



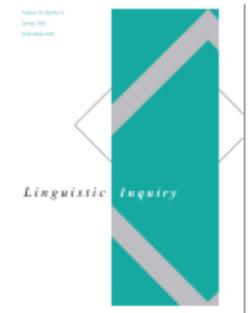
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‘Only’ in Nguni: A Phrase-Final Particle Meets Antisymmetry Theory

Vicki Carstens
Jochen Zeller

This article investigates the syntax of the phrase-final focus particles *kuphela* and *qha* ‘only’ in Zulu and Xhosa (Nguni; Bantu). We show that *kuphela*’s and *qha*’s associations with a focused constituent respect the complex topography of information structure in Nguni and, like English *only*, a surface c-command requirement. However, unlike English *only*, the Zulu and Xhosa particles typically *follow* the focus associate they c-command, a fact that poses a serious challenge for Kayne’s (1994) antisymmetry theory. We demonstrate that the Nguni facts are incompatible with recent Linear Correspondence Axiom-inspired approaches to phrase-final particles in other languages and, after weighing the merits of several approaches, we conclude that *kuphela* is an adjunct and that syntax is only weakly antisymmetric: adjuncts are not subject to the LCA.

Keywords: focus particles, information structure, clefts, Linear Correspondence Axiom, c-command, Bantu, antisymmetry

1 Introduction

1.1 Overview

In this article, 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; the same is true of *qha* (focus associates boldfaced). While

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¹ Zulu (or *isiZulu*) and Xhosa (*isiXhosa*) are Bantu languages spoken primarily in South Africa. They belong to the Nguni group, 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.

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* [Zulu & Xhosa]
 AUG-1a.Sindiswa 1.SM-cook-APPL-PST AUG-1a.Sabelo only
 a-ma-qanda.
 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]
 1SG.SM-stab-FV AUG-5.rest only
 ‘I’m only **taking a break**.’
- (3) U-Sipho u-nikez-e i-zin-kawu 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-1aBusi AUG-7-Zulu only
- a. ‘Busi was taught only **Zulu**.’ *All speakers*
- b. ‘Only **Busi** was taught Zulu.’ *Most speakers*
- c. ‘All that happened was **Busi was taught Zulu**.’ *Most speakers*

² Glosses: Arabic numbers = noun classes (number + gender) unless followed by SG or PL, in which case they indicate person features. APPL = applicative; ASS = associative marker; AUG = augment; CAUS = causative; COP = copulative prefix; DEM = demonstrative; DJ = disjoint verb form; FUT = future tense; FV = final vowel; LOC = locative marker; NEG = negation; OM = object marker; PASS = passive; PL = plural; POSS = possessive marker; PRO = pronoun; PST = past tense; REL = relative marker; SG = singular; SJ = subjunctive; SM = subject marker. Examples are not marked for tone.

To collect data, we constructed a set of Xhosa and Zulu sentences with the help of native speakers. These and subsequent speakers explored potential ambiguities connected with *kuphela/qha*, and the allowable meanings for variations in which they were repositioned elsewhere in the clause. We provide information on acceptance rates for examples in footnotes.

In our study, eleven out of fourteen Xhosa speakers accepted associations at a distance such as (4b), as did three out of five Zulu speakers for (3b–c). Associations with nonadjacent 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). Regarding (3b), although there are reports in the Nguni syntax literature that O₂ of [SV O₁ O₂] cannot be focused, we did not find this; see section 4.3 for details.

(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); however, focus association with a nonadjacent 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 section 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, e.g., Aoun and Li 1993, Büring and Hartmann 2001, Erlewine 2014a,b, Tancredi 1990a). The fact that associates of *kuphela* and *qha* precede them therefore raises interesting theoretical issues connected with the antisymmetry hypothesis of Kayne (1994), which states that high-to-low relations map invariantly into left-to-right linear order, and with the related Final-over-Final Condition of Biberauer, Holmberg, and Roberts (2014) and Sheehan et al. (2017).

In the article, we 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 both crosslinguistic evidence for antisymmetry 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 the S of active [VSX] constructions, especially transitive expletive constructions. We found judgments on association at a distance to material in such positions to be quite unpredictable. Among speakers who accept these associations, 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 evaluating when and where exclusive focus readings are licit within the same utterance (see section 8 for some discussion). Associations to positions that can host either

³ The analysis contrasts with Cardinaletti’s (2011) approach to deriving the location of final particles in Italian; see below (5).

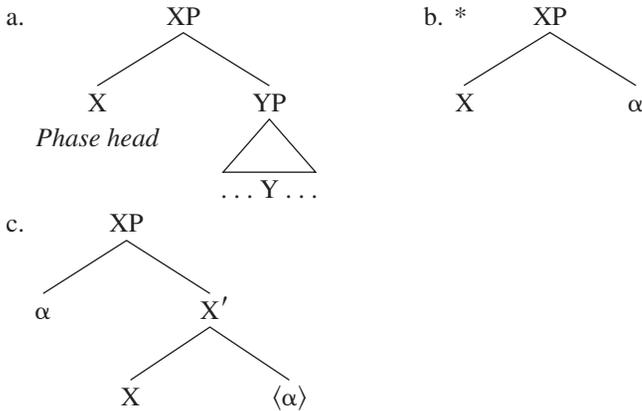
focused or nonfocused material (henceforth, *focus-tolerant positions*) are our primary concern because judgments are clearer on them. We found that they consistently require surface c-command, therefore providing some novel evidence on right-edge particles and the mapping of hierarchy to word order.

It has previously been recognized that right-edge particles appear to violate both antisymmetry theory and the related Final-over-Final Constraint/Condition (FOFC) of Holmberg (2000), Biberauer, Holmberg, and Roberts (2014), and Sheehan et al. (2017), among others. Our article contributes to a debate over why this is so. FOFC rules out head-final over head-initial configurations like $*[_{XP} [_{YP} Y \text{ Complement}] X]$ within specific domains with shared categorial features—extended projections in the sense of Grimshaw (1991). Within such domains, Biberauer, Holmberg, and Roberts (2014) propose that head-finality is due to an EPP-like feature \wedge . This is passed up the tree from head to head, deriving surface head-finality from universal head-complement order in the base.

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

Erlewine (2017) and Hsieh and Sybesma (2011) 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 unanalyzable 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).

(5) *Transfer creates nonlinearizable symmetry, which movement breaks*



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 variety of languages.

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 Specs of functional categories and that the material to their left arrives at its surface position through remnant movement across them. Like the movement analyses of Erlewine (2017) and Hsieh and Sybesma (2011), this approach cannot be extended to word order involving right-edge *kuphela* and *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 section 5, we motivate adjunction to TP (6c). In sections 5, 7, and 8, we argue in detail for the superiority of (6) over other possible approaches.

- (6) a. [_{DP} [_{DP} u-Sipho] *kuphela*]
 AUG-1a.Sipho only
 ‘only Sipho’
 b. [_{vP} [_{vP} hlab-a i-khefu] *kuphela*]
 stab-FV AUG-5.rest only
 ‘only taking a break’
 c. [_{TP} [_{TP} . . .] *kuphela*]

It is worth noting that Xhosa speakers also consistently approve construals in which clause-medial *kuphela* precedes its associate, as in (7a) and (7bi). While there is less consistency on this point among Zulu speakers,⁵ we have found exemplars online, including (7c).⁶

- (7) a. U-Zinhle u-zo-cul-a *kuphela/qha kusasa.* [Xhosa]
 AUG-1a.Zinhle 1.SM-FUT-sing-FV only in.the.morning
 ‘Zinhle will sing only **in the morning**.’
 b. U-Zinhle u-fund-is-a a-ba-ntwana *kuphela* i-si-Xhosa.
 AUG-1a.Zinhle 1.SM-learn-CAUS-FV AUG-2-child only AUG-7-Xhosa
 i. ‘Zinhle teaches the children only **Xhosa**.’ [Xhosa]
 ii. ‘Zinhle teaches only **the children** Xhosa.’ [Zulu & Xhosa]

⁵ All Xhosa speakers seem to accept examples along the lines of (7a) and (7bi); three out of seven Zulu speakers in our study accepted them.

⁶ This example is taken from <http://isizulu.news24.com/Ezemidlalo/U-Erasmus-uphika-eyokunaka-owomkhaya-nowe-CAF-kuphela-20151022>; last accessed 4 June 2017.

- c. A-si-nak-ile *kuphela* **u-m-dlalo** **wo-m-khaya** [Zulu]
 NEG-1PL.SM-focus-PST.DJ only AUG-3-game 3.ASS+AUG-3-family.members
nowe-CAF.
 or-CAF
 ‘We are not focusing only on **the derby match or the CAF.**’

As noted above, the theoretical goal of our article is to determine whether *kuphela* and *qha* must c-command their associates in surface syntax in Xhosa and Zulu. If they need not, then it is possible that the order [*kuphela/qha* > associate] is the underlying order, with the order [associate > *kuphela*] derived from it by raising of the associate. If, on the other hand, *kuphela* and *qha* must c-command their associates’ highest copy, then the existence of both orders entails that *kuphela* and *qha* may adjoin either on the left or on the right. We explore the c-command facts in detail in section 5 and their bearing on the underlying order in section 7.

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, and they focus on associations to preceding material for the same reason and because such associations constitute the challenge to antisymmetry theory that we wish to explore.

1.2 A Note on Speakers’ Judgments

At the request of an anonymous reviewer, we provide information on acceptance rates for key examples in footnotes. It is important for the figures we report to be interpreted in the context of restrictions relevant to them. The task of assembling evidence on c-command and associations at a distance is complex, for Zulu and Xhosa. Not all speakers accept associations at a distance, and for those who do, there is some variation in judgments across examples. Also, as we show in section 4, focused constituents are barred from many syntactic positions that would otherwise be very desirable to test. For each speaker we set out to interview, we first ascertained whether she or he accepted associations between adverbial *kuphela/qha* and a distant DP, in general. Then, with speakers who qualified by passing this first test, we checked whether they would accept focused material including adnominal *kuphela/qha* in a given position of interest, call it P. If they did, we next checked whether these speakers found associations at a distance between material in P and the adverbial *kuphela/qha* felicitous. Only then could we check for a surface c-command requirement with speakers who had not been excluded by negative judgments on the foregoing matters. Unanticipated difficulties with syntactic positions and long associations to them sent us back to the drawing board many times.

1.3 Structure of the Article

Section 2 provides a little background on the interpretation of focus and expressions meaning ‘only’. Section 3 reviews the relevant notions of antisymmetry theory. Section 4 surveys the topography of focus in Nguni and its relevance to *kuphela* and *qha*. Section 5 presents evidence that the two particles must c-command the head of their associate’s chain in surface syntax, if the associate is in a focus-tolerant location. Section 6 details the reasons why we do not reject

antisymmetry theory, despite its incompatibility with the syntax of *kuphela* and *qha*. Section 7 provides arguments against the approach in Erlewine 2017 and Hsieh and Sybesma 2011. Section 8 discusses associations of *kuphela* and *qha* with material in [+focus] positions. Section 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:
- a. Ordinary semantic value: the individual Mary
 - b. Focus semantic value: the set of alternative individuals {Mary⁸, 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 and Hartmann 2001, Erlewine 2014b, Jackendoff 1972, König 1991, Krifka 2006, Rooth 1985, 1992, among many others). Exclusive focus markers like *only* universally

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* with *[Her HUSBAND]_F likes the meatballs*).

In contrast, we have not adopted F-marking for focused material in our Nguni examples (which we mark with boldface 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 section 4.

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.

- (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*.

However, there is evidence of crosslinguistic variation on this important point. As Erlewine (2014b) notes, Barbiers (1995) and Jacobs (1983) report that German and Dutch have expressions meaning ‘only’ that can associate through reconstruction, unlike English *only*. In (16a) and (16b), the expressions *twee boeken* ‘two books’ and *jedes Buch* ‘every book’, 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) a. [TWEE]_F boeken, denk ik dat Jan *pas/maar* ___ heeft gekocht. [Dutch]
 two books think I that Jan just/only has bought
 ‘TWO books, I think that Jan has bought *just/only* ___.’
 (Erlewine 2014b:187, based on Barbiers 1995:68)
- b. Jedes [BUCH]_F hat der Hans *nur* gelesen . . . (ZEITSCHRIFTEN [German]
 every book has the Hans only read magazines
 hat er keine gelesen.)
 has he none read
 ‘It was only every BOOK that Hans read. He didn’t read any MAGAZINES.’
 (Erlewine 2014b:188)

Given this point of contrast, we propose that there are weak and strong versions of the PLA as shown in (17).

- (17) a. *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 2014b:115)
- b. *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 article 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

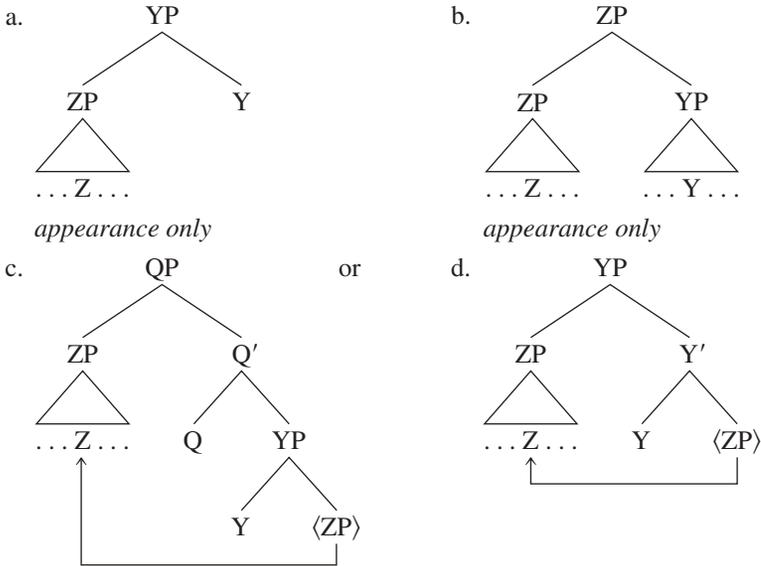
Kayne (1994) has proposed the Linear Correspondence Axiom (LCA): that is, that hierarchy maps invariantly into linear order. For expository convenience, we adopt the formulation in (18).

- (18) *Linear Correspondence Axiom*
 A lexical item α precedes a lexical item β iff

- a. α asymmetrically c-commands β or
 b. an XP dominating α asymmetrically c-commands β .
 (Hornstein, Nunes, and Grohmann 2005:227)

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)*



3.2 Kuphela/Qha, Antisymmetry, and the Principle of Lexical Association

As noted, *kuphela* typically follows the associate in Zulu (see (20)–(22)) and this order is very common in Xhosa too, raising LCA-related issues.

- (20) U-Sipho u-nikez-e **i-zin-kawu** *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.’
- (21) Ku-sebenz-a **u-John** *kuphela* e-ofisi. [Zulu]
 17.SM-work-FV AUG-1a.John only LOC-5.office
 ‘Only **John** works in the office.’
- (22) U-Sipho **u-yi-phek-ile** *kuphela* i-mi-fino. [Zulu]
 AUG-1a.Sipho 1.SM-4.OM-cook-PST.DJ only AUG-4-vegetable
 ‘Sipho only **cooked** the vegetables.’

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* 'vegetables' has been right-dislocated (as indicated by the corresponding object marker of class 4 that is attached to the verb⁹). 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 antisymmetry theory predicts that they must precede their associates. But in examples like (20)–(22), the associate precedes *kuphela/qha*. Under LCA assumptions, this order entails that the associate asymmetrically c-commands *kuphela/qha* and the Strong PLA accordingly cannot be met. As a consequence, if there is evidence that the Strong PLA governs associations in Xhosa and Zulu, a reassessment of antisymmetry is called for—either rejection or weakening of the idea that high to low maps invariantly from 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.

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

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

(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 (Carstens 2008, 2017, Takano 2003). *Kuphela/Qha* are adjuncts and can c-command an associate to the left.

⁹ See Adams 2010, Buell 2005, Cheng and 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.

- b. Ng-**u-m-fazi** o-w-a-bon-a i-n-taka.
 COP-AUG-1-woman REL-1.SM-PST-see-FV AUG-9-bird
 ‘It was **the woman** who saw the bird.’
 (Carstens and Mletshe 2015:190, glosses adapted)
- (25) a. Kw-enzek-e ntoni? [Xhosa]
 17.SM-happen-PST 9.what
 ‘What happened?’
 [Lit.: ‘(There) happened what?’]
- b. #Ku-cul-e **u-Sindiswa** a-ma-culo.
 17.SM-sing-PST AUG-1a.Sindiswa AUG-6-songs
 ‘It was **Sindiswa** who sang songs.’ (infelicitous in context)
 [Lit.: ‘(There) sang Sindiswa songs.’]
- c. #Ng-**u-Sindiswa** o-cul-e a-ma-culo.
 COP-AUG-1a.Sindiswa REL.1.SM-sing-PST AUG-6-songs
 ‘It was **Sindiswa** who sang songs.’ (infelicitous in context)
 (Carstens and Mletshe 2016:797, glosses adapted)
- (26) a. Ku-fund-is-a **i-n-doda en-de** *kuphela* i-si-Xhosa. [Xhosa]
 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 AUG-7-Xhosa
 ‘Who teaches Xhosa?’
- (27) a. (Ng-)**u-Sipho** *kuphela* o-phek-e i-mi-fino. [Xhosa]
 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 postverbal position (see, e.g., Buell 2009, Cheng and Downing 2009), but this is not absolute, as (28b) and (29b) illustrate.

- (28) a. U-Sipho u-fund-is-a **a-ba-ntwana** *kuphela* [Zulu & Xhosa]
 AUG-1a.Sipho 1.SM-learn-CAUS-FV AUG-2-children only
 i-si-Xhosa.
 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**? [Zulu]
 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 (28b) or (3b) (repeated below), are sometimes judged as ambiguous, allowing for *kuphela* to associate with various constituents of the vP (for details on these judgments, see footnote 2).

- (3) U-Sipho u-nikez-e **i-zin-kawu** a-ma-kinati *kuphela*. [Zulu]
 AUG-1a.Sipho 1.SM-give-PST AUG-10-monkey AUG-6-peanuts only
 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** [Zulu & Xhosa]
 17.SM-learn-CAUS-PASS-FV AUG-2-children AUG-7-Xhosa
kuphela.
 only
 ‘The children are taught only **Xhosa**.’
- (31) a. Ku-fund-is-w-a **bani** i-si-Xhosa? [Zulu & 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**? [Zulu]
 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 (these data are from Xhosa, but Zulu patterns the same way; Zeller 2008).

- (32) a. Kw-enzek-e ntoni? [Xhosa]
 17.SM-happen-PST 9.what
 ‘What happened?’
 [Lit.: ‘(There) happened what?']
- b. Ku-lil-e u-Sindiswa. [Xhosa]
 17.SM-cry-PST AUG-1a.Sindiswa

or

- c. Ku-phek-e (u-)bani?
 17.SM-cook-PST AUG-1a.who
 ‘Who cooked?’

As noted in section 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 (see footnote 10). For other speakers, the prohibition illustrated in (34) and (35) holds across clause types, and thus (36a–b) are unacceptable.

- (36) a. (*)Si-fun-a ukuba **u-Thandeka** *kuphela* a-cul-e. [Xhosa]
 1PL.SM-want-FV that AUG-1a.Thandeka only 1.SM-sing-SJ
 ‘We want only **Thandeka** to sing.’
 b. (*)Le y-i-n-tombi **u-John** *kuphela* a-yi-thand-a-yo.
 9.DEM COP-AUG-9-girl AUG-1a.John only 1.SM-9.OM-like-FV-REL
 ‘This is the girl that only **John** likes.’

4.4.2 *Dislocated Expressions Are Antifocus* *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 and Downing (2009), Zeller (2015) proposes that dislocated material in Nguni is antifocus (as in other languages; on information structure effects of clitic doubling in Greek and Spanish, see Anagnostopoulou 1994, Ordóñez 1997, Schneider-Zioga 1994).

- (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**.’
 b. ?‘Sipho only **cooked** the vegetables.’
 (38) *U-Sipho u-yi-phek-ile **i-ni**? [Zulu]
 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. [Zulu]
 AUG-1a.Sipho only 1SG.SM-DJ-1.OM-like-FV
 [Intended: ‘I like only **Sipho**.’]

4.4.3 *X in [V SX] Is Antifocus* Carstens and Mletshe (2015, 2016) show that in active expletive constructions with [V SX(Y)] word order, X is generally resistant to focus in Zulu and Xhosa.¹¹

¹¹ As for why this might be so, Carstens and Mletshe (2015) propose that a low Focus head marks the higher argument [+focus] and the lower [–focus] (the latter might be better understood as covert focus-background marking; see Grubic 2015, Zimmermann 2016 on this). Carstens and Mletshe (2016:796) report a suggestion by Julie Anne Legate that an expression following a [+focus] constituent might be destressed and that this yields the [–focus] interpretation. We leave

Table 1

Topography of focus in Zulu and Xhosa

[+focus]: kuphela or qha acceptable

- a. Clefted material
- b. S in [VSO] constructions

Focus-tolerant: kuphela or qha may associate

- a. VP-internal material of active SV construction: S [_{VP} V(X)(Y) . . .]
- b. VP-internal material of (impersonal) passive: [_{VP} V_{PASS} (X)(Y) . . .]
- c. S of an intransitive expletive construction: [VS . . .]
- d. S of [SV . . .] in a subjunctive or relative clause, for some speakers

Antifocus: kuphela or qha not possible; associations banned

- a. Preverbal subject position is antifocus—either of indicatives only or, for some speakers, across the board:
 - i. S of [SVO], all clause types, for some speakers, *or*
 - ii. S of [_{Indic} SVO] for others
- b. Dislocated expressions are antifocus: [[S (cl+)V] . . . DP] and [DP [S (cl+)V . . .]]
- c. X in active expletive constructions [VSXY] is antifocus (especially if there is an overt Y)

Recall also from section 4.2 that association of *kuphela* or *qha* with nonadjacent, focusable material is considerably less accessible to most speakers than association with an immediate neighbor, giving rise to variations in judgment patterns like those in (43). All long-distance associations are rejected by some speakers (see footnote 2), complicating the investigation of c-command effects (see also the judgments reported in (4), discussed in sections 1 and 4.2).

- (43) U-Sipho u-phek-e i-qanda *kuphela*. [Zulu]
 AUG-1a.Sipho 1.SM-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-distance 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 Principle of Lexical Association 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 antifocus preverbal subject position, [_{Indic} SVO]. We then add evidence from associations to subjects of subjunctives and relative clauses.

- (49) a. U-Thandeka u-ya-phek-a. [Zulu & Xhosa]
 AUG-1a.Thandeka 1.SM-DJ-cook-FV
 ‘Thandeka is cooking.’
 b. . . . ukuba u-Thandeka a-phek-e
 that AUG-1a.Thandeka 1.SM-cook-SJ
 ‘ . . . that Thandeka cook’

5.3.2 *Kuphela at a Distance Associating with the Subjunctive Subject* We found that some Xhosa and Zulu speakers who accept adnominal *kuphela/qha* in preverbal subject position of a subjunctive also tolerate long-distance associations between such a preverbal subject and adverbial *kuphela/qha*, as in (50).¹⁴ We propose that such associations are possible because *kuphela/qha* may adjoin to TP, as shown in (51).

- (50) Si-fun-a ukuba u-Thandeka a-cul-e *kuphela*. [Xhosa]
 IPL.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-level modifier follows *kuphela*, restricting *kuphela* to a lower adjunction site, what readings will be available? We take nonselected locatives to be vP-level modifiers in Nguni. Example (52) from Xhosa shows that association to the subject is impossible when a locative follows *kuphela*.¹⁵

- (52) Si-fun-a ukuba u-Sipho a-phek-e *kuphela* [Xhosa]
 IPL.SM-want-FV that AUG-1a.Sipho 1.SM-cook-SJ only
 e-khitshi-ni.
 LOC-5.kitchen-LOC
 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]]]]

¹⁴ Six of the nine Xhosa speakers who permit focused material in subjunctive clause subject position also permit long-distance association of *kuphela* to it, with the restriction exemplified in (52). Of the five Zulu speakers who permit focused material in subjunctive clause subject position, three accept long-distance associations to the subject, with the same requirement of surface c-command.

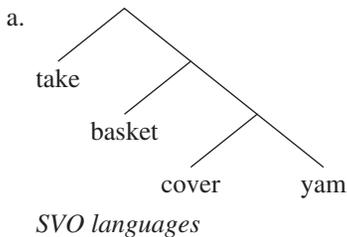
¹⁵ An anonymous reviewer suggests that *ekhitshini* ‘in the kitchen’ might be TP-adjoined, as locatives are versatile in their attachment. The results we report argue that this is not the case, since *ekhitshini* blocks *kuphela* from associating with the subject in Spec,TP. It might alternatively be argued that the modifiers we have tested are not vP-level but VP-level, adjoining lower than the subject’s base position—hence, that these results are uninformative about high vs. low copies. But when *kuphela* immediately follows a verb, that verb must appear in the so-called disjoint form, which is a standard diagnostic of the Nguni syntax literature that a postverbal modifier is outside VP (see, e.g., Buell 2005, Zeller 2012). Anticipating our ultimate conclusion that right-adjunction is possible and in the interests of brevity, it is also worth noting that this discussion does not engage with the antisymmetric idea that such a right-hand locative modifier has been raised across by the clause that it follows.

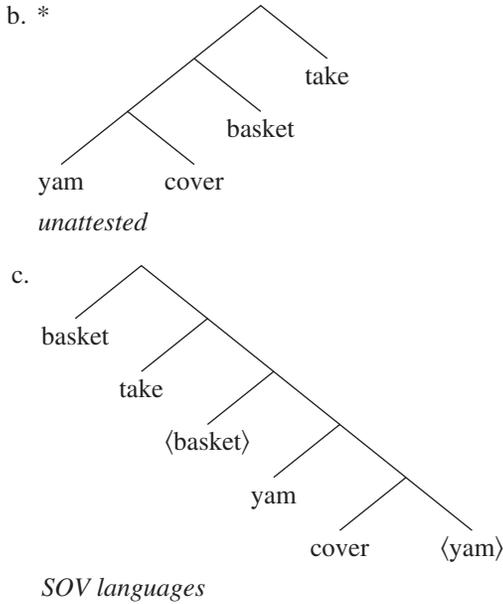
- (57) Jochen lässt das Auto heute in der Garage. [V2 German]
 Jochen leaves the car today in the garage
 S V O Time Place
 a. Das Auto lässt Jochen heute in der Garage. OK: O V S Time Place
 b. Heute lässt Jochen das Auto in der Garage. OK: Time V S O Place
 c. In der Garage lässt Jochen das Auto heute. OK: Place V S O Time
 *non-V2 orders
- (58) *Hypothetical V-penultimate language, nonoccurring*
 OK: S O Time V Place
 OK: S Time Place V O
 OK: S O Place V Time
 *non-V-penultimate orders

The West African language Ijò 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 $[O_1 V_1 O_2 V_2]$. On the basis of a comparison between SVCs in head-final Ijò and SVCs in head-initial languages (see (59)), 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 (60c).

- (59) a. No teki baskita tyari watra. [Sranan]
 no take basket carry water
 ‘Don’t carry water in a basket.’
 (Muysken 1988:71)
- b. Áràṽ zu ye ákì buru tèri-mí. [Ijò]
 she/he basket take yam cover-*PST*
 ‘She/He covered the yam with a basket.’
 (Carstens 2002:3)

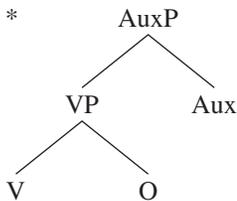
(60) *Word order patterns in serial verb constructions*





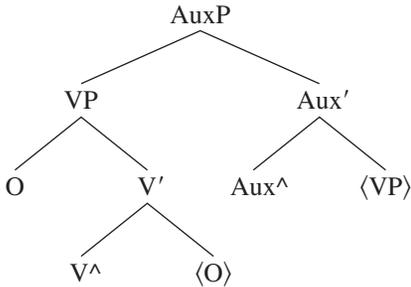
FOFC effects provide some additional arguments for underlying left-headedness. Holmberg (2000), Biberauer, Holmberg, and Roberts (2014), and Sheehan et al. (2017), among others, point out that the patterns [Aux VO], [OV Aux], and [Aux OV] are common, the latter a case of mixed-headedness. But the logically possible mixed-headedness pattern [VO Aux] is very rare. Biberauer, Holmberg, and Roberts (2014) propose that this is because head-initial syntax is underlying. An EPP-type feature $\hat{}$ 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 (61) vs. (62)). Consequently, Aux can follow VP only if VP is also head-final.¹⁷

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



¹⁷ As noted in section 1, Biberauer, Holmberg, and Roberts (2014) suggest that particles can introduce their own $\hat{}$ features because they are acategorial and hence not part of the domains to which FOFC applies. See section 7 for an attempt to apply this approach to *kuphela/gha* and to reconcile it with the Strong PLA effects we have described (and see Erlewine 2017 for arguments against acategoricity as a generalization about final particles).

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



We conclude that antisymmetry captures important crosslinguistic generalizations and that this greatly outweighs its incompatibility with Zulu and Xhosa ‘only’. The question that remains is how to reconcile these two results.

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 relying on surface c-command, thus addressing Option 4 of (23).

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

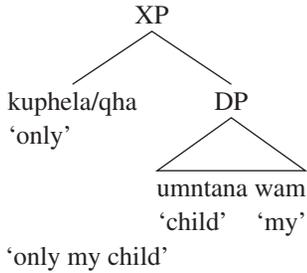
The starting point is a proposal made by Erlewine (2017) and Hsieh and Sybesma (2011): sentence-final particles are underlyingly initial phase heads whose complements raise after Transfer. We will show that this approach to *kuphela* and *qha* is untenable, leaving us with Option 5.

7.2 Final Particles as Underlyingly Initial Phase Heads

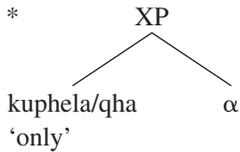
As noted in section 1, Erlewine (2017) and Hsieh and Sybesma (2011) propose that clause-final particles in Mandarin are actually phase heads that precede their complements. As phase heads, they trigger Transfer of their complements (also known as phase interiors). Transferred material is a syntactic atom, so the result is a symmetric and hence unlinearizable representation $\langle H, \alpha \rangle$ (e.g., Kayne 1994, Moro 2000, Richards 2010). The complement α must raise to break symmetry (see Moro 2000).¹⁸ We illustrate in (63) how this would work for a Xhosa DP selected by a hypothetical adnominal phase head *kuphela* or *qha*.

¹⁸ Erlewine (2017) suggests that many phase heads are silent, obscuring this general pattern.

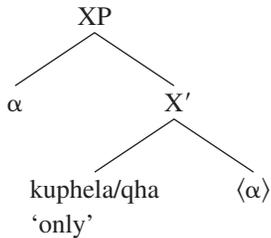
(63) a. *Merge order*



b. *Transfer yields nonlinearizable symmetry*



c. *Raising the complement of phase head kuphela/qha solves the problem*



Such an analysis takes as underlying the alternative order $\langle \textit{kuphela/qha}$ associate \rangle that is accepted in Xhosa and by some Zulu speakers as well (see (7a), repeated here).

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

This approach 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 in the configuration it yields, 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 that excludes 'only'. Perhaps, once the constituent 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, (64) shows that this prediction is not borne out. The shaded material is the TP complement to the embedded phase-head complementizer *that*. By assumption, this TP is 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 afterward. 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 (64b) illustrates.

- (64) 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, Gallego, and Ott to appear on the continued availability of transferred material in syntactic relations and for a proposal that the Phase Impenetrability Condition permits this so long as the transferred material is not altered.

We are unable to replicate this test in Zulu or Xhosa, where CP subjects are unacceptable (see Halpert 2015) and the content of the preverbal subject position is antipocus. This applies not only to the whole of a simple subject, as in our foregoing examples, but also to the subparts of more complex subjects (compare (65a–b) and (66a–b)). Therefore, no such test based on raising a constituent to subject position can succeed.¹⁹

- (65) a. Ngi-thand-a [[**o-bhuti** ba-ka-Mary] *kuphela*] hhayi [Zulu]
 1SG.SM-like-FV AUG-2a.brothers 2-POSS-1a.Mary only not
 o-sisi ba-khe.
 AUG-2a.sisters 2.POSS-1.PRO
 ‘I like only Mary’s **brothers**, but not her sisters.’

¹⁹ Another potential obstacle to successful testing on this point is uncertainty regarding the acceptability of *kuphela* associating to a subpart of a nonadjacent constituent. This is an area that we have not explored, and given the delicacy of judgments on all long-distance associations, we anticipate complexity. Otherwise, a test might conceivably be constructed by asking speakers who (a) find the preverbal subject positions of subjunctives and relatives to be focus-tolerant and (b) allow associations at a distance to their contents whether (c) a postverbal *kuphela* can associate with contents of a transferred subpart of a passivized DP in subjunctive subject position, such as ‘[I asked that [the rumor [that **Mary’s brothers like me**]] be disproved (DP) *kuphela* . . .]’, while (d) positioning an adjunct after *kuphela* to ensure that what is tested is the persistence of associations to transferred material after it moves (given the evidence from sections 5.3.2 and 5.3.3 that clause-final *kuphela* scopes over the preverbal subject). This is a sizable collection of conditions to be addressed in exploring the question. We leave it to future research to determine whether associations to subparts of nonadjacent expressions are acceptable to the relevant speakers and if so, the status of examples like these.

- b. *[[**O-bhuti** ba-ka-Mary] *kuphela*] ba-ya-ngi-thand-a hhayi
 AUG-2a.brothers 2-POSS-1a.Mary only 2.SM-DJ-1SG.OM-like-FV not
 o-sisi ba-khe.
 AUG-2a.sisters 2.POSS-1.PRO
 [Intended: ‘Only Mary’s **brothers** like me, but not her sisters.’]
- (66) a. Ngi-thand-a [[o-bhuti ba-ka-**Mary**] *kuphela*] hhayi [Zulu]
 1SG.SM-like-FV AUG-2a.brothers 2-POSS-1a.Mary only not
 a-ba-ka-Langa.
 REL-2-POSS-1a.Langa
 ‘I like only **Mary**’s brothers, but not Langa’s.’
- b. *[[O-bhuti ba-ka-**Mary**] *kuphela*] ba-ya-ngi-thand-a
 AUG-2a.brothers 2-POSS-1a.Mary only 2.SM-DJ-1SG.OM-like-FV
 hhayi a-ba-ka-Langa.
 not REL-2-POSS-1a.Langa
 [Intended: ‘Only **Mary**’s brothers like me, but not Langa’s.’]

The implication of the English evidence is clear, however: associations to transferred material are not “frozen”; movement alters them. This is unlikely to be a language-particular fact.

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

7.3 Summary

At this point, we have explored and rejected four of the five possibilities presented in (23) (repeated here) for explaining the phrase-final position of *kuphela/qha*. There are no remaining options consistent with a strict version of Kayne’s (1994) LCA.

(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. ×

This leaves only Option 5.

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

- (69) a. I-qhina li-bonakal-a [ukuthi li-phum-ile e-mbize-ni]. [Zulu]
 AUG-5.steenbok 5.SM-seem-FV that 5.SM-exit-PST.DJ LOC-9.pot-LOC
 ‘The secret seems to have come out.’
 [Lit.: ‘The steenbok seems that exited the cooking pot.’]
 (Halpert 2015:36)
- b. U-Hili u-bonakal-a [okokuba u-phum-ile e-ngcongolwe-ni]. [Xhosa]
 AUG-1a.Hili 1.SM-seem-FV that 1.SM-exit-PST.DJ LOC-10.weeds-LOC
 ‘The secret seems to have come out.’
 [Lit.: ‘Hili (= name of a troll) seems that exited the weeds.’]
 (Carstens and Mletshe 2015:230)

Recall that the preverbal subject position of an indicative cannot host focused material, so we did not use subject-to-subject hyperraising as a test of *kuphela/gha*’s sensitivity to low copies. The results are ill-formed in both languages (see (70) from Zulu), but shed no new light since they are consistent with the results 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/gha* supports the Strong PLA.

- (70) a. *U-Sindiswa *kuphela/gha* u-bonakal-a ukuthi u-zo-cul-a. [Zulu]
 AUG-1a.Sindiswa only 1.SM-seem-FV that 1.SM-FUT-sing-FV
- b. U-Sindiswa u-bonakal-a ukuthi u-zo-cul-a *kuphela/gha*.
 AUG-1a.Sindiswa 1.SM-seem-FV that 1.SM-FUT-sing-FV 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 antifocus restriction on preverbal subjects of indicatives. That this association is impossible supports the Strong PLA.*

[_{Indic} Subj V + T [[_{FP} <Subj> . . .] *kuphela*]]
 | |
 antifocus ✓focus possible

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

A few speakers we consulted disallowed any association in which the word order is inconsistent with *kuphela* or *gha* c-commanding the highest copy of the [+focus] associate, as in the following Xhosa examples, where *gha* is sandwiched into the lower clause by an embedded locative (71) or time adjunct (72):²⁰

²⁰ As noted in section 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.

- (71) Ng-u-Sipho o-xhel-el-w-e okokuba a-phek-e [Xhosa]
 COP-AUG-1a.Sipho REL.1.SM-say-APPL-PASS-PST that 1.SM-cook-SJ
qha e-khitshi-ni.
 only LOC-5.kitchen-LOC
 a. 'It's Sipho who was told to only **cook** in the kitchen.'
 b. *'It's only **Sipho** who was told to cook in the kitchen.'
- (72) Ng-u-Zinhle o-bonakal-a ingathi u-zo-cul-a [Xhosa]
 COP-AUG-1a.Zinhle REL.1.SM-seem-FV like 1.SM-FUT-sing-FV
 e-gadi-ni *qha* kusasa.
 LOC-9.garden-LOC 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 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, as in (71b) and (72c). Variations of this kind occurred somewhat unpredictably across individuals, across structurally comparable examples, and across sessions with the same individual. On 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, judgments were quite variable and occasionally more positive than 3.²¹

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 (73) and (74).

- (73) Ng-u-Bill o-xel-el-w-e ng-u-Mary ukuba [Xhosa]
 COP-AUG-1a.Bill REL.1.SM-say-APPL-PASS-PST by-AUG-1a.Mary that
 u-y-a ku-sebenza *kuphela* de kube malanga.
 1.SM-go-FV 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.'
- (74) Ku-tsho u-John ukuba a-ba-ntwana ba-zo-cul-a [Xhosa]
 17.SM-say.PST AUG-1a.John that AUG-2-children 2.SM-FUT-sing-FV
kuphela kusasa.
 only in.the.morning

²¹ Only three out of eleven Xhosa speakers who accepted some associations at a distance consistently rejected associations to a clefted constituent unless *kuphela* surface-c-commanded it. Three more did so in all but one or two cases, which appeared to be random inconsistencies. One speaker was quite unpredictable, and two accepted the majority of associations of *kuphela* to clefted expressions whether there was any c-command or not. Out of eight Zulu speakers, five accepted long-distance associations to clefted material. Only two of the eight gave consistent judgments indicative of a surface c-command requirement. The eighth speaker was uncertain.

object across the adverb, from a position to its right. As she points out, Cinque (1999) analyzes adverbs as Specs of functional categories; hence, in his view they always merge to the left of heads.

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

These results also argue against Bruening's (2014) proposal that effects which are standardly analyzed 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 (77a), the pronoun *she* illicitly binds the R-expression *Bernice* because it precedes it and no phasal node separates them.

- (77) a. *She_i likes Bernice_i's friends.
 b. Her_i mother likes Bernice_i's friends.
 (Bruening 2014:344)
- (78) 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.
 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.
 (Bruening 2014:344)

Clearly, the association facts of *kuphela* and *pha* 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 *pha* 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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