Nguni phrase-final focus particles and antisymmetry theory

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1. Introduction

1.1 Overview

In this paper we explore the syntax of the exclusive focus markers *kuphela* and *qha* - 'only' in the Nguni languages Zulu and Xhosa.[1] *Kuphela* is used in both languages; *qha* is specific to Xhosa.

As the examples in (1) and (2) show, *kuphela* typically follows the focused constituent construed as its so-called "associate" and the same is true of *qha* (focus associates bolded). While there is a strong preference for these particles to associate with an adjacent phrase, this is not absolute, as (3) and (4) demonstrate:[2]

(1) a. U-Sindiswa   u-phek-el-e   **u-Sabelo**   *kuphela* a-ma-qanda. [Zulu & Xhosa]
       AUG-1a.Sindiswa 1.SM-cooked-APPL-PST AUG-1a.Sabelo only   AUG-6-eggs
       'Sindiswa cooked only **Sabelo** eggs.'

    b. U-Sipho   u-phek-e   **a-ma-qanda** *qha*.   [Xhosa]
        AUG-1a.Sipho   1.SM-cook-PST   AUG-6-eggs   only
        'Sipho cooked only **eggs**.'

(2) a. U-John   **u-ya-sebenz-a**   *kuphela*.   [Zulu & Xhosa]
         AUG-1a.John 1.SM-DJ-work-FV   only
         'John only **works**.'

     b. Ngi-**hlab-a i-khefu**   *kuphela*.   [Zulu]
         1S-stab-FV   AUG-5.rest only
         'I'm only **taking a break**.'

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[1] Zulu (or *isiZulu*) and Xhosa (*isiXhosa*) are spoken primarily in South Africa and belong to the Nguni group of Bantu languages, which also includes (si)Swati and (isi)Ndebele. While the Nguni languages show a modest degree of lexical and grammatical variation, they are mutually intelligible and sometimes considered varieties of one language.

[2] Associations with non-adjacent material are greatly facilitated by the addition of disambiguating continuations compatible with them, such as *hayi izinja* – 'not the dogs' for (3b), and *hayi uMary* – 'not Mary' for (4b).

(3) U-Sipho   u-nikez-e   i-zi-nkawu   a-ma-kinati *kuphela*.   [Zulu]
     AUG-1a.Sipho 1.SM-give-PST AUG-10-monkey AUG-6-peanuts only
     a. 'Sipho gave the monkeys only **peanuts**.'   *Most speakers*
     b. 'Sipho gave only **the monkeys** peanuts'   *Some speakers*
     c. 'Sipho only **gave** the monkeys peanuts'   *Some speakers*
     d. 'All Sipho did was **give the monkeys peanuts**'   *All Speakers*
     e. 'All that happened was **Sipho gave the monkeys peanuts**'   *Most speakers*
     f. *'Only **Sipho** gave the monkeys peanuts'   *No speakers*

(4) Ku-fund-is-w-a   u-Busi   i-si-Zulu   *kuphela/qha*   [Xhosa]
     17.SM-learn-CAUS-PASS-FV AUG-1-Busi AUG-7-Zulu only
     a. 'Busi was taught only **Zulu**.'   *All Speakers*
     b. 'Only **Busi** was taught Zulu.'   *Most speakers*
     c. 'Busi was only **taught** Zulu.'   *Most speakers*

(1) shows *kuphela* and *qha* associating with focused DPs immediately to their left. (2) illustrates

that *kuphela* can also be used adverbially, associating with an adjacent focused verb or VP; the

same is true of *qha* (we have picked a VP-idiom in (2b) to rule out a reading with object focus,

which would otherwise be more prominent). For most speakers, the preferred interpretations of

(3) are to associate *kuphela* with the adjacent direct object (3a), with the VP (3d), or even with

the whole sentence (3e), but focus association with a non-adjacent constituent, such as the

indirect object (3b), or the verb (3c), is also possible for some speakers (on the lack of total

agreement regarding (3a) and (3b) and the unacceptability of (3f), see §4). (4) illustrates the

same kinds of options for adverbial *kuphela* or *qha* in an impersonal passive construction with

'expletive' class 17 subject agreement on the verb.

   Languages where expressions meaning 'only' have been well-studied exhibit a requirement

that such expressions c-command their associates (see Aoun & Lee 1993; Büring & Hartmann

2001, Erlewine 2014a,b; Tancredi 1990, among others). The fact that associates of *kuphela* and

qha precede them therefore raises interesting theoretical issues connected with the antisymmetry

hypothesis of Kayne (1994), that is, that high-to-low relations map invariantly into left-to-right

linear order, and with the related Final-Over-Final Condition of Biberauer et al. (2014, 2017).

Our paper will present a complex picture of associations for *kuphela* and *qha.* Certain positions in Xhosa and Zulu clauses are relatively focus-neutral in that they may but need not contain focused material. We will show that *kuphela* and *qha* must c-command the highest copy of an expression in such a position for association to succeed. After considering and rejecting as inadequate several alternative accounts of the facts consistent with antisymmetry in its strongest form, we conclude that syntax is only weakly antisymmetric in the sense of Takano (2003) – that is, at least some adjuncts fall outside of antisymmetry, and *kuphela* and *qha* are among these (assuming with Cardinaletti 2011 that some particles have the status of adjuncts).[3] Only this conclusion is consistent with cross-linguistic evidence for antisymmetry on the one hand, and the language-particular evidence that *kuphela* and *qha* c-command associates that precede them.

There are also syntactic positions in Xhosa and Zulu clauses that are [+focus], that is, restricted to focused material – clefts, and S of active VSX constructions, especially transitive expletive constructions, henceforth TECs. We found judgments on association at a distance to material in such positions to be quite unpredictable. Among speakers who accept them, some were entirely consistent in requiring surface c-command by *kuphela* or *qha* of the highest copy of an associate in a [+focus] position. Others judged associations in which *kuphela* or *qha* c-commands only a low copy to be marginal or well-formed. Occasionally speakers even accepted associations to material in [+focus] positions wherein *kuphela* or *qha* c-commands no copy at all. Our impression is that the narrow focus reading characteristic of material in a cleft or VS construction is a major distractor in evaluations of when and where exclusive focus readings are licit within the same utterance (see §8 for some discussion). Associations to positions that can host either focused or non-focused material (henceforth focus-tolerant positions) are our primary

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[3] The analysis contrasts with Cardinaletti's approach to deriving the location of final particles in Italian; see below.

concern because judgments are clearer on them. We found that they consistently require surface c-command, therefore providing some novel evidence on right-edge particles and the mapping of hierarchy to word order.
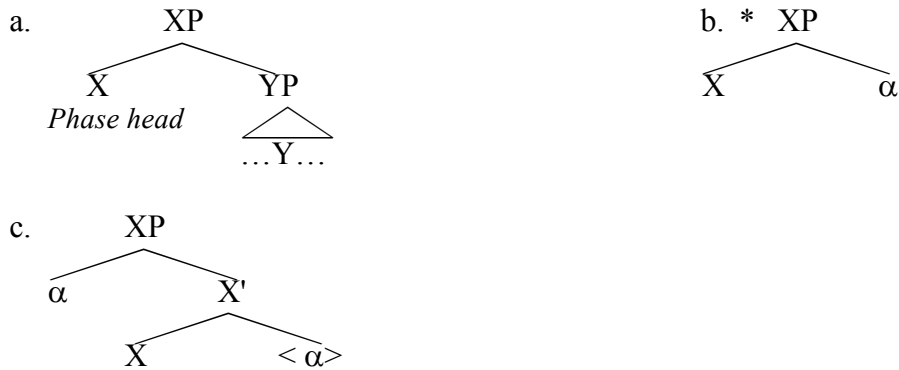
There has been prior recognition that right-edge particles appear to violate both antisymmetry theory and the related Final-Over-Final-Constraint/Condition (FOFC) of Holmberg (2000), Biberauer et al. (2014), Biberauer et al. (2017), among others. Our paper contributes to a debate over why this is so. The FOFC rules out head-final over head-initial configurations like *[$_{XP}$ [$_{YP}$ Y Complement] X] within specific domains with shared categorial features -- extended projections in the sense of Grimshaw (1991). Within such domains, Biberauer et al. (2014) propose that head-finality is due to an EPP-like feature ^. This is passed up the tree from head to head, deriving surface head-finality from universal head-complement order in the base.

Biberauer et al. (2014) suggest that many particles are acategorial and hence outside of the domains in which the FOFC applies. Therefore, though they are underlyingly initial heads, they may introduce ^ features independently of the heads below them and raise their complements to their Specs, leading to the appearance of head-finality.[4]

Hsieh & Sybesma (2011) and Erlewine (2017) adopt a version of this approach, arguing for an underlyingly head-initial syntax for final particles in Mandarin. They propose that such particles are phase heads, triggering transfer of their complements (see (5a)). When phase interiors transfer they become unanalysable syntactic atoms, leading to symmetric, hence unlinearizable structures (5b). They must therefore raise to c-command the phase-head in order to break symmetry, leading to surface head-finality, as in (5c).

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[4] Though not compatible with this mechanics, *kuphela* and *qha* seem consistent with the FOFC generalization that headedness within Extended Projections is harmonic, absent evidence that they form part of such domains. See Biberauer (2017) for relevant in-depth discussion of this issue regarding particles in a range of languages.

(5) *Transfer creates non-linearizable symmetry, which movement breaks*

a.
```
            XP
          /    \
        X        YP
     Phase head  /\
               …Y…
```

b. *
```
        XP
       /    \
      X       α
```

c.
```
            XP
          /    \
        α        X'
               /    \
             X       <α>
```

Although *kuphela* and *qha* are phrase-final rather than exclusively sentence-final, such an approach might in principle be extended to them. We will show, however, that the proposals are incompatible with the pattern of judgments indicating that *kuphela* and *qha* must c-command the highest copy of an associate (with caveats noted above).

The same problem arises in connection with a proposal that Cardinaletti (2011) makes for right-edge modal particles in Italian -- that they merge as specifiers of functional categories, and the material to their left arrives at its surface position through remnant movement across them. Like the movement analyses of Hsieh & Sybesma (2011) and Erlewine (2017), this approach cannot be extended to word order involving right-edge *kuphela/qha* because it is incompatible with the surface c-command requirement.

For the sake of concreteness, we adopt as a working hypothesis the view that *kuphela* and *qha* adjoin to constituents of various categories. Examples we have introduced so far are consistent with adjunction to DP and vP (see (6a,b)). In §5, we motivate adjunction to TP (6c). §5, §7, and §8 argue in detail for the superiority of (6) over other possible approaches.

(6) a. [$_{DP}$ [$_{DP}$ uSipho]   *kuphela*]   b. [$_{vP}$ [$_{vP}$ hlab-a   i-khefu   ] *kuphela*]
                  AUG-1a.Sipho only   stab-FV AUG-5.rest   only
             'only Sipho'   'only taking a break'

    c. [$_{TP}$ [$_{TP}$ ...] *kuphela*]

It is also worth noting that some Xhosa speakers systematically approve construals in which *kuphela* precedes its associate, as in (7a).[5] While Zulu speakers we consulted mostly rejected comparable examples during elicitation, we have found exemplars online, including (7b).

(7) a. u-Zinhle   u-zo-cula   *kuphela/qha* kusasa.   [Xhosa]
         AUG-1a.Zinhle   1.SM-FUT-sing only   in.the.morning
         'Zinhle will sing only **in the morning**.'   *some speakers*

     b. A-si-nak-ile   *kuphela* u-m-dlalo   wo-m-khaya   nowe-CAF[6]   [Zulu]
         NEG-1Pl.SM-focus-PST only   AUG-3-3-game 3.ASS-3-family.members or CAF
         'We are not focusing only on the derby match or the CAF.'

Such associations are unexceptional in that they fully respect the surface c-command requirement, and the topography of focus that we will describe in §4. We assume that they involve left-adjunction of *kuphela* or *qha* to the associate, but it lies outside the scope of this work to fully illustrate or explore the alternate word order in detail. In the interests of clarity, our paper mostly abstracts away from this phenomenon.

Because our investigation uncovered no syntactic differences between *kuphela* and *qha,* we will use them interchangeably. Most of our examples feature *kuphela* because it is acceptable in both languages.

1.2   Structure of the paper

§2 provides a little background on the interpretation of focus and expressions meaning 'only'. §3 reviews the relevant notions of antisymmetry theory. §4 overviews the topography of focus in Nguni and its relevance to *kuphela* and *qha.* §5 presents evidence that the two particles must c-

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[5] Thus for some Xhosa speakers, (1a) permits a reading 'Sindiswa cooked Sabelo only **eggs**.' It is worth making clear that many speakers accept **only** associations where *kuphela* and *qha* follow their associates, and that no speakers accept only associations where the associate follows *kuphela* and *qha.*

[6] http://isizulu.news24.com/Ezemidlalo/U-Erasmus-uphika-eyokunaka-owomkhaya-nowe-CAF-kuphela-20151022; last accessed 4 June 2017.

command the head of their associate's chain in surface syntax, if the associate is in a focus-tolerant location. §6 details the reasons why we do not reject antisymmetry theory, given its incompatibility with the syntax of *kuphela* and *qha*. §7 provides arguments against the approach in Hsieh & Sybesma (2011) and Erlewine (2017). §8 discusses associations of *kuphela* and *qha* with material in [+focus] positions. §9 concludes.

2.   'Only' as an alternative-sensitive particle

2.1   Focus and 'only'

The semantics of focus is typically analyzed in terms of *alternatives* that are introduced into the discourse by a focused constituent. For example, in Rooth's (1985, 1992) influential theory of Alternative Semantics, every node is assumed to have, in addition to its ordinary semantic value, a *focus semantic value*, which is derived by replacing the ordinary meaning of the focused constituent with contextually plausible alternatives. To illustrate, if the ordinary semantic value of a focused DP like *Mary* is the individual Mary, then its focus semantic value is the set of individuals who are potential alternatives to Mary:[7]

(8)   [Mary]$_F$:

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[7] In the English examples, we follow the standard convention (going back to Jackendoff 1972) and mark the syntactic focus by means of square brackets and the focus feature F, which mediates between the semantics of focus and its prosodic realization. In languages such as English, focused constituents are prosodically prominent and marked by a pitch accent on the main stress-bearing syllable (compare *Her husband likes* [*the MEATballs*]$_F$ vs. [*Her HUSband*]$_F$ *likes the meatballs*). In contrast, we have not adopted F-marking for focused material in our Nguni examples (which we mark in bold instead), because focus is not correlated with prosodic prominence in Nguni and only influences prosodic phrasing indirectly, through its syntactic position (Downing 2010). There also seem to be no prosodic cues to disambiguate sentences with multiple possible focus readings in Zulu and Xhosa. Speakers listening to recordings of ambiguous sentences involving *kuphela* did not reliably identify intended readings even when the recorded speech was their own. On the link between syntactic position and focus, see §4.

a. Ordinary semantic value: the individual Mary

b. Focus semantic value: the set of alternative individuals {Mary[8], Sue, Bill …}

The focus semantic value of the sentence in (9), which includes the focused DP *Mary*, is the set of propositions of the form "John likes y", where y is an element from the set in (8b):

(9)   John likes [Mary]$_F$

a. Ordinary semantic value: the proposition "John likes Mary"

b. Focus semantic value: the set of alternative propositions {"John likes Mary", "John likes Sue", "John likes Bill" …}

The Nguni focus markers *kuphela* and *qha* are *focus-sensitive* (or alternative-sensitive) particles comparable to English *only*. "Focus/alternative-sensitive" means that the semantic contribution made by these elements depends on the alternatives introduced by the focus; they *associate* with the focus (Büring & Hartmann 2001; Erlewine 2014b; Jackendoff 1972; König 1991; Krifka 2006; Rooth 1985, 1992, among many others). Exclusive focus markers like *only* universally quantify over the alternatives introduced by their focus associate: the sentences in (10), with either adnominal or adverbial *only*, are true if every y from the set of alternatives in (9b) for which "John likes y" is true is identical to Mary (in other words, (10a) and (10b) are true if "John likes Mary" is true and all other propositions in (9b) are false):

(10)   a. John likes only [Mary]$_F$.   (adnominal *only*)

b. John only likes [Mary]$_F$.   (adverbial *only*)

Note that while adnominal *only* in (10a) is adjacent to the focus, adverbial *only* in (10b) can also associate with the focused object, and (10a) and (10b) have the same truth conditions.

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[8] Note that in Rooth's (1985, 1992) theory, the ordinary semantic value of an expression is always an element of its focus semantic value.

2.2 Association at a distance and the c-command requirement

As already illustrated by (10b), the English focus adverb *only* can associate "at a distance,"
giving rise to multiple association options such as those in (11) (see Jackendoff 1972).

(11) a. John *only* [gave]$_F$ his daughter a new bicycle.

   b. John *only* gave [his]$_F$ daughter a new bicycle.

   c. John *only* gave his [daughter]$_F$ a new bicycle.

   d. John *only* gave his daughter a [new]$_F$ bicycle.

   e. John *only* gave his daughter a new [bicycle]$_F$.

But there is a crucial constraint on what *only* can associate with: *only* must c-command its
associate. Tancredi (1990a) formulates this requirement as the *Principle of Lexical Association*
in (12), henceforth the PLA.

(12) **Principle of Lexical Association:** an operator like *only* must be associated with a
      lexical constituent in its c-command domain. (Tancredi 1990a:30).

In English, the c-command requirement holds in surface syntax: lower copies of moved
expressions don't suffice to permit that expression to associate with *only* (Aoun & Lee 1993;
Erlewine 2014a,b; Tancredi 1990b). (13)-(15) illustrate this: the lower copy in Spec, vP does not
permit a subject in Spec, TP to serve as *only*'s associate in (13). Nor does the copy of an A'-
moved expression in (14a), unlike the in situ wh-phrase of an echo question (14b) or the unraised
infinitival subject in (15a).

(13) [$_{TP}$ John only [$_{vP}$ <John> likes Mary]].　　　　　✓The only person John likes is Mary.
　　　　　　　　　　　　　　　　　　　　　　　　✓John likes but doesn't love Mary.
　　　　　　　　　　　　　　　　　　　≠ only *John* likes Mary, nobody else does.

(14) a. Who do you only like <who>?　　　　　　≠Who is the only person you like?
　　　　　　　　　　　　　　　　　　　　　✓Who do you like but not love?
　　　b. You only like who?　　　　　　　　✓Who is the only person you like?
　　　　　　　　　　　　　　　　　　　　　✓Who do you like but not love?

(15) a. There only seems to be a man in the room.   ✓ There doesn't seem to be *a woman.*
     b. A man only seems to be in the room.   *There doesn't seem to be *a woman.*

There is evidence, however, of cross-linguistic variation on this important point. As Erlewine (2014) notes, Jacobs (1983) and Barbiers (1995) report that in German and Dutch, there are expressions meaning 'only' which can associate through reconstruction, unlike English *only* ((15) and (16) are from Barbiers (1995) via Erlewine (2014b)). In (16) and (17), the expressions *twee boeken* and *jedes Buch*, which include the focused element, have been topicalized. As a result, the exclusive focus markers no longer c-command the highest copy of their focus associates:

(16) [TWEE]$_F$ boeken, denk ik dat Jan *pas/maar* __ heft gekocht.
     two   books   think I that John just/only   has bought
     'TWO books, I think that John has bought *just/only__*.'

(17) Jedes [BUCH]$_F$ hat der Hans *nur* gelesen...(ZEITSCHRIFTEN hat er keine gelesen.)
     every book   has the Hans only read   magazines   has he none read
     'It was only every BOOK that Hans read. He didn't read any MAGAZINES.'

Given this point of contrast, we propose the weak and strong versions of the PLA in (12').

(12') **Strong PLA:** If *only* associates with *α* and there are multiple copies of *α* in the representation, *only* must c-command the *highest* copy of *α* (Erlewine 2014: 115).

     Weak PLA: Reconstruction permits association of operators meaning 'only', thus c-command of a copy suffices (German and Dutch).

One of the tasks of this paper is to determine whether a version of the PLA holds in Xhosa and Zulu and if so, which: weak, or strong? This will be crucial to assessing the compatibility of *kuphela* and *qha* with Kayne's (1994) antisymmetry theory, which we review next.

3. Antisymmetry, 'only,' and the principle of lexical association
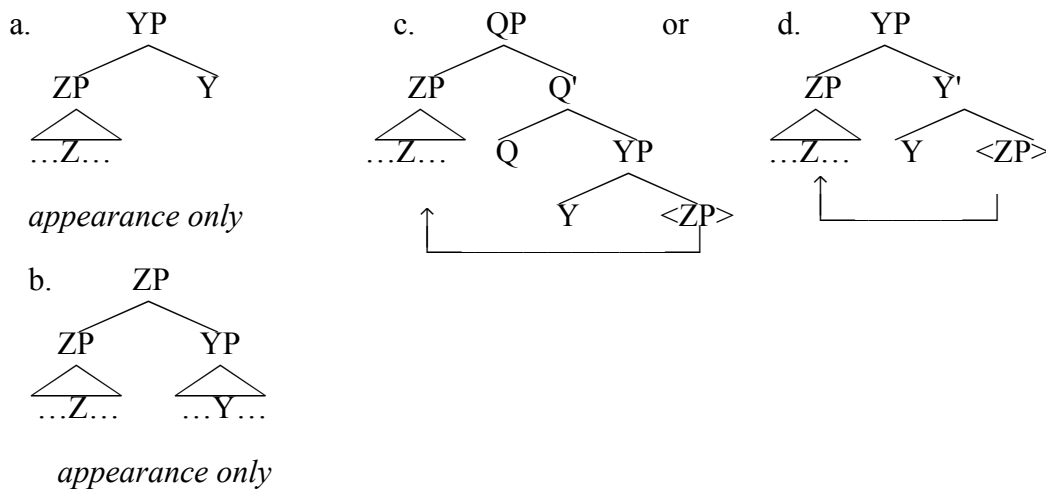
3.1 Antisymmetry theory

Kayne (1994) proposed the Linear Correspondence Axiom (LCA): that is, that hierarchy maps invariantly into linear order. For expository convenience we adopt the formulation in (18), from Hornstein et al. (2005: 227).

(18)   Linear Correspondence Axiom LCA: A lexical item α precedes a lexical item β iff

(i) α asymmetrically c-commands β or
(ii) an XP dominating α asymmetrically c-commands β

Under the LCA, underlying Spec, head, complement order is universal. Apparent deviations

from this pattern are taken to be the result of movement (see Kayne (1994) and Cinque (2005)

for extensive discussion). We illustrate in (19).

(19) *Antisymmetric approaches: what looks like (a) or (b) is actually (c) or (d).*

a. YP [ZP […Z…] Y] *appearance only*

b. ZP [ZP […Z…] YP […Y…]] *appearance only*

c. QP [ZP […Z…] Q' [Q YP [Y <ZP>]]] or

d. YP [ZP […Z…] Y' [Y <ZP>]]

3.2   *Kuphela/qha*, antisymmetry, and the PLA

As noted, *kuphela/qha* typically follows the associate (see (20)-(22)), raising LCA-related issues.

(20) U-Sipho   u-nikez-e   **i-zi-nkawu**   *kuphela* a-ma-kinati.   [Zulu]
     AUG-1a.Sipho   1.SM-give-PST   AUG-10-monkey   only   AUG-6-peanuts
     'Sipho gave only **the monkeys** peanuts.'   *[indirect object]*

(21) Ku-sebenz-a   **u-John**   *kuphela*   e-ofisi.
     17.SM-work-FV   AUG-1a.John   only   LOC-5.office
     'Only **John** works in the office.'   *[postverbal SU]*

(22) U-Sipho   **u-yi-phek-ile**   *kuphela*   i-mi-fino.
     AUG-1a.Sipho   1.SM-4.OM-cook-PST.DJ   only   AUG-4-vegetable
     'Sipho only **cooked** the vegetables.'   *[verb]*

In (20), *kuphela* associates with the indirect object DP of a ditransitive verb. (21) is an expletive

construction with VSX word order, and *kuphela* associates with the focused postverbal subject in

this example. In (22), the direct object-DP *imifino*, 'vegetable', has been right-dislocated (as

indicated by the corresponding object marker of class 4 that is attached to the verb[9]). Dislocation constructions such as (22) can express contrastive verb focus, and in this case, *kuphela* can follow, and be associated with, the focused verb.

If *kuphela/qha* are subject to the Strong PLA, that is, if they need to c-command their associates in surface syntax, then they would be expected to precede the associates under antisymmetry theory, contrary to what (20)-(22) show to be the case. Instead, the associate precedes *kuphela/qha,* but this means that the associate asymmetrically c-commands *kuphela/qha* according to the LCA, and the Strong PLA would not be met, blocking association. Accordingly, evidence for the Strong PLA in Xhosa and Zulu could motivate a reassessment of antisymmetry – either rejection or weakening of the idea that high to low maps left to right.

If, on the other hand, *kuphela/qha* are only subject to the Weak PLA in the associations in question, and thus only need to c-command a copy, no antisymmetry problem arises: we can assume that the associate precedes *kuphela/qha* by virtue of raising across it.

Another possibility is that Nguni will present Strong PLA effects that turn out to be only apparent, capturable under some alternative, antisymmetry-friendly approach which maintains that only the Weak PLA holds in Nguni.

Lastly but not least, it might be that *kuphela/qha* need not c-command the associate at all; this remains to be established in our paper.

(23) summarizes the analytical options that we have identified with respect to *kuphela/qha* and antisymmetry theory.

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[9] See Adams (2010); Buell (2005); Cheng & Downing (2009); Halpert 2015; Van der Spuy (1993); Zeller (2015) and others for ample evidence that object-marked DPs in Zulu are always dislocated to a VP-external position.

(23) Analytical possibilities for *kuphela/qha* vis-à-vis the LCA:

- Option 1: *kuphela/qha* need not c-command their associates.

- Option 2: *kuphela/qha* can associate with a lower copy of a moved expression in Xhosa and Zulu; thus the Weak PLA is correct for these languages, like German and Dutch.

- Option 3: The Strong PLA is correct for Zulu and Xhosa, and therefore the LCA is wrong. Syntax is not antisymmetric.

- Option 4: An antisymmetric analysis can capture apparent strong PLA effects differently.

- Option 5: The Strong PLA constrains associations in Zulu and Xhosa. Syntax is only weakly antisymmetric in that it allows rightward adjunction (Takano 2003; Carstens 2008 and 2017). *Kuphela* and *qha* are adjuncts, and can c-command an associate to the left.

In what follows we will describe in detail the distributional constraints on *kuphela/qha,* showing that they reflect two factors: (i) the topography of [+focus], focus-tolerant, and anti-focus positions in Nguni clauses, and (ii) the strong PLA (though with caveats mentioned in the introduction and discussed in §8). Associations with material in focus-tolerant positions require surface c-command by *kuphela/qha,* and are thus inconsistent with Options 1 and 2. We will argue that Option 3 must be rejected based on strong cross-linguistic arguments for underlying Spec, head, complement order. As for Option 4, we will consider an antisymmetry-friendly approach to final particles proposed in Hsieh & Sybismeh (2011) and Erlewine (2017) and show that it is not viable for *kuphela/qha.* We conclude by adopting Option 5 for these associations.

4. Capturing the distribution of *kuphela/qha*

4.1 The topography of focus and anti-focus

Based on the classes of expressions that can appear in particular clausal positions in Xhosa and Zulu, previous studies distinguish [+focus], anti-focus, and focus-tolerant locations (see Adams 2010; Buell 2008; Carstens & Mletshe 2015, 2016; Cheng & Downing 2009; Sabel & Zeller

2006; Zeller 2008, 2015, among others). This constrains the interpretation of *kuphela* and *qha* in ways that do not come up for English *only* because the associates of *kuphela/qha* are restricted to positions where foci are licit.

In this section we review and illustrate the topography of focus uncovered in the above cited works, and show how it constrains the distribution of the associates of *kuphela* and *qha*. We follow these works in exemplifying focal properties of each position by means of the distribution of (i) phrases modified by *kuphela* and (ii) wh-phrases, as these are generally recognized as [+focus] expressions. This established, we can describe the ways in which associations with *kuphela/qha* are further constrained by a surface c-command requirement.

4.2   [+focus] positions

Studies of VSO constructions in Nguni languages have proposed that the verb raises across the subject, which either fails to raise at all, as in Halpert's (2015) analysis of Zulu, or raises very locally, to Spec, of a FocusP atop vP (Carstens & Mletshe 2015, 2016). (24a) exemplifies the focus interpretation characteristic of post-verbal subjects in active VSO constructions in Xhosa (Carstens & Mletshe 2015, 2016; Sabel & Zeller 2006), and (24b) does the same for clefts. (25) shows that these are not felicitous answers to a 'What happened?' question, which requires an all-new, sentence-focus answer. The examples in (26) and (27) show that wh-phrases and expressions modified by *kuphela* appear freely in these two [+focus] positions ((24) Carstens & Mletshe 2015:190; (25) from Carstens & Mletshe 2016:797. While these examples are Xhosa, the Zulu facts pattern alike).

(24) a. Ku-theth-a   **i-ndoda   e-nde** i-si-Xhosa.   *S of VSX is +focus*
       17.SM-speak-FV AUG-9.man 9-tall   AUG-7-Xhosa
       'It's **the tall man** who teaches Xhosa.'

     b. **Ng-u-m-fazi**   o-w-a-bon-a i-ntaka.   *Cleft is +focus*
        COP.AUG-1- woman REL.1.SM-see- FV AUG-9bird
        'It was **the woman** who saw the bird.'

14

(25) a. Kw-enzek-e   ntoni?
   17.SM-happen-PST 9what
   'What happened?' [Lit: (There) happened what?]

  b.#Ku-cul-e   u-Sindiswa a-ma-culo.   *Infelicitous in context*
   17.SM-sing-PST 1-1Sindiswa 6-6-songs
   'It was Sindiswa who sang songs'
   [Lit: (There) sang Sindiswa songs]

  c. #Ng-uSindiswa o-cul-é   a-ma-culo.
   COP.AUG-1a.Sipho REL.1.SM-sing-PST AUG-6-songs
   'It was Sindiswa who sang songs.'

 (26) a. Ku-fund-is-a   **i-ndoda** **e-nde** *kuphela* i-si-Xhosa.   *S of VSX is +focus*
   17.SM-learn-CAUS-FV AUG-9.man 9-tall only   AUG-7-Xhosa
   'It's only **the tall man** who teaches Xhosa.'

  b. Ku-fund-is-a   **bani** i-si-Xhosa?
   17.SM-learn-CAUS-FV 1a.who 7-7-Xhosa
   'Who teaches Xhosa?'

(27) a. **(Ng)u-Sipho** *kuphela* o-phek-e   i-mi-fino.   *Cleft is +focus*
   COP.AUG-1a.Sipho only REL.1.SM-cook-PST AUG-4-vegetables
   'It was only **Sipho** who cooked vegetables.'

  b. **(Ng)u-bani** o-phek-e   i-mi-fino?
   COP.AUG-1a.who REL.1.SM-cook-PST AUG-4-vegetables
   'Who is it that cooked vegetables?'

4.3 Focus-tolerant positions

Material inside vP of an SVO(O) construction may but need not include expressions interpreted

as focused. There is a preference for such items to appear in the immediately post-verbal position

(see Buell 2009; Cheng & Downing 2009, a.o.), but this is not absolute, as (28b-29b) illustrate.

(28) a. U-Sipho   u-fund-is-a **a-ba-ntwana** *kuphela* i-si-Xhosa   [Zulu &Xhosa]
   AUG-1a.Sipho 1.SM-learn-CAUS-FV AUG-2-children only AUG-7-Xhosa
   'Sipho teaches only **the children** Xhosa.'

  b. U-Sipho   u-fund-is-a   a-ba-ntwana **i-si-Xhosa** *kuphela*
   AUG-1a.Sipho 1.SM-learn-CAUS-FV AUG-2-children AUG-7-Xhosa only
   'Sipho teaches the children only **Xhosa**.'

(29) a. U-Sipho   u-fund-is-a   **bani** i-si-Xhosa?   [Zulu &Xhosa]
   AUG-1a.Sipho 1.SM-learn-CAUS-FV 1a.who AUG-7-Xhosa
   'Who does Sipho teach Xhosa to?'

b. U-Sipho   u-fund-is-a   a-ba-ntwana **i-ni**?
   AUG-1a.Sipho   1.SM-learn-CAUS-FV   AUG-2-children AUG-9.what
   'What does Sipho teach to the children?'

[SVOO] double object constructions with clause-final *kuphela*, such as (26b) or (4) (repeated

from the introduction), are sometimes judged as ambiguous, allowing for *kuphela* to associate

with either object (though a few speakers accept only one of the two readings; most often (4a)).

(4) U-Sipho   u-nikez-e   i-zi-nkawu   a-ma-kinati   *kuphela*.   [Zulu]
     AUG-1a.Sipho 1.SM-give-PST   AUG-10-monkey AUG-6-peanuts only
     a. 'Sipho gave the monkeys only **peanuts**.'   *Most speakers*
     b. 'Sipho gave only **the monkeys** peanuts'   *Some speakers*

Either argument in an impersonal passive of a ditransitive verb can be focused.

(30) a. Ku-fund-is-w-a   **a-ba-ntwana** *kuphela* i-si-Xhosa   [Zulu &Xhosa]
        17.SM-learn-CAUS-PASS-FV AUG-2-children only   AUG-7-Xhosa
        'Only **the children** are taught Xhosa.

     b. Ku-fund-is-w-a   a-ba-ntwana **i-si-Xhosa**   *kuphela*
        17.SM-learn-CAUS-PASS-FV AUG-2-children AUG-7-Xhosa   only
        'The children are taught only **Xhosa**.

(31) a. Ku-fund-is-w-a   **bani**   i-si-Xhosa?
        17.SM-learn-CAUS-PASS-FV 1a.who AUG-7-Xhosa
        'Who is taught Xhosa?'

     b. Ku-fund-is-w-a   a-ba-ntwana **i-ni**?
        17.SM-learn-CAUS-PASS-FV AUG-2-children AUG-9-what
        'What are the children taught?'

The subject of an intransitive expletive construction also may but need not have a focus

interpretation.

(32) a. Kw-enzek-é   ntoni?
        17SA-happen-CONJ1   9what
        'What happened?' [Lit: (There) happened what?]

     b. Ku-lil-e   u-Sindiswa.
        17.SM-cry-PST   AUG-1-Sindiswa
        i. 'Sindiswa cried.'
        ii. #'It's Sindiswa who cried.' (available but infelicitous in context)

16

Some speakers permit preverbal subjects in subjunctives or relative clauses to contain focused material.[10]

(33) a. Si-funa   ukuba **u-Thandeka**   *kuphela*   a-cul-e   *OK for some speakers*
       1Pl. SM-want-FV that   AUG-1a.Thandeka only   1.SM-sing-SJ
       'We want only Thandeka to sing.'

     b. Le yintombi   **u-John**   *kuphela*   a-yi-thanda-yo
       this COP.AUG-9.girl AUG-1a.John only   1.SM-9.OM-like-9REL
       'This is the girl that only John likes.'

4.4   Anti-focus positions

4.4.1   Preverbal subject position of indicatives

Example (34a) illustrates that a preverbal subject of an indicative clause cannot be modified by *kuphela.* The intended meaning can instead be expressed with a cleft (see (34b)) or a VS construction as in (24a) and (24b). (35a-c) shows that wh-phrases share this distributional pattern. Sabel & Zeller (2006) and Zeller (2008) accordingly propose that the preverbal subject position is anti-focus in Zulu. Carstens & Mletshe (2016) report that the facts are the same in Xhosa and adopt the anti-focus account.

(34) a.***U-Sipho**   *kuphela* u-phek-e   i-mi-fino.   **[S]$_F$-V-O*
       AUG-1a.Sipho   only   1.SM-cook-PST AUG-4-vegetables
       [Intended: Only **Sipho** cooked vegetables.] *subject focus*

     b. **(Ng)u-Sipho**   *kuphela* o-phek-e   i-mi-fino.   *(Subject cleft)*
       COP.AUG-1a.Sipho only   REL.1.SM-cook-PST AUG-4-vegetables
       'It was only **Sipho** who cooked vegetables.' *subject focus*

(35) a. ***U-bani**   u-phek-ile?
        AUG-1a.who 1.SM-cook-PST.DJ
        [Intended: Who cooked?]

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[10]This came to our attention through Pietraszko (2017), who shows that subjunctive and relative clause subject positions are focus-tolerant in Zimbabwean Ndebele (another Nguni language, very close to Zulu). She attributes this pattern to their having a smaller clause size than that of indicatives; we discuss this in §5.3.1 (see also Schneider-Zioga 2002, 2007 on Kinande). Thanks also to Karlos Arregi for making us aware of Pietraszko's work.

b. Ng-**u-bani**   o-phek-ile?   *or*   c. Ku-phek-e   (**u-)bani**?
     COP.AUG-1who REL.1.SM-cook- PST.DJ   17.SM -cook-PST   (AUG-)1a.who
     'Who cooked?'   'Who cooked?'

As noted in §4.3, some Zulu and Xhosa speakers permit focused material in the preverbal subject position of a subjunctive or relative, but this is not universal. For other speakers the prohibition illustrated in (34) and (35) holds across clause types, and thus (36a,b) are unacceptable.

(36) a. *Si-funa   ukuba **u-Thandeka**   kuphela a-cul-e   *some speakers*
        1Pl.SM-want-FV that   AUG-1a.Thandeka only   1.SM-sing-SJ
        'We want only Thandeka to sing.'

       b. *Le yintombi   **u-John**   *kuphela* a-yi-thanda-yo
          this COP.AUG-9.girl AUG-1a.John only   1.SM-9.OM-like-9REL
          'This is the girl that only John likes.'

4.4.2 Dislocated expressions are anti-focus

Kuphela and *qha* cannot be associated with a dislocated expression; nor can *wh*-phrases be clitic doubled, indicating that they cannot be dislocated either. Following Buell (2008) and Cheng & Downing (2009), Zeller (2015) proposes that dislocated material in Nguni is anti-focus (as in other languages -- on information-structure effects of clitic doubling in Greek and Spanish see Anagnostopoulou 1994, Schneider-Zioga 1994, and Ordóñez 1997).

(37) U-Sipho   u-yi-phek-ile   i-mi-fino   *kuphela*   [Zulu]
      AUG-1a.Sipho 1.SM-4.OM-cook-PST.DJ AUG-4-vegetables   only
      a. *'Sipho cooked only **the vegetables'**   *association with dislocated OB
      b. ?'Sipho only **cooked** the vegetables.'

(38) *U-Sipho   u-**yi**-phek-ile   **i-ni**?
       AUG-1a.Sipho 1.SM-4.OM-cook-PST.DJ AUG-9.what
       [Intended: What did Sipho cook?]

(39) ***U-Sipho**   *kuphela* ngi-ya-**m**-thand-a.
       AUG-1a.Sipho only   1S-DJ-1.OM-like-FV
       [Intended: I like only Sipho.']

4.4.3 X in [VSX] is anti-focus

Carstens & Mletshe (2015, 2016) show that in active expletive constructions with VSX(Y) word

order, X is generally resistant to focus in Zulu and Xhosa:[11, 12]

(40) *Ku-fund-is-a   u-Sipho   **a-ma-ntombazane** *kuphela*   i-si-Xhosa.   [Xhosa]
    17.SM-learn-CAUS-FV AUG-1a.Sipho AUG-6-girl   only   AUG-7-Xhosa
    [Intended: Sipho teaches only **the girls** Xhosa.]

(41) *Ku-thum-el-e   u-mama   **i-zi-ngane** *kuphela*   i-mali.   [Zulu]
    17.SM-send-APPL-PST AUG-1.mother AUG -10-child only   AUG-9.money
    [Intended: Mother sent only **the children** money.]

(42) *Ku-thum-el-e   u-mama   (u-)**bani**   i-mali?   [Xhosa & Zulu]
    17.SM-send-APPL-PST AUG-1.mother (Aug-)1.who AUG-9.money
    [Intended: Who did mother send money to?]

(40)-(42) illustrate that an element X cannot be focused when it directly follows the postverbal

subject in an expletive construction with VSXY order.[13] This contrasts sharply with the licit

focus of X in [SVXY] constructions (compare with (28a) and (29a)).

4.4.4 Summary and discussion

Table 1 summarizes the way [+focus] material is distributed in Xhosa and Zulu clauses.

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[11] This effect is strongest and most consistent when there is overt material Y following X of VSXY, as in the

ditransitive expletive constructions of (40)-(42). Carstens & Mletshe (2016) report that in a monotransitive VSO

construction, many speakers accept a wh-phrase as O. Other focused material – negative concord items, strict NPIs

and associates of *kuphela* – is generally judged degraded there, however.

[12] (i) illustrates the anti-focus effect for a locative X in a Zulu VSX construction. Many speakers accept association

of adverbial *kuphela* with the post-verbal subject in such a case.

(i) Ku-sebenz-a   u-John   e-ofisi   *kuphela*   [Zulu]
    17. SM-work-FV   AUG-1a.John LOC-5.office only
    a. *'John works only **at the office** '
    b. 'Only **John** works at the office.'

[13] Carstens & Mletshe (2016) report that Y of [VSXY] is focus-tolerant. Since we have other sentence-final focus-

tolerant positions represented in discussion, in the interests of brevity we ignore this case here.

Table 1: **Topography of focus in Zulu and Xhosa**

[+focus]: kuphela *or* qha *acceptable*
i.   Clefted material
ii.   <u>S</u> in [V<u>S</u>O] constructions

Focus-tolerant: kuphela or qha *may associate*
i.   VP internal material of active SV construction: S[_{VP}<u>V(X)(Y)</u>...]
ii.   VP internal material of (impersonal) passive: [_{VP} <u>V_{PASS} (X)(Y)</u>...]
iii.   <u>S</u> of [SV...] in a subjunctive or relative clause, for some speakers

Anti-focus: kuphela *or* qha *not possible; associations banned*

i.   Preverbal subject position is anti-focus -- either of indicatives only or, for some speakers, across the board:
        a. S of [<u>S</u>VO], all clause types, for some speakers, *or*
        b. S of [_{Indic} <u>S</u>VO] for others

ii.   Dislocated expressions are anti-focus: [[S (cl+)V]...<u>DP</u>] and [<u>DP</u> [S (cl+)V...]]
iii.   <u>X</u> in active [_{VP} VS<u>X</u>Y] is anti-focus (especially if there is an overt Y)

One logical possibility is that this focus topography in Nguni plays the roles that *both* focal stress and c-command play in a language like English: thus Nguni focus-sensitive particles are freely associated with any expression in a [+focus] or focus-tolerant position, though perhaps subject to the independent locality constraints of phase-based syntax. Another possibility is that both the focus topography and a version of the PLA are involved. Our task is to determine the facts and their implications.

Since the preverbal subject position of indicatives is anti-focus (as discussed in §4.3.1), the simple test of c-command in (13) (repeated below) is inapplicable in Xhosa and Zulu. Because wh-question words are typically in situ, a translation of (14a) also does not provide a useful test.

(13)   [_{TP} John only [_{vP} <John> likes Mary]].   ✓The only person John likes is Mary.
                                                    ✓John likes but doesn't love Mary.
                                  ≠ only *John* likes Mary, nobody else does.

(14)   a. Who do you only like <who>?   ≠Who is the only person you like?

✓Who do you like but not love?

Recall also from §4.2 that association of *kuphela* or *qha* with non-adjacent, focusable material is considerably less accessible to most speakers than association with an immediate neighbor, giving rise to variations in judgment patterns like (43). Long-distance associations are rejected by many speakers, complicating the investigation of c-command effects (see also the judgments reported on (4), discussed in the introduction and in §4.2).

(43) U-Sipho   u-phek-e   i-qanda   *kuphela.*
      AUG-1a.Sipho   1.SM-DJ-cook-PST   AUG-5.egg   only
      a. 'Sipho cooked only **an egg**.' (he didn't cook anything else)   *All speakers*
      b. 'Sipho only **cooked an egg**.' (he didn't do anything else)   *All speakers*
      c. 'Sipho only **cooked** an egg.' (he didn't eat it)'   *Some speakers*

Nonetheless, those speakers who accept long associations provide several kinds of evidence that associations of *kuphela* and *qha* to material in focus-tolerant positions are subject to the strong PLA in Xhosa and Zulu.

5. Evidence on the PLA in Zulu and Xhosa

5.1 Introduction

In this section we present evidence that association of *kuphela* or *qha* to material in a focus-tolerant position is sensitive only to the intended associate's highest copy. We first point out a strong implication in this direction from the failure of associations when the subject lands in the anti-focus preverbal subject position, [SVO]$_{indic}$. We then add evidence from associations to subjects of subjunctives and relative clauses.

5.2 Evidence from the preverbal subject restriction

Recall that the preverbal subject of an indicative cannot contain *kuphela* or *qha*, nor can adverbial *kuphela* or *qha* associate with a preverbal subject (see (34a) and (3f), repeated below).

(34) a.***U-Sipho**   *kuphela* u-phek-e   i-mi-fino.   **[S]$_F$-V-O*
      AUG-1a.Sipho only   1.SM-cook-PST AUG-4-vegetables
      [Intended: Only **Sipho** cooked vegetables.] *subject focus*

(3) U-Sipho   u-nikez-e   i-zi-nkawu   a-ma-kinati   *kuphela*.   [Zulu]
     AUG-1a.Sipho 1.SM-give-PST   AUG-10-monkey AUG-6-peanuts only
     a. 'Sipho gave the monkeys only **peanuts**.'   *Most speakers*
     b. 'Sipho gave only **the monkeys** peanuts'   *Some speakers*
     c. 'Sipho only **gave** the monkeys peanuts'   *Some speakers*
     d. 'All Sipho did was **give the monkeys peanuts**'   *All Speakers*
     e. 'All that happened was **Sipho gave the monkeys peanuts**'   *Most speakers*
     f. *'Only **Sipho** gave the monkeys peanuts'   *No speakers*

The infelicity of reading (3f) argues that lower copies in a movement chain are not available for

association with *kuphela/qha.* Low subjects, including agentive ones, are always focusable, as

(21) shows (repeated below). While (21) arguably involves adnominal *kuphela,* (44) shows that a

non-adjacent adverbial *kuphela/qha* can also associate with a low subject (see also note 12).

(21) Ku-sebenz-a   **u-John**   *qha* e-ofisi.   [Xhosa]
      17.SM-work-FV   AUG-1a.John only   LOC-5.office
      'Only **John** works in the office.'   *postverbal SU in VS construction w/default AGR*

(44) Ku-sebenz-a   u-John   e-ofisi   *kuphela*   [Zulu]
      17.SM-work-FV   AUG-1a.John LOC-5.office   only
      a. *'John works only **at the office** '
      b. 'Only **John** works at the office.'   *Most speakers*

As previously noted, Carstens & Mletshe (2015, 2016) attribute post-verbal subject focus to

movement into a low Spec, FocusP, while other authors have argued that a sole vP-internal

expression may be interpreted as focused (Cheng & Downing 2012, Halpert 2015). What is

important for present purposes is that *kuphela/qha* freely associates with low subjects. Hence if

adverbial *kuphela/qha* could associate with a low copy in a movement chain, (3f) would be

expected to be licit. We illustrate in (45): FP = vP or FocP, whichever functional category houses

low subjects.

(45) *Association of adverbial* kuphela *with a low copy would avoid the anti-focus restriction on preverbal subjects of indicatives. That this association is impossible supports the Strong PLA.*

[_{Indic} Subj V+T [[_{FP} <Subj> ...] kuphela]]

$$[_{\text{Indic}} \text{ Subj V+T } [[_{\text{FP}} \text{ <Subj> ...] kuphela }]]$$

anti-focus   ✓focus possible

The unacceptability of readings like (3f) is thus a strong indication that associations are computed only in relation to the highest copy of a movement chain, hence the Strong PLA is the condition relevant to Zulu and Xhosa *kuphela*. If this copy is in an anti-focus position, the association fails.

It is important to acknowledge that so far, we have presented no real evidence that associations are based upon *kuphela* c-commanding the associate and not vice versa. Thus it might conceivably be the case that (3f) is illicit because in the intended reading, *kuphela* is c-commanded by an associate in an anti-focus position. The following sections, on subjects of subjunctives and relative clauses, make it clear that associations with material in focus-tolerant positions are dependent upon *kuphela* c-commanding the associate and not vice-versa.

5.3 Long associations with focus-tolerant preverbal subject positions

5.3.1 Focus in the subject of subjunctives

Recall that some speakers allow focused material in the preverbal subject position of a subjunctive. Inclusion of the complementizer *ukuba* in the Zulu example (46) shows that this is not a Raising-to-Object construction; the subject surfaces within the embedded clause.[14]

(46) Si-fun-a   ukuba [[u-Thandeka   *kuphela*] a-cul-e]   *some speakers*
1Pl. SM-want-FV that   AUG-1a.Thandeka   only   1.SM-sing-SJ
'We want only Thandeka to sing.'

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[14] Raising to object is possible and its landing site is focus-tolerant. However judgments on long associations of *kuphela* to an R-t-O expression were murky for reasons unclear to us (though sometimes it seems that simple linear distance has a large impact). We therefore omit them from consideration here.

Pieraszko (2017) reports comparable facts for Ndebele, and proposes that subjunctives lack some structure that is present in indicatives. Indicative subjects may not be focused because they surface in Spec of a TopP projection which is absent in subjunctives. Subjunctive subjects surface in Spec, TP as shown in (47a) versus (47b). Arguing for this difference in size are tell-tale contrasts in negation and agreement. Pietraszko argues that part of the structure present in indicatives is a ΣP, the locus of a negation marker *a-* that precedes subject agreement in indicatives. In subjunctives, where this structural layer is lacking, negation is expressed by a morpheme *nga-* that follows subject agreement. Pietraszko proposes that *nga-* heads a NegP located between TP and vP.

(47) a. Indicative: [$_{CP}$ [$_{\Sigma P}$ Neg1 [$_{TopP}$ SU Top$_{u\phi}$ [$_{TP}$ T [$_{NegP}$ Neg2 [$_{vP}$ …]]]]]]
     b. Subjunctive: [$_{CP}$ [$_{TP}$ SU T$_{u\phi}$ [$_{NegP}$ Neg2 [$_{vP}$ …]]]]]

(48) a. **a**-ngi-phek-i   b.   ngi-**nga**-phek-i
        NEG1-1s.SM- cook- FV   1s.SM-NEG2-cook- FV
        'I don't cook.'   '…that I not cook.'

A systematic difference between indicatives and subjunctives in subject agreement morphology is illustrated in (49a,b). The *u-* agreement marker accompanying third person subjects of noun class 1/1a in indicatives is analyzed by Pieraszko as uPhi of Top, whereas *a-* subject agreement for this class in subjunctives is uPhi of T as shown in (47)a,b (see Schneider-Zioga 2002, 2007 for similar conclusions regarding subject position and clause size in Kinande).

(49) a. u-Thandeka   **u**-ya-phek-a   b. ukuba u-Thandeka   **a**-phek-e
        AUG-1a.Sipho   1.SM-DJ-cook-FV   that   AUG-1a.Thandeka 1.SM-cook-SJ
        'Thandeka is cooking'   '…that Thandeka cook'

5.3.2   *kuphela* at a distance associating with the subjunctive subject

We found that a few of those Xhosa speakers who accept adnominal *kuphela/qha* in preverbal subject position of a subjunctive also tolerate long associations. Importantly, these speakers

accept association at a distance between such a preverbal subject and adverbial *kuphela/qha,* as in (50). We propose that *kuphela/qha* adjoins to TP in such cases, as shown in (51).

(50) Si-funa   ukuba u-Thandeka   a-cul-e   *kuphela*
       1Pl. SM-want-FV that   AUG-1a.Thandeka 1.SM-sing-SJ   only
       a. 'We want Thandeka to only **sing**.'   *All speakers*
       b. 'We want only **Thandeka** to sing.'   *Some speakers*

(51) ...[$_{CP}$ that [$_{TP}$ [$_{TP}$ Thandeka sing] *kuphela*]]

The possibility of this association at a distance makes possible a revealing test: if a vP modifier follows *kuphela,* suggesting that its adjunction site is lower than TP, what readings will be available? (52) shows that association to the subject is impossible in this circumstance.

(52) Si-fun-a   ukuba u-Sipho   a-phek-e   *kuphela* ekitshini
       1Pl.SM.-want-FV that   AUG-1a.Sipho 1.SM-cook-SJ   only   LOC.5.kitchen
       a. 'We want Sipho to only **cook** in the kitchen'
       b. *'We want only **Sipho** to cook in the kitchen'
       c. …[$_{CP}$ that [$_{TP}$ Sipho cook+T [$_{vP}$ <Sipho> <cook> only [$_{PP}$ in the kitchen]]]]

Thus speakers who otherwise accept long associations to subjunctive subjects in Spec, TP rule them out when *kuphela* is unambiguously located in the vP, since vP excludes the highest copy of the associate. The relevance of the PLA to *kuphela* is given support comparable to the evidence of (13) (repeated below) for English.[15]

(13) [$_{TP}$ John only [$_{vP}$ <John> likes Mary]].   ✓The only person John likes is Mary.
                                                               ✓John likes but doesn't love Mary.
                                           ≠ only *John* likes Mary, nobody else does.

5.3.3   Preverbal subjects in relative clauses

Recall that the preverbal subject position of object relative clauses is also focus-tolerant, for some speakers (see (33)b, repeated below). Pieraszko (2017) attributes this to movement-

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[15] It might be argued that the modifiers we have tested are not vP level but VP-level, adjoining lower than the subject's base position and hence that these results are uninformative about high versus low copies. See however §5.2 for clear evidence that c-command of the highest copy is critical to association.

facilitating structure-deletion (Pesetsky's 2016 *exfoliation*), eliminating the obstacles of phasal

ΣP and TopP to object extraction.[16]

(33) b. Le yintombi   u-John   *kuphela* a-yi-thanda-yo
         this COP.AUG-9.girl AUG-1a.John only   1.SM-9.OM-like-9REL
         'This is the girl that only John likes.'

(53) a. Ordinary: [CP C [ΣP Σ   [TopP SU Top [TP T [NegP Neg [vP …]]]]]
      b. Reduced: [CP Obwh C   [TP SU Tφ [NegP Neg [vP …<OB>…]]]]

As was true of subjunctives, long association is acceptable to a few speakers if *kuphela* is final –

analyzable as a TP-adjoined modifier (see (54)). For these speakers, association fails when a vP-

level modifier follows *kuphela* (see (55); these examples are from Xhosa).

(54) U-Nwabisa   u-theng-e   i-moto   u-Sihle   a-yi-qhub-e   kuphela
     AUG-1a.Nwabisa   1.SM-cook-SJ AUG-9.car AUG-1a.Sihle 1.SM-9.OM-drive- PST only
     'Nwabisa bought a car that only **Sihle** drove'

(55) U-Nwabisa   u-theng-e   i-moto   u-Sihle   a-yi-qhub-el-e   kuphela
     AUG-1a.Nwabisa   1.SM-cook-SJ AUG-9.car AUG-1a.Sihle 1.SM-9.OM-drive-APPL-PST only

     i-Uber
     AUG-
     9Uber
   *'Nwabisa bought a car that only **Sihle** drove for Uber'
    'Nwabisa bought a car that Sihle drove only for **Uber**.'

Summing up, speakers who accept long associations to relative clause subjects in Spec, TP rule

them out when *kuphela* is unambiguously vP-internal. Like the subjunctive facts, these data

support the relevance of the PLA to *kuphela*. [17]

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[16] Similarly, Schneider-Zioga (2007) reports that when there is a fronted object operator in Kinande, a wh-subject

may exceptionally surface in preverbal position. She attributes this to competition for the left-periphery.

[17] We have argued that *kuphela* may TP-adjoin. We would expect the same pattern of judgments for *kuphela*

followed by a TP-level modifier, but for reasons of length we leave exploration of this topic for future research.

5.4   Interim conclusions

While §4 demonstrates that the distribution of *kuphela* and *qha* is constrained by the [+/-focus] values of particular clausal positions, this section has shown that there is more to the picture. The ban on long associations to subjects of indicatives provides important confirmation that the Strong version of the PLA holds in Xhosa and Zulu (see (45), repeated below).

(45)   *Association of adverbial* kuphela *with a lower copy would avoid the anti-focus restriction on preverbal subjects of indicatives. That this association is impossible supports the Strong PLA.*

[Indic Subj V+T [[FP <Subj> ...] kuphela]]
        | |
     anti-focus   ✓focus possible

Further, evidence from final vP-level adjuncts has shown that *kuphela* and *qha* must c-command their associates in the focus-tolerant subject positions of subjunctives and relative clauses. We accordingly rule out the following two options of (22):

- Option 1: kuphela/qha need not c-command the associate. ✗

- Option 2: kuphela/qha can associate with a lower copy of a moved expression in Xhosa and Zulu; thus the Weak PLA is correct for these languages. ✗

Since *kuphela* and *qha* appear to the right of their associates, their syntax therefore conflicts with the antisymmetric view that X precedes Y if and only if X or a category that contains it asymmetrically c-commands Y.

6.   The antisymmetry question

How should the conflict between the linear order facts of *kuphela* and *qha* be reconciled with the LCA? One possibility is that the LCA is simply wrong -- our Option 3 from (22).

- Option 3: The strong PLA is correct for Zulu and Xhosa, and therefore the LCA is wrong. Syntax is not antisymmetric.

But there is much compelling cross-linguistic evidence in favor of universal Spec-head-complement order.

As Kayne (1994) points out, the absence of successive cyclic wh-movement to the right is one indicator. Despite the diversity of wh-question strategies in the languages of the world, nothing along the lines of (46) is attested:

(46)   *[$_{CP}$ [$_{TP}$ Mary [$_{VP}$ [$_{CP}$ [$_{TP}$ Calvin ~~what~~ brought] that ~~what~~] thinks] C$_{WH}$ **what]**?

Kayne also points out that while there are numerous verb-second languages, there are no verb-penultimate languages. If V2 Yiddish, exemplified in (47), had a mirror image counterpart in the languages of the world, it would exhibit word order patterns like (48). But nothing of the kind has been identified, to our knowledge.

(47)   Jidn **redn** jidis   hajnt   in a sax lender.   [V2 Yiddish]
       Jews speak Yiddish today   in many countries
       S   V   O   Time   Place

       OK: O **V** S Time Place   *Time S **V** O Place
       OK: Time **V** S O Place   *Place S **V** O Time
       OK: Place **V** S O Time   *O S **V** Place Time

(48)   Hypothetical V-penultimate language, non-occurring:

       OK: S O Time **V** Place   *non-V-penultimate orders
       OK: S Time Place **V** O
       OK: S O Place **V** Time

The West African language Ịjọ also provides persuasive evidence for underlying Spec, head, complement order. Muysken (1988) observes that though there are head-final languages with serial verb constructions (SVCs), they do not have the mirror image order [O_2 V_2 O_1 V_1] of head-initial SVCs. Instead, only the local ordering of verbs and objects is reversed, from [V_1 O_1 V_2 O_2] to [O_1 V_1 O_2 V_2]. Based on a comparison of SVCs in head-final Ịjọ to head-initial languages (see (49)), Carstens (2002) proposes that this typological gap is due to antisymmetry: head-finality in SVCs results from V-movement or object shift around the verb as shown in (50)c.

(49) a. no teki baskita tyari watra.　　　　　　　　　　　　　　　　[Sranan; Muysken 1987]
　　　 no take basket carry water
　　　 'Don't carry water in a basket.'

　　 b. áràụ zu ye ákị buru tèri-mí　　　　　　　　　　　　　　　　[Ijọ; Carstens 2002]
　　　 s/he basket take yam cover- PST
　　　 'S/he covered the yam with a basket.'

(50)　 Word order patterns in serial verb constructions:

a.　　　　　　　　　　　　 b.　　*　　　　　　　　　 c.
　　 take　　　　　　　　　　　　　　　 take　　　 basket
　　　 basket　　　　　　　　　　 basket　　　　　　 take
　　　　 cover　 yam　 yam　　 cover　　　　　 <basket>
　　　　　　　　　　　　　　　　　　　　　　　　 yam
　　　　　　　　　　　　　　　　　　　　　　　　　 cover　 <yam>

　　 SVO languages　　　　 *unattested*　　　　　 *SOV languages*
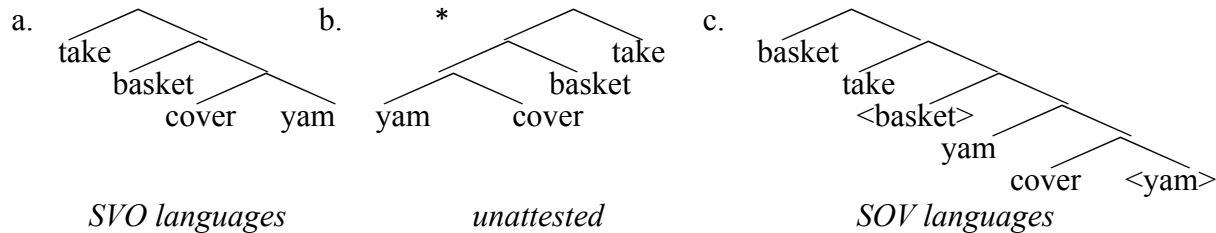
Final-Over-Final Condition effects provide some additional arguments for underlying left-

headedness. Holmberg (2000), Biberauer et al. (2014, 2017), among others, point out that the

patterns [Aux VO], [OV Aux], and [Aux OV] are common, the latter a case of mixed-

headedness. But the logically possible mixed-headedness pattern [VO Aux] is very rare.

Biberauer et al. (2014) propose that this is because head-initial syntax is underlying. An EPP-

type feature ^ must be passed up the tree from head to head to induce surface head-finality in any

category. If V has the feature and raises its object, it can also pass the feature to Aux, which will

raise VP. If V does not, then Aux has no source of this feature (see (51) versus (52)).

Consequently, Aux can follow VP only if VP is also head-final:[18]

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[18] As noted in the introduction, Biberauer et al. (2014) suggest that particles can introduce their own ^ features

because they are acategorial and hence not part of the domains to which the FOFC applies. See §7 for an attempt to

apply this approach to *kuphela/qha* and reconcile it with the Strong PLA effects we have described (and see

Erlewine 2017 for arguments against acategoricity as a generalization about final particles).

(51) Given languages with mixed-headedness, the absence of [V-O-Aux] order suggests that head-finality cannot be base generated.

```
        *     AuxP
            /      \
          VP       Aux
        /    \
       V      O
```
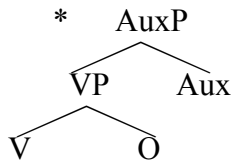
(52) The proposal: Aux may have the feature ^ to raise VP only if acquired from V. In this case, O necessarily also raises.

```
              AuxP
            /      \
          VP        Aux'
        /    \      /      \
       O      V'  Aux^    <VP>
            /    \
          V^     <O>
```
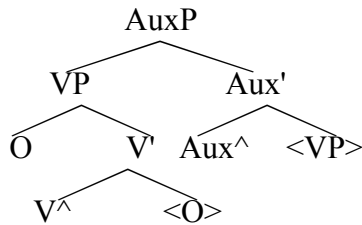
We conclude that antisymmetry captures important cross-linguistic generalizations, and that this greatly outweighs its incompatibility with Zulu and Xhosa 'only'. The question that remains is how to reconcile them.

7.   An antisymmetric approach to *kuphela* and why it fails

7.1   Introduction

This section explores a potential means of explaining apparent Strong PLA effects in Xhosa and Zulu without reliance on surface c-command, thus addressing Option 4 of (22):

- Option 4: An antisymmetric analysis can capture apparent Strong PLA effects differently.

The starting point is a proposal presented in Hsieh & Sybesma (2011) and Erlewine (2017): sentence-final particles are underlyingly initial phase-heads whose complements raise after transfer. We will show that this approach to *kuphela* and *qha* is untenable, leaving us with Option 5.

7.2   Final particles as underlyingly initial phase-heads

As noted in the introduction, Hsieh & Sybesma (2011) and Erlewine (2017) propose that clause-final particles in Mandarin are actually phase heads which precede their complements. As phase

heads, they trigger Transfer of their complements, henceforth phase interiors. Transferred

material is a syntactic atom, so the result is a symmetric and hence unlinearizable representation

<H, α> (Kayne 1994, Moro 2000, Richards 2010, among others). The complement must raise to

break symmetry (see Moro 2000).[19] We illustrate in (53) how this would work for a Xhosa DP

selected by a hypothetical adnominal phase head *kuphela* or *qha*.

(53) a. *Merge order*   b. *Transfer yields non-linearizable symmetry*

```
          XP                                    *  XP
        /    \                                    /    \
  kuphela/qha   DP                          kuphela/qha   α
  only          /  \                        only
          umntana wam
          child    my
  'only my child'
```
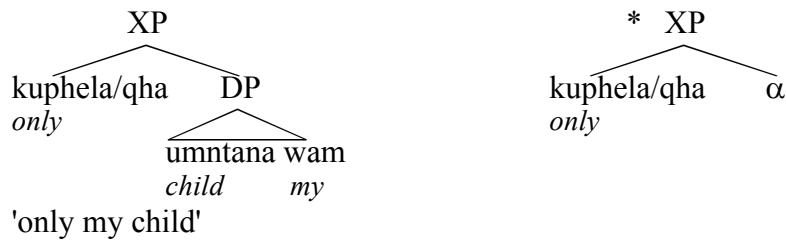
c. *Raising the complement of phase-head* kuphela/qha *solves the problem*

```
         XP
       /    \
      α      X'
           /    \
      kuphela   < α >
      only
```
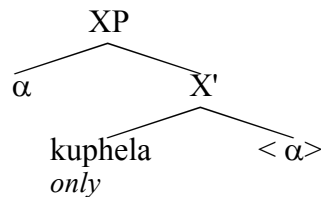
Such an analysis maintains the attractive assumption that the LCA applies uniformly in syntax,

but it is not obvious how to reconcile it with the evidence of the Strong PLA for Xhosa and Zulu

kuphela/*qha* because the configuration it yields is one in which the focus particle no longer c-

commands the highest copy of the focus. The same question comes up with respect to the

Mandarin final particle *eryi* – 'only' that Erlewine (2017) discusses, since he claims it must find

an associate within its scope, which we take to be its c-command domain.

A possible answer to this objection might be provided by the following hypothesis about the

way grammar operates. It could be the case that the PLA ceases to apply to a focus associate

once it undergoes Transfer, within a unit which excludes 'only'. Perhaps, once the constituent

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[19] Erlewine (2017) suggests that many phase heads are silent, obscuring this general pattern.

containing the associate becomes a syntactic atom, the PLA ceases to be relevant because the height of the associate relative to the focus particle (in the case at hand = *kuphela* or *qha*) is no longer visible.

This hypothesis can be tested in English where the Strong PLA is well-established. The prediction is that sensitivity to surface c-command ends when an associate is contained within a phase interior. However, (54) shows that this prediction is not borne out. The shaded material is the TP complement to the embedded phase-head complementizer *that*. This TP is by assumption transferred to Spell Out prior to construction of the higher clause that dominates it, and forms a syntactic atom after Transfer. According to the hypothesis that the Strong PLA no longer holds in this case, *only* should be able to associate with a focused constituent inside the raised TP because it c-commands this constituent prior to atomization and cannot "see" its location afterwards. But in reality, if the embedded CP is raised into that higher clause by passivization, its contents are unavailable for association with the adverbial *only,* as the unacceptable continuation *not books* in (54b) illustrates.

(54)   a. It is *only* believed [CP that Julie likes movies]

        …✓not proven/✓not Sue/✓not books/

     b. [CP That Julie likes movies] is *only* believed [CP that Julie likes movies]

        …✓not proven/✗not Sue/✗not books.

See also Chomsky et al (2017) on the continued availability of transferred material in syntactic relations, and a proposal that the Phase Impenetrability Condition permits this so long as the transferred material is not altered.

We conclude that an analysis of final focus-sensitive particles as phrase-initial phase heads that obligatorily trigger Spell Out and raising to their Specs cannot resolve the conflict between associations and antisymmetry, contra Erlewine (2017).

7.3   Summary

At this point we have explored and rejected four of the five possibilities presented in (22) (repeated below) for explaining the phrase final position of *kuphela* and *qha.* There are no remaining options consistent with a strict version of the LCA of Kayne (1994).

(22)   Analytical possibilities for *kuphela/qha* vis-à-vis the LCA:

- Option 1: *kuphela/qha* need not c-command the associate. ✗

- Option 2: *kuphela/qha* can associate with a lower copy of a moved expression in Xhosa and Zulu; thus the Weak PLA is correct for these languages. ✗

- Option 3: The Strong PLA is correct for Zulu and Xhosa, and therefore the LCA is wrong. Syntax is not antisymmetric. ✗

- Option 4: An antisymmetric analysis can capture apparent strong PLA effects differently.✗

This leaves only option 5.

- Option 5: The Strong PLA is correct for Zulu and Xhosa. Syntax is only weakly antisymmetric in that it allows rightward adjunction. *Kuphela/qha* are right-adjuncts, and hence c-command an associate on their left to which they are adjoined.

That adjuncts are LCA-exempt was proposed independently by Takano (2003) to account for the ability of material inside adjuncts to license NPIs on their left, such as (55). Takano notes that while the judgments are delicate, these examples are at least much better than *Anyone saw nothing.*

(55)   a. John paints pictures at all well only rarely.

        b. Jay tells jokes with any gusto only occasionally.

Carstens (2008) and (2017) presents arguments that post-nominal AP modifiers and demonstratives in Bantu languages may be base generated in high, right-adjoined positions. We consider briefly some recent arguments against immunity of adjuncts to the LCA in §9.

8. Associations to [+focus] positions

We turn now to some intriguing deviations from the patterns we have described. As noted in the introduction, judgments vary on associations to (i) clefted expressions, and (ii) the post-verbal subjects of transitive expletive constructions. Material in these two positions has systematically [+focus] interpretations, as we have demonstrated earlier (see (23a,b), repeated below).

(23) a. Ku-fund-is-a   **i-ndoda   e-nde**   i-si-Xhosa.   *S of VSX is +focus*
   17.SM-learn-CAUS-FV AUG-9.man 9-tall   AUG-7-Xhosa
   'It's **the tall man** who teaches Xhosa.'

   b. **(Ng)u-Sipho**   o-phek-e   i-mi-fino.   *Cleft is +focus*
      COP.AUG-1a.Sipho REL.1.SM-cook-PST AUG-4-vegetables
      'It was **Sipho** who cooked vegetables.'

The argument begins with hyper-raising out of tensed clauses, which is quite productive in Zulu and Xhosa (see Zulu examples (56a,b) from Halpert 2015: 35). (57) shows that it preserves idiomatic readings, a standard diagnostics for true raising constructions ((57a) from Halpert 2015: 36; (57b) from Carstens & Mletshe 2015: 230).

(56) a. Ku-bonakala ukuthi u-Zinhle   u-zo-xova   u-jeqe   [Zulu]
   17.SM-seem   that   AUG-1a.Zinhle 1.SM-FUT-make AUG-1.steamed.bread
   'It seems that Zinhle will make steamed bread.'

   b. u-Zinhle   u-bonakala ukuthi u-zo-xova   u-jeqe
      AUG-1a.Zinhle 1.SM-seem   that   1.SM-FUT-make AUG-1.steamed.bread
      'It seems that Zinhle will make steamed bread.'

(57) a. Iqhina   li-bonakala ukuthi li-phum-ile   embize-ni   [Zulu]
      AUG-5.steinbok 5.SM-seem   that   5.SM-exit-PST   LOC.9.pot-LOC
      'The secret seems to have come out.'
      [Lit: the steenbok seems that exited the cooking pot]

   b. U-Hili   u-bonakala [okokuba u-phum-ile   engcongolwe-ni].   [Xhosa]
      AUG-1a.Hili 1.SM-seem   that   1.SM-exit-PST LOC.10.weeds-LOC
      'The secret seems to have come out.'
      [Lit: Hili (= name of a troll) seems that exited the weeds]

Recall that the preverbal subject position of an indicative cannot host focused material, so we did not utilize subject-to-subject hyper-raising as a test of *kuphela/qha*'s sensitivity to low copies.

The results are ill-formed in both languages (see (58)), but shed no new light since they are consistent with those of raising subjects to preverbal position in a single clause and therefore support the generalization in (45) (repeated below) -- that the preverbal subject restriction for adverbial *kuphela/qha* supports the Strong PLA.

(58) a. *U-Sindiswa   *kuphela/qha* u-bonakala   ukuthi u-zo-cula
         AUG-1a.Sindiswa only   1.SM-seem   that   1.SM-FUT-sing

    b. U-Sindiswa   u-bonakala ukuthi u-zo-cula   *kuphela/qha*
         AUG-1a.Sindiswa   1.SM-seem   that   1.SM-FUT-sing   only

         *'It seems that only **Sindiswa** will sing.'
         OK:'It seems that Sindiswa will only **sing**.'

(45) *Association of adverbial* kuphela *with a lower copy would avoid the anti-focus restriction*
       on preverbal subjects of indicatives. That this association is impossible supports the Strong
       PLA.

      [$_{Indic}$ Subj V+T [[$_{FP}$ <Subj> ...] kuphela]]
                 | |
           anti-focus   ✓focus possible

But hyper-raising can feed clefting, so in principle, this combination of operations provides a further test of the Strong PLA.

    A few speakers we consulted disallow any association in which the word order is inconsistent with *kuphela* or *qha* c-commanding the highest copy of the [+focus] associate such as in the two Xhosa examples below, where *qha* is sandwiched into the lower clause by an embedded locative (59) or time adjunct (60).[20, 21]

(59) Ngu-Sipho   o-xhel-el-w-e   okokuba a-phek-e   *qha* ekhishini
       COP.AUG-1a.Sipho   REL.1.SM-say-APPL-PASS-PST that   1.SM-cook-SJ only LOC.5.kitchen
       a. 'Sipho was told to only **cook** in the kitchen.'
       b. *'It's only **Sipho** who was told to cook in the kitchen.'

---

[20] The complementizer *ingathi* – 'like' is this speaker's preference in 'seems' constructions. There are no obvious syntactic differences correlating with the choice, i.e. idiomatic readings are preserved just as in cases of raising across 'that' complementizers *ukuthi, okuba,* and *okokuba.*

[21] As noted in §1.1, some speakers also permit association with a following expression; an option more widely available in Xhosa than in Zulu, so we have abstracted away from it. It does not correlate in any way with strictness or permissiveness regarding construals with a raised expression.

(60) Ngu-Zinhle   o-bonakala   ingathi u-zo-cula   egadini   *qha* kusasa.
      COP.AUG-1a.Zinhle   REL.1.SM-seem like   1.SM-FUT-sing in.the.garden only in.the.morning
      a. 'It's Zinhle who it seems will sing only **in the garden** in the morning.'
      b. 'It's Zinhle who it seems will only **sing** in the garden in the morning.'
      c. *'It's only **Zinhle** who it's seems will sing in the garden in the morning.'

But other speakers were more liberal in their judgments on these cases, permitting at least some associations where *kuphela* or *qha* c-commands a low copy of the associate surfacing in a [+focus] position, at least some of the time, such as (59b) and (60c). Variations of this kind occurred somewhat unpredictably across individuals, across structurally comparable examples, and across sessions with the same individual. Given a 1-5 scale, speakers tended to give examples that violate the strong PLA a middling rating of 3 -- thus they are not fully acceptable but not entirely excluded either. However, judgements were quite variable and occasionally more positive than 3.

    Last but not least, in a few instances, some Xhosa and Zulu speakers accepted associations in which *kuphela* and *qha* c-command no copy of an associate in a [+focus] position; see (61) and (62).

(61) Ngu-Bill   o-xel-el-w-e   ngu-Mary   ukuba   [Xhosa]
      COP.AUG-1a.Bill   REL.1.SM- say-APPL-PASS-PST   by.AUG-1a.Mary that

      u-ya   ku-sebenza *kuphela* de kube malanga
      1.SM-go 15-work   only   until   morning
      a. 'It's only **Bill** who was told by Mary that she would work all night'
      b. 'It's Bill who was told by Mary that she would only **work** all night'

(62) Ku-tsho   u-John   ukuba a-ba-ntwana   ba-zo-cula   *kuphela* kusasa   [Xhosa]
      17.SM-say. PST AUG-1a.John that   AUG-2-children 2.SM-FUT-sing only   in.the.morning
      a. 'It's only **John** who said that the children would sing in the morning.'
      b. 'It's John who said that the children would only **sing** in the morning.'

Curiously, if *kuphela* or *qha* is located in an island, judgments remain about the same:

(63) NguSifiso   o-buz-e   ukuthi ngubani   o-theng-el-e   [Zulu]
      COP.AUG-1a.Sifiso REL.1.SM-ask-PST that   COP.AUG.1who REL.1.SM-buy-APPL-PST

      a-ba-ntwana   *kuphela* i-zi-pho.
      AUG-2-children only   AUG-10-gifts.

a. It's Sifiso who asked who bought gifts only **for the children**.
b. ??It's only **Sifiso** who asked who bought gifts for the children.

(64) Ku-hamb-e   u-Mthuli   ukuze a-yo-thenga i-mi-fino   *kuphela* esitolo.   [Zulu]
17.SM-go. PST AUG-1a.Mthuli so.that 1.SM-FUT-buy AUG-4-greens only   LOC.7.store

  a. Mthuli left in order to buy only **green vegetables** at the shop.

  b. ??Only **Mthuli** left in order to buy green vegetables at the shop.

It seems clear to us that occupancy of a [+focus] position has a strong effect in these cases. We are not sure whether to attribute this phenomenon entirely to difficulty in isolating two foci in a single clause, or whether a second strategy exists for association at a distance with a strongly [+focus] position. Recall from §4.4.4 our conjecture that as a logical possibility, the clausal topography of focus in Nguni might play the roles that *both* focal stress and c-command play in a language like English. The pattern of judgements on association to material in focus-tolerant positions did not bear this out as a general conclusion, but for speakers who accept associations without c-command to material in [+focus] positions like (61)-(64), the possibility seems worth considering. On the other hand, the fact that acceptance is only middling needs to be explained if such an alternative strategy exists. We leave further exploration to future research.

9.   Conclusion

Association of the particles *kuphela* and *qha* is constrained by the topography of Nguni focus, by a preference for string-adjacency consistent with a strategy of constituent-marking, and by a need to c-command an associate in surface syntax, modulo some anomalies associated with clefted material and [+focus] post-verbal subjects of TECs.

The fact that *kuphela* and *qha* are generally to the right of their associates raises subtle analytical challenges. On close examination the facts are not compatible with a strict version of the LCA.

We propose that *kuphela* and *qha* are adjunct particles, and that at least some adjuncts fall outside the purview of the LCA (see Takano 2003, Carstens 2008 and 2017).

The claim that adjuncts may be exempt from antisymmetry is a controversial one. Sheehan (2017) considers this possibility in relation to the order [V-O-Adverb], putting it aside in favor of a derivation consistent with the LCA and the FOFC: she argues for independent movements of the verb and its object across the adverb, from a position to its right. As she points out, Cinque (1999) analyzes adverbs as Specs of functional categories, and hence they always merge to the left of heads in his view.

The association requirements of adverbial and adnominal *kuphela* are important tests of the generality of these claims. The results we have described argue against their adoption as universals.

These results also argue against a proposal of Bruening (2014) that effects which are standardly analysed in terms of c-command are in fact due to precedence plus a domain restriction *phase command*, under which a bindee must be included in the same phase as its binder. In (66)a, the pronoun *she* illicitly binds the R-expression *Bernice* because it precedes it and no phasal node separates them ((65) and (66) are from Bruening 2014:344).

(65) a. *She$_i$ likes Bernice$_i$'s friends
      b. Her$_i$ mother likes Bernice$_i$'s friends

(66) a. Binding Principle C: an R-expression may not be bound.
      b. A binds B iff A and B are coindexed and A precedes and phase-commands B (Bruening 2014)

      c. Phase-command: X phase-commands Y iff there is no ZP, ZP a phasal node, such that ZP dominates X but does not dominate Y.

Clearly, the association facts of *kuphela* and *qha* are at odds with Bruening's proposal to recast c-command in terms of precedence.

We leave a number of questions to future research, among them an explanation for the apparent exemption of adjuncts/adjunct particles like *kuphela* and *qha* from the LCA, and the important and intriguing task of clarifying how associations work when the associate is in a [+focus] position and surface c-command is lacking, for speakers who allow this.

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Glosses: 1S = 1st person singular; APPL = applicative; AUG = augment; COP = copulative prefix; DJ = disjoint verb form; EXPL = expletive; FV = final vowel; INF = infinitive; LOC = locative marker; NEG = negation; OM = object marker; PASS = passive; POSS = possessive marker; PST = past tense; REL = relative marker; RS = relative suffix; SM = subject marker.