona* 'see' or the noun *bung'ali* 'certainty' in some way prohibits complementizer agreement. The example in (85) shows that this is not the case, however, as the logical subject of the noun phrase is not expressed via the associative marker as in the example above, but is instead expressed as a locative adjunct.[26]

(85)　m-bona　　bu-ng'ali　　mu-Alfredi　**n-di**　ba-ba-ana　b-ewe　ba-kha-khil-e
　　　 1st-PRS.see　14-certainty　18-Alfred　**1st-that**　2-2-children　2-his　2S-FUT-win-FUT
　　　 'I see Alfred's certainty that his children will win.' (lit. 'certainty in Alfred')

Complementizer agreement in the case of (85) becomes completely acceptable. Therefore in (84) complementizer agreement is prohibited, but when that nearly-semantically-identical element is present as a locative adjunct (rather than a subject of the noun phrase), there is no intervention effect. Intuitively, it seems that the locative phrase in (85) is not sufficiently "subject-like" in (85) to intervene in the agreement relation. Note, however, that (84) demonstrates that the complementizer nonetheless cannot agree with the subject of the noun phrase. The subject of the noun phrase is not capable of triggering agreement itself, and yet it disrupts the agreement relationship with the matrix subject.

4.1.2 FURTHER IMPLICATIONS OF PASSIVES

　　　As was noted at various points above, the derived subject of a passive can trigger agreement on the complementizer. An example of this is given in (86)a where the complementizer appears as *ali*, agreeing with the class 1 subject *omwana* 'child'. What was not discussed previously is that when a by-phrase is included, as in (86)b, this agreement relation with the subject is degraded.

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[26] Note that the logical subject has a very similar meaning whether expressed as a possessor or as a locative adjunct ('Alfred's certainty' vs. 'certainty in Alfred')

(86) a. omw-ana   ka-a-sitaki-bwa   a-li   k-eba   chi-ngokho
        1-child   1S-PST-accuse-PASS   1-that   1S-stole   10-chicken
        'The child was accused that he stole chickens.'

    b. o-mw-ana   ka-a-sitaki-bwa   ne ba-bebusi mbo (*a-li)   k-eba   chi-ngokho
        1-1-child   1S-PST-accuse-PASS   by 2-parents that (*1-that) 1S-stole   10-chicken
        'The child was accused by (the) parents that he stole chickens.'

This effect is very similar to the intervention effect noted in the previous section: as we saw in section 2.2.3, demoted agents in passive by-phrases are not themselves capable of triggering complementizer agreement, but we see here that they in fact serve as interveners for the agreement relationship between the complementizer and the subject. The data given in (87) and (88) provide further examples of the pattern described in (86)b above.

(87)   Nelson   ka-a-bol-el-wa   nende ese mbo   ba-keni   b-a-acha
        1Nelson   1S-PST-say-AP-PASS   by   me that   2-guests   2S-PST-go
        'Nelson was told by me that the guests left.'
                  *n-di   1stSG-that   (agrees with *ese* 'me')
                  *a-li   1-that   (agrees with *Nelson*)

(88)   Sammy   ka-a-bol-el-wa   ne ba-sasi   mbo (*ali)   ba-keni ba-a-rekukha
        1Sammy 1S-PST-say-AP-PASS   by 2-parents that (*1-that) 2-guests 2S-PST-leave
        'Sammy was told by (his) parents that the guests left.'

There is an important observation to be made that arises out of the interview process with native speakers of Lubukusu. Despite the large number of times that complementizer agreement with derived subjects of passives was deemed acceptable, there are also a significant number of instances when speakers would not accept complementizer agreement with the derived subject, even in the absence of a by-phrase agent (with variation from case-to-case for individual speakers as well). On several occasions, however, speakers explicitly referred to the implicit agent in a passive as the reason that they did not accept the complementizer agreement. I will include one example here as illustrative of this general pattern:

(89)   Alfred   ka-a-bol-el-wa   %a-li   syakhulia   sili   tiyari
        1Alfred   1S-PST-say-AP-PASS   1-that   2-food   7-be   ready
        'Alfred was told that the food was ready.'

The '%' symbol in the example above notes variation between speakers. Whereas several speakers readily accepted this example, others strongly opposed the presence of the agreeing complementizer here, stating that since "Alfred was told" something, somebody had to have told him, and as such the class 1 *ali* agreement form was unacceptable, based on that fact that it seemed more appropriate in that case to agree with the agent (it should be noted that these same speakers accepted agreement with derived subjects of passives on many other occasions). Despite the intuition that the agreement should be with the agent in certain cases like (89), speakers nonetheless do not accept complementizer agreement with the implicit agent:

In the context where it is known that the speaker is the one who told Alfred the food was ready:
(90)   *Alfred   ka-a-bol-el-wa   n-di   sy-akhulia   si-li   tiyari
        1Alfred   1S-PST-say-AP-PASS   1stSG-that 7-food   7-be   ready
        'Alfred was told (by me) that the food was ready.'

It seems, then, that the implicit agent of a passive is able to obstruct complementizer agreement in a manner similar to an overt by-phrase, but like a passive by-phrase cannot trigger its own agreement on the complementizer.[27]

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[27] It should be noted that I am unaware of any morphosyntactic differences in Lubukusu between a passive with an implicit agent, and one without it. This leads to a situation where there is simply variation as to whether speakers accept agreement with a derived subject in a passive. When presented with a large collection of sentences, such that speakers do not dwell on any single sentence, they readily accept agreement with the derived subject of the passive.

4.1.3 AN ANALYSIS OF INTERVENTION EFFECTS

My core analysis of both sorts of intervention effects noted in this section (subjects of NPs and passive agents, including both overt by-phrases and implicit agent arguments) is that these syntactic contexts essentially create a conflict between the two necessary conditions for triggering complementizer agreement in Lubukusu. Recall from (43) that there are two distinct conditions on complementizer agreement: the trigger of the agreement must be a subject, and the trigger of the agreement must be capable of establishing a "point of view", i.e. it must have a mind to report. What happens in these intervention contexts, then, is that a conflict is created between the subject requirement and the logophoric requirement on complementizer agreement.

Specifically speaking, I claim that both passive agents (implicit or explicit) and subjects of noun phrases create a strong bias toward a logophoric interpretation. That is, those elements are frequently agentive and/or topical, and agents and topics are frequently logophoric antecedents, and therefore those elements position themselves functionally-speaking as preferable logophoric antecedents. As is noted, however, the Lubukusu logophoric operator must be anteceded by a logophoric antecedent which is also a subject (see section 5 for a more precise analysis). Therefore these intervention contexts are cases where the two conditions on complementizer agreement come into conflict, where the preferred logophoric antecedent is not a subject (and vice versa). I claim that it is this conflict which results in the degraded complementizer agreement construction in these contexts.

4.2 Inversion Contexts

Another interesting commentary on the analysis set forward here is the presence of complementizer agreement in certain inversion contexts, as shown in (91) (Ken Safir and Justine Sikuku, p.c.).

(91)   Mu-sooko   ba-a-lom-el-a-mo   ba-saani   ba-li   o-mu-khoongo   a-li-rura-yo
        18-market   2S-PST-say-AP-FV-18L   2-men   2-that   1-1-boss   1S-FUT-get.out-16L
        'In the market, the men said that the boss will leave the place.'
        Lit: In the market said the men that the boss will leave the place.

On the face of it, this raises important questions about the nature of the subject-complementizer relation, as in this case a subject in a non-canonical word order is nonetheless capable of triggering complementizer agreement. I have argued extensively in Diercks (2010, to appear), however, that this particular sort of inversion (disjoint agreement locative inversion) has a very specific syntactic structure, namely, that the subject in these cases is in fact in canonical subject position and the locative phrase is in some left-peripheral position:

(92)   <u>Disjoint Agreement Locative Inversion</u>[28]
        [XP LOC X-V [TP SUBJ … [vP ~~SUBJ V LOC~~]]]

On the analysis of locative inversion in (92), then, the schematic structure of the inversion sentence in (91) will look like (93), where verb-raising to Xº is assumed

(93)   [XP in-market X-said [TP men [vP ~~men~~ [~~in-market~~ ~~said~~ [CP AGR-that …

What we see in (93), then, is that complementizer agreement proceeds in this case in exactly the same manner that it proceeds in any other case, enabled by the particular configuration of these Lubukusu inversion constructions. A more interesting challenge to the empirical generalizations established here would be to see whether a VP-internal subject could trigger complementizer agreement. I cannot conceive of a context where this would be possible, however, as any verb with a CP complement will have an external argument as well. A passive matrix verb selecting a CP might be the only alternative, but not a perfect one by any means. As we see in the example in (94), in an impersonal passive a null expletive triggers subject agreement (class 5), and the same agreement is triggered on the complementizer.

The tendency, rather, was when speakers became consciously aware of the implicit agent in the passive construction that they rejected the complementizer agreement with the derived subject of the passive.

[28] Note that the canonical subject position is assumed to be SubjP in (Diercks 2010), but Spec, TP here (and in Diercks 2010). The particular label makes no substantive difference to the point being discussed here.

(94)   Mu-sooko   li-a-lom-w-a   li-li   o-mu-khoongo   a-li-rura-yo
         18-market   5S-PST-say-PASS-FV   5-that   1-1-boss   1S-FUT-get.out-16L
         'In the market it was said that the boss will leave the place.'

Assuming with Bowers (2002) that expletives are merged in the specifier of the head which introduces external arguments (Voiceº here, Prº for Bowers), this agreement is unsurprising on the account set forth here (apart from the availability of expletive agreement, which is not a trivial issue but which is beyond the scope of this work). It is thus difficult to construct an example where a postverbal logical subject that was never in Spec, VoiceP could be a possible antecedent for complementizer agreement. Whether or not this is a strength of my analysis or just a lack of diagnostic contexts, it nonetheless stands that these inversion constructions, on the proper analysis of locative inversion, do not pose a problem to my analysis of complementizer agreement.

5   On the Relationship with Subjects

Thus far I have discussed at length the syntactic contexts in which complementizer agreement is and is not licensed, arguing that the complementizer is subject to two conditions: first, it must agree with the most local super-ordinate subject, and second, that subject must be an appropriate logophoric antecedent. I packaged this analysis in a proposal that complementizer agreement is in fact very local, between the complementizer a null logophoric operator, but what I have not discussed to this point is how the null logophoric operator comes to be coreferent with the subject.

5.1   Explaining the Subject-Operator relationship

My claim in this section is that the null logophoric operator is in fact a subject-oriented anaphor.

(95)   The Lubukusu logophoric operator is a (null) subject-oriented anaphor

This section will establish that this analysis fits with the empirical generalizations established to this point, will formalize this analysis to a limited extent, and will briefly address the most prominent alternative analyses of Lubukusu complementizer agreement, addressing their shortcomings. I will also address how clarifying the distinctive characteristics of null operators in logophoric constructions cross-linguistically explains the variation in complementizer agreement constructions (and logophoric phenomena more generally) that are seen cross-linguistically.

By means of summary, the chart in (96) describes the generalizations regarding complementizer agreement that have been established to this point in the chapter, along with the relevant supporting evidence.

(96) Properties of the Complementizer Agreement relation

	CA Generalization	Supporting evidence
a.	CA not controlled by the semantic 'source'	▪ Passive by-phrases can't control CA (§2.2.3) ▪ The 'source' in verbs of hearing doesn't control CA (§2.2.1)
b.	Agreement trigger is structurally controlled, not lexically controlled	▪ Subjects of passives trigger CA (§ 2.3.2) ▪ Subjects of causatives trigger CA (§ 2.3.2)
d.	CA is not strictly local (i.e. not the closest DP)	▪ Indirect objects don't trigger CA (§2.3.2) ▪ 'causee' in causatives doesn't trigger CA (§2.3.2)
e.	CA is not unbounded (closest subject triggers CA)	▪ Multiple embeddings (§2.3.3) ▪ Periphrastic causatives (§2.3.3)
f.	Intervening subject-like elements can degrade the acceptability of the agreement relation	▪ Passive by-phrases do so (§4.1.2) ▪ Subjects of NPs do so (§4.1.1) ▪ Implicit agents in passives do so (§4.1.2)
g.	The controller of CA must have a 'mind' or 'point of view' to report (i.e. must be an appropriate logophoric antecedent)	▪ Non-animate subjects yield degraded CA (§3.1) ▪ A matrix reflexive makes comp. agr. obligatory (§3.3)

First, analyzing the null operator as a subject-oriented reflexive groups this element with a natural class of subject-oriented elements, accounting for the limited semantic/pragmatic effects on the trigger of complementizer agreement, the structural effects where subjects of passives and causative causers trigger agreement, and the lack of intervention effects from indirect objects and causees in morphological causative constructions. Furthermore, assuming a familiar Condition A stance on reflexives—that a reflexive must be bound within its governing category (which is the superordinate clause for the relevant cases here)—we are able to derive the boundedness of complementizer agreement – only the subject of the selecting clause is a candidate as an antecedent for complementizer agreement (Chomsky 1981 and much resultant work).

This assumption necessarily considers the null logophoric anaphor to be considered an argument of the superordinate clause, rather than the subordinate clause in which it is positioned. Phrases at the edges of phases are assumed to be accessible to higher operations, however, and for this reason I assume that this operator is calculable in anaphoric relations in its selecting clause.[29]

This account necessarily assumes a more traditional representational account of this anaphoric relation. Assuming a derivational account such as those in (Reuland 2005, Reuland 2001) causes significant analytical problems, whether based on movement of the anaphor to T or on Agree between T and the anaphor. First, as demonstrated in §3.5, T and the complementizer may bear different features in the event that a class 1 subject is extracted. The alternative agreement effect for subject agreement that appears in extraction of class 1 subjects does not affect complementizer agreement, making it highly questionable that an Agree relation has been established between T and C. Furthermore, this Agree relation would be very different in nature than more familiar Agree relations, an argument that is discussed in somewhat more depth below. As will be discussed below, a direct Agree account of agreement on the complementizer is ruled out for empirical reasons, and ruling this Agree relation out to account for the agreement directly likewise rules it out as a mechanism to explain the anaphoric relation between the operator and the subject.

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[29] An alternative approach would be to claim that the logophoric operator in Spec, CP of the embedded clause makes the entire complement clause take on the properties of that operator (much the same way that an operator in a tough-construction or a copy-raising construction makes those clauses function as predicates (Landau 2009, Hornstein, et al. 2005)). Either approach accounts sufficiently for the facts.

On account of these empirical problems that arise with a derivational account of the anaphoric relation between the logophoric operator and the subject, I assume that the anaphor is evaluated for acceptability by some sort of post-syntactic interpretive component, along the lines of that proposed by Safir (2004, 2008). That is to say, there is no need to posit a narrow-syntax relationship between the matrix subject and the embedded logophoric operator. Rather, the operator is merged into the structure bearing its phi-features, and it is then evaluated post-syntactically, based on the resultant syntactic structure, for acceptability. This analysis of the long-distance complementizer agreement relation to a post-syntactic anaphoric relation significantly reduces the problematic nature of the long-distance relationship between the subject and the complementizer, adequately accounting for the array of facts reported in the preceding sections.

5.2 Alternative Analyses

This section briefly considers the most prominent alternative analyses, demonstrating that an analysis of the null logophoric operator as a subject-oriented anaphor achieves much better empirical coverage than the alternatives. In the course of the discussion, I discuss how the empirical predictions of these analytical alternatives for the subject-operator relationship do in fact occur cross-linguistically, demonstrating not only that there is rich typological variation in the nature of logphoric operators, but also defending the claim that the Lubukusu case at its core is an anaphoric relationship.

5.2.1 AGREE

On the surface, an approach to complementizer agreement based on a syntactic Agree relation along the lines of (Chomsky 2000, 2001) seems intuitive, given that this is an agreement phenomenon.[30] If Baker (2008) is on the right track, heads are capable of probing upwards to find a goal for Agree, which would at least in principle allow such an agreement relation where embedded C is the probe and the matrix subject is the goal.

That being said, beyond the question of allowing an 'upward' agreement relation, there are additional issues for a standard Agree approach. First to be considered is the lack of intervention effects. As row (d) of (96) summarizes, complementizers agree with subjects even in the event that there is an intervening indirect object, or 'causee' in a causative verb. On most standard accounts of double object constructions and applicative constructions, the indirect object (i.e. applied object) is structurally higher than the second object, but structurally lower than the subject. For the sake of argument I present Pylkkannen's (Pylkkänen 2002, 2008) analysis of high applicatives, that the head introducing the indirect object in examples like (108)b above lies below Voiceº and above VP.[31]

(97)   Pylkkanen's (Pylkkänen 2002) High Applicative
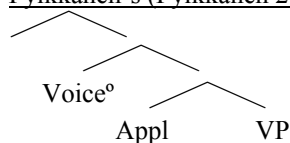
Based on (97), if a head of the embedded CP probed upwards for any DP goal for agreement (either as the complement of Vº, or as the specifier of VP), it should find the intervening applied object in Spec, ApplP, and therefore the indirect object should trigger complementizer agreement, not the subject. A simplistic Agree account itself is quite obviously insufficient to account for this agreement relation.

5.2.2 THE PROS AND CONS OF A FEATURE INHERITANCE ACCOUNT

Given that a direct Agree relation cannot account for the intervention of DPs between the subject and the agreeing complementizer, an approach in this spirit necessarily requires some stipulations along the lines of what are included in the hypothesis in (98), namely, that the agreement relation occurs between two pre-established heads.

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[30] A much more extensive treatment of the benefits and drawbacks of an Agree approach to Lubukusu complementizer agreement is taken up in Diercks (2010), to which I refer the reader who is skeptical of the arguments given here.

[31] Note that Pyllkanen distinguishes the Voice head (as proposed by Kratzer 1996) from the functional head v that creates a syntactic verb from what is otherwise a category-neutral verb.

(98)   Hypothesis:
         The head which introduces the external argument (Voiceº) necessarily agrees with an embedded Cº which it
         selects.[32,33]

Note that I use the label "Voice" here in the sense of Kratzer (1996) and Pylkkanen (2002, 2008), as the external-argument-introducing head, though the label is not critical here. In Lubukusu complementizer agreement, then, Voiceº agrees with the subject, and then Voiceº subsequently agrees with Cº. As noted above, an account of the Voice-C relationship based solely on Chomsky's (2000, 2001) Agree relation (or most of its descendants) would fail to account for the lack of intervention effects triggered by intervening DPs. In contrast, however, if it could be stipulated that Voiceº passed its features to an embedded phase head, then a feature-inheritance analysis like that sketched in (99) is in principle possible, where Voice° bears phi-features that Agree with the argument in its specifier, and then passes these features down to the complement CP (see Chomsky 2008, Ouali 2008, among others, on feature inheritance).

(99)   Rough Sketch of Feature Inheritance Analysis
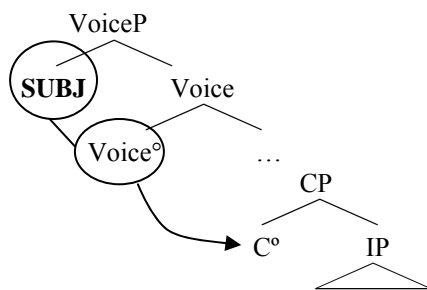
         The sketch of the analysis in (99) straightforwardly explains the basic cases of complementizer agreement. In active sentences the external argument is merged into Spec, VoiceP, where it Agrees with Voice°, which then passes these valued features down to the embedded C°. Given its structural basis, this analysis can also account for the passive cases – assuming that derived subjects in passives raise through a (non-thematic) Spec, VoiceP, the Agree+FI process can occur just as sketched in (99). Intervening DPs are irrelevant if the features of Voiceº are necessarily inherited by the embedded complementizer, as presumably the features of Voiceº must be passed down to an appropriate functional head, irrespective of intervening DPs.
         Crucially, while agreement doesn't target the most local DP (e.g. indirect objects can't trigger agreement), it is not unbounded, always targeting the most local subject. This approach captures both of these facts. Any DP that is not in Spec, VoiceP will not trigger complementizer agreement, hence the irrelevance of indirect objects to complementizer agreement. But in cases of multiple embeddings or periphrastic causatives, the agreement is triggered by the closest subject rather than the subject of the matrix clause, because the intermediate Voice° head is more local.
         On the face of it, causative constructions pose a challenge to this approach, but as is demonstrated in Diercks (2010), following the diagnostics set forth by Pylkkanen (2002, 2008), in Lubukusu causatives only the subject displays agentive qualities, and therefore only the subject is introduced by a Voice° head (the 'causee' argument, on the other hand, is assumed to be introduced by some other means). Therefore the Voice°-C° feature inheritance relationship could be maintained in most cases dealing with the intervention of a DP. The critical evidence against a feature-inheritance approach, however, comes from cases where there is complementizer agreement out of an object DP.
         As was pointed out in §4.1.1, CP complements of object nouns may have a complementizer which agrees with the matrix subject. Some further examples are given in (100)-(101) (Justine Sikuku p.c.).

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[32] This hypothesis as it is currently phrased does not make direct reference to a logophoric operator, but an account where the agreeing complementizer is introduced by a logophoric projection does not in principle require that the agreement operation involve the logophoric operator.
[33] This agreement relation is very similar to that proposed by Richards and Rackowski (2005) (Agree between v° and C°), though their proposed agreement relation relates more directly to extraction out of embedded CP.

(100)   Palin   a-biyila   e-nganakani   a-li   Obama   a-kha-khile   e-kuura.
        1Palin   1S-hates   9-idea   1-that 1Obama   1S-FUT-win   9-election
        'Palin hates the idea that Obama will win the election.'

(101)   Tegan   a-loba   e-lomo   a-li   Guiness   ka-li   ka-ma-lwa   ka-ma-layi.
        1Tegan   1s-disputed 9-statement   1-that 6Guiness   6-be   6-6-beer   6-6-good
        'Tegan disagreed with the statement that Guiness is the best beer.'

Assuming that Voice-C feature inheritance were to apply directly in cases like (100) and (101), the structure of such examples would look like that given in (102) (irrelevant details omitted):

(102) <u>CA out of Object DP</u> (problematic structure)

$$[_{VoiceP} \text{ SUBJ}\quad \text{Voice } [_{VP} \text{ V} [_{DP} \text{ D} [_{NP} \text{ N} [_{CP} \text{ OP } \text{C}^{o} \text{ [IP]]]]]]]}$$

|___Agree___| |_____Feature Inheritance_____↑|

This relation is clearly problematic, either for feature inheritance or for Agree, as there is no selectional relationship between the matrix verb and the embedded clause in this structure, and by most assumptions the phase head D^o should obstruct any feature inheritance relationship between $Voice^o$ and C^o. It is plausible that perhaps in these contexts noun phrases in Lubukusu lack D^o, as there are no overt determiners in Lubukusu. Even so, the selection issue is problematic with respect to how to motivate feature inheritance between the matrix verb and the complementizer when the complementizer is the head of the complement of an object noun.

There are in fact additional reasons to doubt an approach to Lubukusu complementizer agreement that relies on a direct transfer of features between $Voice^o$ and C^o, whether by feature inheritance or by Agree. First, if this is a readily available operation cross-linguistically, it is unclear why there is not more cross-linguistic evidence of a co-variation in features between matrix predicational heads and embedded complementizers. Presumably this sort of relationship would find a morphological realization in a variety of languages, but yet instead we find it only (albeit robustly) in complementizer agreement constructions in a limited set of African languages (Idiatov 2009, Kawasha 2007).

Beyond this, it is also unclear why this feature-inheritance relationship should be specified to solely be between matrix $Voice^o$ and embedded C^o (for example, why not $D°$ in examples like (100) - (101)?). On a similar note, this sort of analysis raises the important question of what happens to these features on $Voice^o$ when there is *not* an embedded clause. Presumably we should find the phi-features of subjects (apart from normal subject agreement) appearing on verbal forms in the event that there is no embedded clause, but this is not the case, either in Lubukusu or cross-linguistically to my knowledge. All of these arguments are sufficient enough to give us pause when considering a feature-inheritance analysis, between $Voice^o$ and C^o.[34]

5.2.3 SEMANTICALLY-CONTROLLED AGREEMENT

Another alternative analysis is that the complementizer agreement relation is semantically-based, that is, that the agreement tracks a specific semantic role. This could provide a straightforward explanation of the generalization that the complementizer agrees with the subject in most cases, and perhaps even an analysis of the evidential properties of the agreeing complementizer as opposed to other non-agreeing complementizers (see §6.1 below).

As noted previously, however, there are various empirical problems for this proposal, including the lack of agreement with 'sources' in passive by-phrases and in verbs of hearing. Additionally problematic in this respect is the fact that derived subjects in passives are capable of triggering complementizer agreement (row b), and that causees in causatives are not. For these reasons, then, an approach based on semantic roles does not seem to be able to explain the Lubukusu complementizer agreement relation, and we instead need to look for an approach to this issue which is at least partially syntactically-based.

That being said, in some West African languages the antecedent of logophoric pronouns is in fact determined by specific semantic roles. For example, Hyman and Comrie (1981) report that the objects in Gokana control the reference of an embedded logophoric pronoun in the case that that object is the source of the information reported in the embedded clause. The same situation arises in certain cases of complementizer agreement in select

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[34] Many thanks to Ruth Kramer, Raffaella Zanuttini, Mark Baker, and Paul Portner on their comments on the issues in this sub-section.

West African languages as well, including Jula of Samatiguila and Tura (Idiatov 2009). The example in (103) is from Jula of Samatiguila, a case where the complementizer agrees with an argument in an oblique by-phrase.

(103)　Wô　lé　tén　fɔ̀-nìn　　　ǎn　bòrò n-kò　byɛ̀ yè　ná　bí
　　　　DEM FOC PST say-PTCP.PFV 1PL by　1-COMP　all　IPFV come today
　　　　'It was asked by us that everybody comes today'　(Braconnier 1987-1988: 55)

While these phenomena in these languages need extensive investigation in their own right, if we are to assume that this sort of complementizer agreement—along with logophoric pronominal reference—arises out of the properties of a null operator in the embedded CP across languages, then the null operator in these Gokana, Jula of Samatiguila, and Tura is linked with a specific semantic role linking its reference to a corresponding argument in the matrix clause. It is therefore significant that there are both pronominal systems and complementizer agreement systems that behave similarly in this respect, presumably because both are syntactic consequences of null logophoric operator in the embedded CP.

5.2.4　A CONTROL ANALYSIS OF COMPLEMENTIZER AGREEMENT

Another analytical possibility, much more similar to the account argued for in this paper, is that the relationship between the matrix subject and the logophoric operator is in fact an obligatory control relationship.[35]

(104)　<u>Hypothesis (to be rejected)</u>:　The null logophoric operator in Lubukusu locative inversion identifies its
　　　　　　　　　　　　　　　　　referent via an obligatory control relationship with the matrix subject.

In other logophoric languages it is apparent there is a control relationship between matrix arguments and the logophoric operator, as the choice of the matrix predicate influences which argument controls the logophoric operator. That is to say, subject-control verbs yield subject-controlled logophoric pronouns, and object-control verbs yield object-controlled logophoric pronouns. As a manner of illustration, I will discuss the case of Yoruba as reported by Adesola (2005, 2006), who describes the logophoric pronoun *oun*, which he analyzes as bound by a null logophoric operator in Spec, CP:

(105)　Olú$_j$　ti　kéde　　　pé　**òun$_j$**　má a　wá　nî　òla　　　　　　　　　[Yoruba]
　　　　Olu　ASP announced that he　　will　come at　tomorrow　　(Adesola 2006: 2069)
　　　　'Olu has announced that he will come tomorrow.'

As shown in (106), this logophoric reference is altered depending on the matrix predicate: (106)a is an instance of a subject-controlled logophoric operator, for example, and (106)b an instance of an object-controlled logophoric operator (Adesola 2006: 2083):

(106) a. Olú$_i$　sèlérî　　fún　Adé　pé　òun$_i$　ń　　bò　　　　　　　　　[Yoruba]
　　　　　Olu　promise　for　Ade　that he　PROG　come
　　　　　'Olu promised Ade that he is coming.'　　　　　　　　　　*(subject control)*

　　　b. Adé　so　fún　Olú$_i$　pé　kí　òun$_i$　lo　kî　　bàbá　Òjó
　　　　　Ade　say to　Olu　that that he　go　greet　father　Ojo
　　　　　'Ade told Olu that he should visit Ojo's father.'　　　*(object control)*

　　　c. Olú$_i$　gbà　　fún　Adé$_j$　pé　kí　　òun$_{i/j}$　lo　kí　　bàbá　Òjó
　　　　　Olu　accept　for　Ade　that that he　　go　greet　father　Ojo
　　　　　'Olu agreed with Ade that he should visit Ojo's father　　*(subj/obj. control)*

As can be seen in the examples above, for a subject-control verb like 'promise' the logophoric pronoun *oun* in the embedded clause is obligatorily coreferent with the subject. In the case of an object-control verb like 'tell', however, the logophoric pronoun is obligatorily coreferent with the object of the matrix clause, as shown in (106)b.

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[35] This is similar to the analysis adopted by Baker (2008) for a similar agreement relation in Lok<u>aa</u> (a Niger-Congo language of Nigeria)

Example (106)c then shows that some verbs allow for either the subject or the object to be the antecedent of the logophoric pronoun. These properties are expected, of course, on the analysis proposed by Adesola, that there is a null operator in the specifier of the embedded CP that is necessarily controlled by an argument in the matrix clause.[36]

As is clear from the the generalizations reached about Lubukusu, however, it is not possible for non-subjects in Lubukusu to control the reference of the logophoric operator, even with object-control predicates. (107)a and (108)a are cases of object control, whereas the corresponding data in the (b) examples show the same predicates with finite complements and an agreeing complementizer. As in all other cases, complementizer agreement is with the subject, not with the object.

(107) a. mb-ombelesie   Alfredi$_k$ [PRO$_k$ khubola   a-li   ka-ch-ile   Nairobi
        1stSG-persuaded   1Alfred   INF-say   1-that   1S-go-PST   Nairobi
        'I persuaded Alfred to say that he went to Nairobi.'

      b. n$_k$-aombelesia   Alfredi   [OP$_k$ n-di   Sammy   ka-a-cha
         1stSG-persuaded   1Alfred   1stSG-that   1Sammy   1S-PST-go
         'I convinced Alfred that Sammy left.'

(108) a. n-a-bol-el-e   Alfredi$_k$ [PRO$_k$ khu-bola   a-li   ka-ch-ile   Nairobi
         1STSG-PST-tell-AP-PST   1Alfred   INF-say   1-that   1S-go-PST   Nairobi
         'I told Alfred to say that he went to Nairobi.'

      b. n$_k$-a-bol-el-a   Nelsoni   [OP$_k$ n-di   ba-keni   ba-rekukha
         1STSG-PST-tell-AP-PST   1Nelson   1stSG-that   2-guests   2S-left
         'I told Nelson that the guests left.'

So while the Yoruba logophoric pronominal system demonstrates that in some languages logophoric operators may be controlled in the same manner that PRO may be controlled, it is clear that Lubukusu complementizer agreement does not display the expected control properties, or else we would expect the PRO in the control constructions and the OP in the complementizer agreement constructions to have the same reference in (107) and (108). I conclude, therefore, that despite the fact that control seems to play a role in other logophoric systems like Yoruba, where choice of an object-control matrix predicate can trigger logophoric pronouns which are controlled by the matrix object, Lubukusu complementizer agreement cannot arise in this manner, as the parallel data do not occur in Lubukusu.

5.3   Conclusions: the Subject-Operator Relationship

In this section I have extended my argumentation that Lubukusu complementizer agreement arises out of an agreement relation between a C head and a null operator in the embedded CP. More specifically, I have argued that the null logophoric operator is in fact a subject-oriented anaphor which is obligatorily bound by the matrix subject.

I also argued against some prominent alternative analyses, demonstrating that they are insufficient to account for the Lubukusu data. That being said, the discussion also revealed that despite their inability to account for the Lubukusu data, some alternative analyses do in fact account for the properties of other logophoric systems (pronominal and complementizer agreement) that are found in other African languages. In this way I join with previous researchers on logophoric phenomena to claim that the embedded logophoric markers (whether pronouns or agreeing complementizers) are mediated by a null operator in the embedded CP.

My additional claim, however, is that the precise nature of that logophoric operator is subject to variation between languages. In Gokana, Jula of Samatiguila, and Tura this operator is defined by a specific semantic/pragmatic role, namely, SOURCE, and therefore must be coreferent with the bearers of those semantic roles in the matrix clause. In Yoruba, in contrast, the logophoric operator is PRO, whose reference is determined via a control relationship with an argument in the matrix clause. In the Lubukusu case, this null operator is a null

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[36] I am unaware of any examples of object-controlled complementizer agreement, as such agreements are not reported in the limited literature on this phenomenon.

subject-oriented anaphor, which is necessarily coreferent with the subject of the selecting clause.[37] Therefore cross-linguistic variation in logophoric phenomena can be explained by specifying the exact nature of the empty category in the embedded CP which mediates those phenomena in each language.

6   Distribution of the Agreeing Complementizer

This section looks at some of the more general distributional properties of the agreeing complementizer in Lubukusu. Both the evidential properties of the complementizer system in Lubukusu and the lexical distribution of the agreeing complementizer are considered in this section, but both of these sub-sections are only the first steps in analyzing these issues in Lubukusu. Nonetheless, the forays into these areas of distribution not only enrich our understand of the Lubukusu agreeing complementizer, but provide important insight into its precise structure in the left periphery, in addition to providing fertile ground for future research. §6.1 examines the pragmatic distribution of the agreeing complementizer, looking at its evidentiary properties, and §6.2 looks at the lexical distribution of the complementizer, with respect to its selecting verbs. §6.3.1 then gives a more precise analysis of the position of the agreeing complementizer within the embedded CP.

6.1   Evidential Properties of Complementizers

This section gives a rudimentary description of contexts in which the agreeing complementizer is used, in contrast to the non-agreeing *bali* complementizer.   The main intent is to clarify the contexts in which the agreeing complementizer is licit, though the comparison with non-agreeing *bali* will highlight the properties of both. All of the examples considered here have class 1 subjects, and so the agreeing complementizer in each of these cases is realized with class 1 agreement as *ali*.

     Take the example of a verb of speech in (109), which presents three different situations and examines the non-agreeing *bali* as compared to the agreeing complementizer *ali* (agreeing with the class 1 subject *Mosesi*).

(109)   Mosesi   a-lom-ile   ____   Sammy   k-eb-ile   chi-rupia.
        1Moses   1S-say-PRF   COMP   1Sammy   1S-steal-PST   10-money
        'Moses has said that Sammy stole the money.'
                a. Moses saw the event, and the speaker believes him: * bali   ✓ ali
                b. Moses did not see the event, but reported what people have said: ✓ bali   * ali
                c. Moses says he saw the event, but the speaker doesn't believe him: ✓ bali   * ali

As can be seen in (109)a, when the subject of the sentence is the source of the information reported in the embedded clause, the agreeing complementizer is used, and the non-agreeing *bali* is impossible. This is in contrast to (109)b, when the subject of the sentence is not the source of the information of the reported event, and as such *bali* is possible and *ali* is not. The non-agreeing *bali* is therefore an evidential-type complementizer, signaling that the source of the information reported in the embedded clause is less-than-reliable. Therefore in the case of (109), though Moses says that Sammy stole the money, Moses only knows of this from other people, and he himself did not witness the theft. There is an additional use of the non-agreeing *bali* in (109)c, however, as it may be used by a speaker to signal distrust in the subject of the sentence (who is reporting the information in the embedded clause). On this reading, instead of signaling the source of evidence, the complementizer instead signals the credibility of the information reported in the embedded clause.

     This interpretation of the data in (109) is supported by similar data with other clause embedding verbs. Take (110), for example, with the verb 'hear', in the context of the speaker of the sentence telling a third party that Moses heard about Sammy stealing money:

(110)   Mosesi   a-ul-ile   ___   Sammy   k-eba   chi-rupia
        1Moses   1S-hear-PST   COMP   1Sammy   1S-stole   10-money
        'Moses heard that Sammy stole the money.'
                a. If Moses does believe it: ✓ bali   ✓ ali
                b. If Moses doesn't believe it, or if the speaker doubts it: ✓ bali   * ali

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[37] It is very possible that the other 5 Bantu languages reported by Kawasha (2007) to have similar agreement properties have logophoric operators of the same anaphoric nature, but further research would be necessary on each of those languages to confirm that.

With the verb 'hear', even if the subject of the sentence in good faith is the source of the information in the embedded clause, both the agreeing complementizer and non-agreeing *bali* are possible. This is consistent with the conclusions from (109), as even in the default case, Moses' information is second-hand (necessarily, given the meaning of 'hear'). It is notable, however, that using the agreeing complementizer is inconsistent if there is a component of doubt in the context regarding the veridicality of the reported event, as shown by (110)b: if the veracity of the reported even is brought into question (whether the speaker is doubting, or is projecting that doubt onto the subject of the sentence), only the non-agreeing complementizer is possible.

This effect is also evident in the case of the verb 'know' – as above, the non-agreeing complementizer is only possible in the case that there is some amount of doubt about the reported information. In the context of the verb *manya* 'know', however, the doubt is not plausibly on the part of the subject of the sentence, whose knowledge is being reported. Rather, again we see that doubt on the part of the speaker of the sentence can trigger use of the non-agreeing *bali* complementizer, rather than the agreeing complementizer.

(111) Mosesi   a-many-ile   ___   Sammy   k-eba   chi-rupia
      1Moses   1S-know-PRF   COMP   1Sammy   1S-stole   10-money
      'Moses knows that Sammy stole the money.'
          a. If Moses is absolutely certain: ✓ ali   * bali
          b. If Moses is absolutely certain, but the speaker doubts: * ali   ✓ bali

As we look at a progressively less inherently 'doubtful' predicates, we see that this does not preclude the use of *bali*, only that it takes on more of a pragmatic effect of injecting speaker's doubt. In (112), despite Moses's certainty, the non-agreeing *bali* can still be used, again bringing a sense of doubt about the veracity of the reported information, that Sammy stole the money.

(112) Mosesi   a-li   na   ng'ali   ___   Sammy   k-eba   chi-rupia
      1Moses   1S-be   with   certainty   COMP   1Sammy   1S-stole   10-money
      'Moses has certainty that Sammy stole the money.'
          a. If Moses is absolutely certain: ✓ ali   * bali
          b. If Moses is absolutely certain, but the speaker doubts: * ali   ✓ bali

The conclusion that can be drawn from these data is that the agreeing complementizer (*ali* in this case) is used in cases where the veridicality of the embedded proposition is not being called into question, but *bali* may be used if the either subject of the main clause or the speaker of the sentence is distanced from responsibility for the reported information. In this way the Lubukusu complementizer system has a limited evidential system, where the use of the agreeing complementizer or the non-agreeing *bali* may be used to signal the reliability of the information reported in the embedded clause. When that information is reliable, the agreeing complementizer appears (and agrees with the matrix subject). When that information is not reliable, the non-agreeing *bali* is used, whether this non-reliability is the speaker's judgment or the result of a less-reliable information source (e.g. hearsay).[38]

6.2   Lexical Influences on the Agreeing Complementizer

As demonstrated in the previous sections, there are both semantic, pragmatic, and syntactic conditions on the complementizer agreement relation in Lubukusu. This section looks at the lexical influences on complementizer agreement, as there is variation between CP-selecting verbs as to whether they allow the agreeing complementizer to

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[38] It is an important question whether non-agreeing *bali* is a distinct complementizer from the agreeing complementizer, or whether it is the same syntactic element, but is realized as a default form in certain contexts. I won't repeat the evidence here, but as has been discussed previously, in *because*-phrases and *if*-clauses (§3.4) the non-agreeing *bali* can occur in a variety of contexts in which the agreeing complementizer is impossible, patterning with the generic complementizer *mbo*. I interpret these facts structurally, claiming that non-agreeing *bali* occurs in a different position from the agreeing complementizer, explaining their distinct distributions. As pointed out to me by Paul Portner, an alternative analysis could be that they in fact occur in the same structural positions, but agreement on the complementizer is ruled out in certain structural contexts and a default form results. It is unclear to me how such a "default" analysis could explain the facts in §6.1, but I must leave a full investigation of the matter to future research.

occur in their complement. As I will demonstrate, the unifying thread between all verbs disallowing the agreeing complementizer is that they are emotive factive verbs.

There are a large number of CP-selecting verbs in Lubukusu that allow complementizer agreement. Perhaps the most common cases of complementizer agreement come with verbs of speech, as shown in (113), but the agreeing complementizer also occurs naturally with verbs of knowledge/belief and verbs of desire, shown in (114) and (115), respectively:

(113)   Verbs of speech/manner of speech
    khuloma   'to say'   khuboola   'to tell'
    khuombelesia   'to convince'   khulaka   'to promise'
    khukhwelocha   'to complain'   khumonya   'to whisper'
    khubiyisya   'to accuse/admonish'   khusubisia   'to promise' (cause to believe)
    khukalusya   'to reply/to return'

(114)   Verbs of knowledge/belief
    khumanya   'to know'   khukanakana   'to think'
    khusuubila   'to believe'   khufwanirisya   'to guess/suppose'

(115)   Verbs of desire
    khukhwenya   'to want'   khukhwikoomba 'to wish'
    khuroora   'to dream'

For examples of verbs in these preceding categories, see (Diercks 2010), as well as various examples throughout this paper. There are also various other verbs which allow for complementizer agreement which don't fit any of the above general categories, as shown below in (116).

(116)   Other verbs
    khuulila   'to hear'   khufukilila   'to agree'
    khubuula   'to reveal'   khububa   'to be jealous'
    khukhweendekhelela   'to worry'   khubona   'to see'
                                   (see also Wasike 2007)

In contrast to the preceding cases, there is also a group of verbs in Lubukusu which take complement clauses, but for which the agreeing complementizer is highly degraded, given in (117):

(117)   Verbs Disallowing Complementizer Agreement
    khubeelela   'be sad, regret'   khukhwesindukha 'be surprised'
    khusangala   'be happy'   khung'anya   'to protest'
    khusiima   'to like/to be thankful'   khusulunya   'to be sullen'
    khukhwesonia   'to be ashamed'   khuubila   'to be angry'
    khusinyikha   'to be upset'   khuuka   'to express shock'

In each of these cases, while the verbs don't allow the agreeing complementizer, other non-agreeing complementizers like *mbo* and *bali* are still appropriate, as illustrated in (118):

(118)   N-a-beelele   mbo (*ndi)   si-n-a-ch-ile   Bungoma   ta
    1st SG-PST-regret that (*1st-that) NEG-1st SG-PST-go-PST Bungoma NEG
    'I regretted that I didn't go to Bungoma.'

There are several potential generalizations for the breakdown between verbs which allow complementizer agreement, and those which do not. Many of the verbs which disallow complementizer agreement are psychological verbs whose subject is an experiencer rather than an agent, suggesting a generalization dividing psychological predicates from verbs with more canonical external arguments (e.g. agents). There are several key pieces of data that lead me away from this analysis, however: note that the Lubukusu verb *khung'anya* 'protest' disallows complementizer agreement, whereas verbs that are more likely analyzed as psych-verbs like *khuulila* 'hear' and *khukhweendekhelela* 'worry' do allow complementizer agreement.

I would suggest that a better analysis is that the agreeing complementizer does not occur with a specific sub-class of factive predicates, namely, emotive factive verbs. Building off of work from Kiparsky and Kiparsky (1971) and Karttunen (1971), Hooper and Thompson (1973) categorize clause-selecting verbs into 5 categories based on their syntactic and semantic properties, including whether or not the complement clauses show main-clause phenomena, and whether or not the complement clauses are asserted. The factive categories are shown in (119):

(119) Factive (Hooper and Thompson 1973: 474)

D	E
resent	realize
regret	learn
be sorry	find out
be surprised	discover
bother	know
be odd	see
be strange	recognize
be interesting	

Of particular interest here are the Class D factive verbs, as the verbs which disallow the agreeing complementizer seem to fall into this class. The question is what exactly distinguishes class D verbs from class E verbs – both are factives, in that their complement clauses are presupposed, but as both Kartunnen (1971) and Hooper and Thompson (1973) note, there are a number of differences between them. First, Karttunen pointed out that class E verbs (which he refers to as semifactives) can lose their factivity in questions and conditionals. Hooper and Thompson also note that complements of class E verbs can be preposed, whereas complements of class D verbs cannot (a diagnostic of a main assertion).

This along with other evidence leads them to the conclusion that the class E verbs (so-called semifactives) in fact have readings in which the complement proposition is considered the main assertion, a conclusion that is further confirmed by the fact that tag questions can occur with class E verbs but not with class D, a process which they argue only applies to main assertions as well. Therefore, according to Hooper and Thompson, "what these facts suggest … is that the complements of these semifactive verbs of 'coming to know' have at least one reading on which they are in fact assertions" (482). This of course distinguishes the class E verbs from the emotive factives of class D, which (in contrast) *always* presuppose their complement clause.

Returning to Lubukusu, it would appear then that the class of verbs which disallow complementizer agreement are those which presuppose the truth of their complement CP. This of course raises an important question for this generalization – beyond externally imposed categories for verbal meanings, what evidence is there for the Lubukusu examples given above as to whether the verbs are actually factive or not? As the data in (120) illustrates, verbs from the group given in (117) in Lubukusu do in fact presuppose their complement clauses.[39]

(120) a. John   asangalile   mbo   ba-keni   b-olile
        John   1S-is.happy   that   2-guests   2S-arrived
        'John is happy that the guests arrived.'

      b. John   se-a-sangalile   mbo   ba-keni   b-olile   ta
         John   1S-is.happy   that   2-guests   2S-arrived   NEG
         'John isn't happy that the guests arrived.'

In both (120)a and (120)b, speakers understand that it is true that guests arrived, in both the affirmative case and the negative case. This is consistent with the analysis of these verbs as presupposing their complement clause (as presuppositions are non-defeasible under negation), and therefore as being considered emotive factives.

There are a variety of syntactic correlates of factivity (and non-factivity), including extraction of manner adjuncts across different predicates and variability of NPI licensing between factive and non-factive verbs. It is beyond the scope of this paper to establish the semantic properties of factivity and its syntactic correlates in

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[39] For more on factives and emotive factives, see Hooper and Thompson (1973), de Cuba (2007), Andersson (1975), Hegarty (1992), Heycock (2006), among others.

Lubukusu, and therefore at present I will rely on the minimal data in (120) to justify the inclusion of the Lubukusu verbs in (117) in Hooper and Thompson's (1973) class D emotive factive verbs. The implications of these facts are discussed in the following section.

6.3 The Fine Structure of the Lubukusu Agreeing Complementizer

6.3.1 THE CARTOGRAPHY OF POINT-OF-VIEW

Questions of logophoricity and evidentiality are often connected with the problematic notion of point-of-view in sentence structure, and the existing research on these issues can provide us with clarity when looking at the Lubukusu complementizer agreement phenomenon. There are a number of recent works proposing integrating pragmatic projections relating to point of view into the left periphery (Baker 2008, Bianchi 2003, Haegeman 2006, Speas 2004, Tenny and Speas 2003, among others). I will adopt the particular approach of Speas (2004), who integrates observations about logophoricity, evidentiality, and the functional typology of adverbials (from Cinque 1999) to build an argument about the nature of the syntactic encoding of point of view.

Addressing the nature of logophoricity first, Culy (1994a) notes that there is a cross-linguistic hierarchy with respect to the predicates that license their complements as logophoric domains (i.e. the types of verbs that occur with logophoric pronouns in their embedded clauses). That is to say, languages vary with respect to what sorts of predicates license logophoricity: speech verbs most commonly license logophoric domains, whereas direct perception verbs are least likely to do so.

(121) Logophoric Predicate Hierarchy (Culy 1994a: 1062)

speech >> thought >> knowledge >> direct perception

The hierarchy in (121) is implicational, so that in the event that a language allows logophoric complements with a less-common sort of predicate, it also allows them with the more-common sorts of predicate. For example, if direct perception verbs trigger logophoric domains in a given language, predicates of speech, thought, and knowledge will also do so in that language.

Speas (2004) also notes that there is a correlation between the hierarchy of logophoric predicates and the different types of evidential morphemes that occur cross-linguistically. Relying on previous work by Oswalt (1986) and Willett (1988), Speas notes that there is a hierarchy with respect to the different sorts of evidence which are grammaticized in evidential morphology cross-linguistically.

(122) Evidential Hierarchy (Oswalt 1986, Speas 2004, Willett 1988)

personal experience >> direct (e.g. sensory) experience >> indirect evidence >> hearsay

This hierarchy is taken to express the probability of the use of evidential morphemes, so that speakers will not use redundant forms. That is, if they have direct experience of some event, they will use the form which represents direct evidence, rather than using some less specific form. Speas derives this from a series of binding relationships in the structures for the pragmatic point of view projections she posits, as shown in (126) and (128) below, but I will not go into any depth in the properties of evidentials and how they are explained under her account as it is peripheral to my concerns regarding logophoricity. Rather, I will let it suffice to note that her account is based on a wide range of syntactic/pragmatic phenomena, including evidentiality.

In particular, Speas notes that there is an inverse correlation between the logophoric hierarchy and the evidential hierarchy with respect to the degree of evidence which is involved in each step of the hierarchies. For the logophoric hierarchy, verbs of speech are the most common and verbs of direct perception are the least common, whereas for the evidential hierarchy, "hearsay" is the least specific, used only in the case that some more direct experience is not available, and "experiential evidence" is the most specific sort of evidence. This inverse correlation serves as an important cue towards the structure of pragmatic projections in the syntax.

In proposing a structure to account for the logophoric and evidential hierarchies in (121) and (122), Speas draws a connection with Cinque's (1999) proposal for a universal structure of functional projections based on positions of adverbs cross-linguistically.

(123) Cinque's (1999) four highest projections:
[Speech Act Mood [Evaluative Mood [Evidential Mood [Epistemological Mode

(124) Speech Act Mood: indicates the type of speech act (declarative, interrogative, etc.)
        Evaluative Mood: indicates speaker's evaluation of the reported event or state as good, lucky, bad, surprising, etc.)
        Evidential Mood: indicates the nature of speaker's evidence for truth of proposition
        Epistemological Mode: indicates speaker's degree of certainty about the proposition

As stated above, Cinque arrived at this analysis on the basis of adverb positions, arguing that adverbs only occur at their corresponding functional projections. Representative adverbs are given in (125):

(125)   Representative Adverbs (Speas 2004: 259)
        Speech Act Mood   frankly, confidentially
        Evaluative Mood   unfortunately, luckily, surprisingly
        Evidential Mood   allegedly, reportedly,
        Epistemological Mode   obviously, apparently

Speas relates the hierarchies of logophoricity and evidentiality to Cinque's hierarchy of functional projections, claiming that the evidential and logophoric properties of language are rooted in these functional projections. Note that the evidential hierarchy is inverted in in (126), showing the correspondences between the functional structure, the logophoric predicates, and the degree of evidence in evidential contexts:

(126)

Cinque's projections	Logophoric Hierarchy	Evidental Hierarchy
Speech Act	say	hearsay
Evaluative	think	indirect/less valuable evidence
Evidential	know	direct evidence
Epistemological	perceive	experiential/unquestionable evidence
		(Speas 2004: 264)

Without examining the claims with respect to evidentiality here, Speas proposes that different predicates select for different subsets of the point-of-view (POV) heads (the term which Speas uses to refer to Cinque's highest projections). Note that each type of verb is associated with the (highest) functional projection which is appropriate to its meaning.

(127) a. say   [$_{SAP}$ SA [$_{EvalP}$ Eval [$_{EvidP}$ Evid [$_{EpisP}$ Epis [
        b. think   [$_{EvalP}$ Eval [$_{EvidP}$ Evid [$_{EpisP}$ Epis [
        c. know   [$_{EvidP}$ Evid [$_{EpisP}$ Epis [
        d. perceive   [$_{EpisP}$ Epis [

Speas then applies this analysis to the logophoric hierarchy, claiming that that any of these left-peripheral positions may bear a strong POV (point of view) feature, and when this is the case, it is a logophoric language, licensing a logophoric operator. Languages may vary as to in which position they license a POV feature (and a logophoric operator), as is outlined in (128), where each of (a)-(d) represent a different possible language. [40]

(128) a. say   [$_{SAP}$ OP$_k$ SA$_{[POV]}$ [$_{EvalP}$ Eval   [$_{EvidP}$ Evid [$_{EpisP}$ Epis [$_{CP}$ C … LOG$_k$ …
        b. think   [$_{EvalP}$ OP$_k$ Eval$_{[POV]}$ [$_{EvidP}$ Evid [$_{EpisP}$ Epis [$_{CP}$ C … LOG$_k$ …
        c. know   [$_{EvidP}$ OP$_k$ Evid$_{[POV]}$ [$_{EpisP}$ Epis [$_{CP}$ C … LOG$_k$ …
        d. perceive   [$_{EpisP}$ OP$_k$ Epis$_{[POV]}$ [$_{CP}$ C … LOG$_k$ …

This analysis explains the logophoric hierarchy that occurs cross-linguistically. Logophoric languages that that have a POV feature in the Speech Act Phrase (such as in (128)a) license logophoric domains under verbs of saying, but not under any other verbs, because verbs of thought (for example) do not have a Speech Act projection, and therefore do not have the logophoric operator to bind an embedded logophoric pronoun. The implicational nature of the hierarchy is captured by the ordering of the projections. Take the potential language in (128)d for example—the POV feature and the logophoric operator as in EpisP, and therefore verbs of direct perception trigger logophoric domains, but all the verbs higher on the hierarchy (verbs of speech, thought, and knowledge) also have an EpisP

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[40] I use "CP" here to represent a generic CP-level head.

projection, and therefore also license logophoric domains. The presence of POV features on any of these point of view projections explains the logophoric hierarchy, as a POV feature on each POV projection accounts for each level of the hierarchy.

Adopting the basic approach of Speas (2004) towards logophoricity, I propose that the logophoric operator in Lubukusu occurs in EpistP, and the agreeing complementizer occurs in Epist°. Agreement is triggered locally between the complementizer and the null operator.

(129) Proposal: The Lubukusu agreeing complementizer occurs in Epist°, agreeing with the
                     operator in Spec, EpistP

(130) <u>Schematic of Lubukusu Complementizer Agreement</u> (final version)
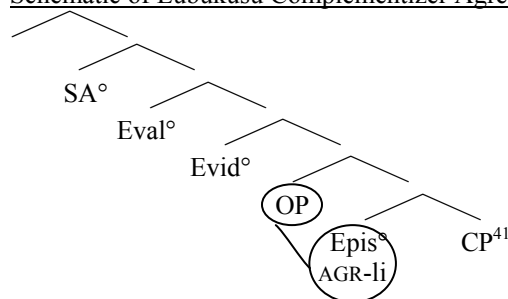
This approach is promising for a variety of reasons. First, the agreeing complementizer in Lubukusu is acceptable with all the logophoric predicates noted in Culy's (1994a) logophoric hierarchy, as predicted by the structures given in (128)d and (130). An additional benefit of the account is that it addresses the tendency of the presence and/or absence of the agreeing complementizer to communicate some sense of the speaker's attitudes towards the veracity of the reported event. This was addressed in §6.1, but perhaps is seen most clearly in the data in (131) and (133), where the presence of complementizer agreement (as opposed to the use of the non-agreeing complementizer) relates more to the reliability of the reported event itself than it does to forms of evidence (and the reliability of that evidence) for that proposition.

(131) Sammy   ka-bol-el-wa   **a-li**   ba-keni   b-ola
       1Sammy   1S-say-AP-PASS   **1-that**   2-guests   2S-arrived
       'Sammy was told that the guests arrived.'

There are (at least) two separate circumstances in which speakers accept the sort of example in (131). These situations were presented to speakers as is given in (132):

(132) Situation A   *I am talking to you. We are waiting for Sammy to join us, because we are*
                        supposed to meet the guests, but he is late. You wonder whether perhaps Sammy didn't
                        know that the guests arrived, and that's why he's not there. But earlier that day, <u>Sammy</u>
                        <u>had informed me</u> that his parents told him about the guests' arrival. So I tell you (the
                        sentence in (131)).

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[41] Two notes are important here. I assume that non-logophoric complementizers like non-agreeing *bali* and *mbo* occur in a lower CP-level head, labeled here simply as CP (but perhaps corresponding to Fin°, as proposed by Haegeman 2006). This raises an important question, however, as to why "stacked" complementizers never occur (e.g. … *ali mbo …*). To my knowledge this does not in fact occur, though there is nothing in the analysis here to rule it out. I will not attempt to fully address this here, but instead offer a couple of thoughts. First, some notion of a doubly-filled comp filter could be invoked, though this is questionable given the occurrence of multiple complementizer-like elements in cases like because-phrases. A more likely suggestion is that the two morphemes of the AGR-*li* complementizer actually occur on different heads: -*li* occurs in the same position as other non-agreeing complementizers (generically labeled CP in (130)), and the agreement form on the complementizer arises on Epis°. I am not aware of any evidence for against either of these accounts, however.

Situation B   *I am talking to you. We are waiting for Sammy to join us, because we are supposed to meet the guests, but he is late. You wonder whether Sammy perhaps didn't know that the guests arrived, and that's why he's not there. But earlier that day, <u>Sammy's parents had informed me</u> that they told Sammy about the guests' arrival. So I tell you (the sentence in (131)).*

Therefore the example in (131) may be used whether the speaker received this information from Sammy, or from someone else (e.g. if Sammy's parents informed the speaker that the guests arrived). It seems, then, that the source (or, evidence) of the information does not play a role in triggering complementizer agreement, as was noted previously. Instead, complementizer agreement is possible with the derived subject, even if the speaker has no contact with the person referred to by that derived subject (as as in the case of (131)). This does not imply, however, that the non-agreeing complementizer cannot be used, as is evident in (133):

(133)   Sammy   ka-bol-el-wa   **bali**   ba-keni   b-ola
         1Sammy   1S-say-AP-PASS   **that**   2-guests   2S-arrived
         'Sammy was told that the guests arrived.'

As described by speakers, (133) is licit in the context that the speaker and the addressee are waiting for the guests in order to meet with them, but the guests have not showed up for the meeting, so that the reliability of the reported situation is in question (i.e. that the guests arrived). Evidence like this suggests that rooting the agreeing complementizer in the EpisP is on the right track, given Cinque's argument that the Epistemological Mode indicates speaker's degree of certainty about the proposition.   Thus the apparent "evidential" nature of the agreeing complementizer would seem to have more to do with the the speaker's certainty than with degrees of evidence. As noted above, this analysis predicts that complementizer agreement should be possible with the full range of levels on Culy's (1994a) logophoric hierarchy.

6.3.2   WHY EMOTIVE FACTIVES HAVE NO AGREEING COMPLEMENTIZER

A critical question at this juncture is why the agreeing complementizer is dispreferred in complements of emotive factive verbs, as opposed to other clause-selecting verbs. As it turns out, there is a growing collection of research that argues that the complements of factive verbs have less structure than non-factives do, though this is counter to the traditional analysis (cf. de Cuba 2006, de Cuba 2007, de Villiers 1998, Grewendorf 2002, Haegeman 2006, Kiparsky and Kiparsky 1971, McCloskey 2005, Nichols 2001).
    Specifically, Haegeman (2006) claims that factive verbs (along with adjuncts and conditionals) lack a speaker deixis (SD) projection and consequently lacks topic and focus projections as well. Haegeman proposes the following structures of the left peripheral in different clausal contexts, where Sub refers to a general subordination morpheme (1663ff):

(134)   Central adverbial clause:
         Subj   Fin

         Peripheral adverbial clause:
         Subj   Top   Focus   SD   Fin

         Root Clause:
                 Top   Focus   SD   Fin

         Factive complement:
         that   *Mod   Fin

Haegeman claims that it is this lack of left-peripheral structure that restricts adjuncts, conditionals, and factives from displaying main-clause phenomena like speaker-oriented adverbs (see also various restrictions on "root transformations" in factives as discussed in Hooper and Thompson 1973). Haegeman claims that "speaker deixis" corresponds to the "point of view" zone of Cinque's hierarchy, the highest projections discussed above (see Tenny 2000: 319), also equating it with Speas' (2004) POV heads (see (128)).
    Based on these precendents and the evidence from Lubukusu, I therefore suggest that emotive factives lack all point of view heads (speaker deixis heads, in Haegeman's terminology), and therefore lack a logophoric operator

and (consequently) the ability to trigger complementizer agreement. This is consistent with Speas' intuition that the degree of reliability of a matrix predicate is inversely related to the amount of structure there is in the point of view domain, so that the more reliable the report, the less structure there is in the point of view domain. Complements of emotive factives are always presupposed, and never asserted (Heycock 2006, Hooper and Thompson 1973), and therefore there is no influence on the embedded proposition of the senses of reliability or non-reliability introduced by the matrix predicate, degree/sufficiency of evidence, or point of view. This is encoded in the syntax by that lack of point of view heads (SAP, EvalP, EvidP, EpisP) in the left periphery.

This does raise an important question for Hooper and Thompson's (1973) class E verbs, however, those verbs that are factive but which at times allow for their complement clause to be asserted rather than presupposed. In Lubukusu, these sorts of verbs (including verbs for 'know' and 'realize') allow the agreeing complementizer, suggesting that they must in fact have point of view heads (or, at least, EpisP), in order to allow a logophoric operator which can in turn trigger the complementizer agreement. This is problematic, however, as these verbs nonetheless presuppose the truth of their complement clause.

As pointed out by Karttunen (1973) and Hooper and Thompson (1973) (and discussed briefly in §3 above), this class of verbs at times allows for the sorts of main-clause phenomena associated with main assertions, and can in fact lose their factivity in questions and conditionals (de Cuba 2007, Heycock 2006) whereas the complements of emotive factives always presuppose their complement clauses. I would suggest that the source of the presuppositions in non-emotive factives is not the lack of POV heads, but some other component of the syntax or semantics. This would explain why main clause phenomena are allowed at times in class E verbs, and help to differentiate between the emotive factives and the non-emotive factives. A full investigation of these matters is beyond the scope of this dissertation, however, and as such I leave it for future research.

6.3.3 DE-FACTIVE CONSTRUCTIONS

There are some surprising data that arise in light of the restriction on complementizer agreement to non-presuppositional verbs which lend some support to the notion that the presence of the agreeing complementizer also means that POV heads are present, and the content of a complement clause is therefore no longer presupposed. Note the sentence in (135), an emotive-factive verb that, matching with the generalization noted above, rules out the presence of the agreeing complementizer.

(135)   N-esindukha   mbo (*ndi)   ba-keni   b-ol-ile
        1stSG-was.surprised   that (*1stSG-that)   2-guests   2S-arrive-PST
        'I was surprised that guests arrived.'

It turns out that some speakers in fact do accept the agreeing complementizer as a (quite) marginal structure with the verb *sindukha* 'be surprised', but it triggers a very different interpretation of the verb.

(136) $^{??}$n-esindukha   n-di   ba-keni   b-ol-ile
        1stSG-was.surprised   1stSG-that   2-guests   2S-arrive-PST
        'I was surprised regarding the guests' arrival' (see comments below)

The translation offered in (136) is a best attempt to offer a one-sentence translation for the following interpretation: in (136), the speaker of the sentence was expecting the guests to come, but they in fact did not come, to the speaker's surprise. Note that there is no added negation in the embedded clause in (136), but rather, using the agreeing complementizer here seems to force a reading where the embedded clause is no longer assumed to be true. This is consistent with an analysis that the structure that contains the logophoric operator and the agreeing complementizer are the POV heads which remove the presuppositional reading of an embedded clause. The availability of such a marginal construction such as that in (136) not surprisingly varies between speakers (with a large number rejecting it outright), but the correlation with the presupposition generalization is notable.

Similar facts arise with the predicate 'be happy'. As shown in (137), on the standard reading the agreeing complementizer is impossible in the complement of *sangala* 'be happy':

(137)   N-asangala   mbo (*ndi)   ba-keni   b-ol-ile
        1stSG-was.happy   that   2-guests   2S-arrive-PST
        'I was happy that guests arrived.'

Again, as above, the marginal sentence in (138) is possible using the agreeing complementizer, but giving a very different interpretation.

(138) $^{??}$N-asangala   n-di   ba-keni   b-eecha
        1stSG-was.happy   1stSG-that   2-guests   2S-left

Without even offering a specific translation here, speakers report that there is a sense that the guests in this case did not actually come, and which has in fact has impinged upon the speaker's happiness, and as a result the speaker may in fact not even be happy at all. Again, there is no overt negation in the lower clause, but the veracity of that lower clause has been brought into question. Given the link between the speaker's happiness and the guests' arrival, it is not surprising that the matrix veracity of the matrix predicate itself is brought into question in these cases.

While these are marginal sentences (at best) and certainly not irrefutable evidence for the generalizations argued for above regarding the connection between complementizer agreement and presuppositional verbs, it is nonetheless striking that these non-canonical interpretations that arise are directly in line with the predictions of an analysis that the presence of the agreeing complementizer is incompatible with a reading of an embedded clause where that embedded proposition is presupposed to be true.

7   Conclusions, and Open Issues

This paper has provided extensive documentation and analysis of an unfamiliar form of complementizer agreement from Lubukusu, where the complementizer agrees with the matrix subject. I argued that there are two conditions on complementizer agreement in Lubukusu: the subject condition and the logophoric condition. First, complementizers may only agree with a subject, and second, that subject must be an appropriate logophoric antecedent. I then argued that these two conditions are explained by an analysis that the complementizer agreement is triggered by a null logophoric operator, which is itself a subject-oriented anaphor.

The long-distance nature of this agreement relation is therefore only apparent, as complementizer agreement is in fact local agreement between the complementizer and the logophoric operator. I argued that this operator is located in a point-of-view projection in the left periphery—in the Epistemological Phrase (Cinque 1999, Speas 2004)—which was taken to account for the complementizer's evidential properties and its lexical distribution. I discussed a variety of alternative analyses as well, arguing not only that the logophoric operator *qua* anaphor analysis is preferable over its alternatives, but that some of the alternative analyses of the logophoric operator do in fact occur in other languages, and account for some of the variation in logophoric properties across languages.

In the end, then, this paper is both a significant step forward in our knowledge about this sort of matrix-subject-focused complementizer agreement relations and a step towards understanding logophoricity in its broader context, beyond simply logophoric pronouns. If anything, this paper can be taken as confirmation of analyses of logophoricity that rely on null elements in the left periphery, as complementizer agreement demonstrates a logophoric phenomenon that is left-peripheral on its own.

There are a number of issues that remain open, however. Empirically speaking, despite the fact that this paper documents a wide range of contexts for complementizer agreement, certainly there are many more syntactic contexts and syntactic, pragmatic, and semantic properties which are yet to be uncovered about this phenomenon. This is most immediately clear with respect to its evidential properties, which have been described here in only a cursory manner. Another area that requires further research is whether there are any logophoric interactions on the level of discourse, and related to this, whether non-clause-bounded reflexives in Lubukusu interact with complementizer agreement in any significant way.

Theoretically-speaking, we are left with a large number of questions as well. While the structure of the left periphery that is adopted here serves its purpose well, as more is learned about logophoric phenomena cross-linguistically we will refine our knowledge of logophoric operators, and those conclusions will affect the analysis here. More importantly, the proper analysis of subject-oriented anaphors is still a matter of broader investigation, and the outcomes of that field of research will affect the conclusions drawn here as well.

Not insignificant, however, is the fact that the conclusions come to here about the nature of this complementizer agreement do not significantly alter our current conception of some core aspects of Minimalist theory, namely, cyclic spell-out and Agree, which seemed to face significant *prima facie* challenges from the Lubukusu complementizer agreement relation. As I have demonstrated, however, this agreement relation which (on the face of it) appears highly problematic for our notions of locality in syntactic derivational operations in fact turns out to not be problematic in the least. This conclusion in and of itself is a promising result.

8 Acknowledgements

9 References

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