

VP-Internal DPs and Right Dislocation in Zulu*

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Many Bantu languages have SVO as their unmarked word order and allow some sort of right dislocation of both subjects and objects, but only recently has significant attention been paid to the characteristics of the right periphery in Bantu (Marten 2007, Cheng & Downing 2007, Riedel 2008, Yoneda 2008). Zulu is such an SVO Bantu language in which postverbal elements, such as objects, are sometimes inside the verb phrase and sometimes outside of it (right-dislocated). The purpose of this paper is to examine the types of noun phrases that can appear in these two different positions. For example, can a noun phrase modified by ‘all’, ‘every’, or ‘only’ appear in both positions? The scope of negation with respect to these two positions is also examined. The idea espoused in Cheng & Downing (2007) that, in Zulu, elements interpreted as non-given must appear VP-internally will be supported, but it will be shown that the structural position of right-dislocated elements cannot be adjunctions to CP as they argue. Rather, these elements must be at least as low as an inflectional-domain Neg⁰ head. Zulu right dislocation thus lends support to an analysis of along the lines of Cecchetto (1999) for Italian, which places right-dislocated elements in a sub-IP structural position.

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- c. Zi-fik-ile]_{VP} izingane.
 10SM-arrive-PERF 10children
 ‘The children have come.’

The third and final diagnostic involves the conjoint/disjoint verb alternation, which in Zulu is found in the affirmative principal (i.e. matrix clause) present tense and in all tenses employing the perfect *-e/-ile* suffixes, including the affirmative recent past tense, as shown in (3).

(3) Morphology of the conjoint/disjoint alternation

	Conjoint	Disjoint
Present tense	bacula ...] _{VP} ‘they sing’	bayacula] _{VP} ... ‘they sing’
Recent past tense	bacule ...] _{VP} ‘they sang’	baculile] _{VP} ... ‘they sang’

The first generalisation pertaining to the VP boundary is that the element following a conjoint verb form is always VP-internal. The correlate to this generalisation, namely that an element following a disjoint verb form is always VP-external, is also generally true.³ The correlation can be seen in conjunction with the subject and object agreement examples in (1) and (2). In (1a), for example, the element following the verb (the object) is inside the VP, and the verb has the conjoint variant *-e* of the perfect suffix. In contrast, in (1b), the element following the verb (again the object) is outside the VP, and the verb has the disjoint variant *-ile* of the perfect suffix. The conjoint/disjoint alternation is particularly useful in determining the structural position of elements which cannot trigger subject or object agreement, such as adverbs.

2. The distribution of DPs over the VP boundary

Using the diagnostics just described, we will now examine the distribution of various types of DPs with respect to whether they can occur inside the VP and/or to the right of the VP's right edge. For conciseness, these positions will sometimes be referred to simply as the “VP-internal position” and the “VP-external position”, although there are actually multiple positions both inside the VP and in the right periphery. Unless specific reference is made to the preverbal subject position or left-peripheral position, “VP-external” will mean anywhere to the *right* of the VP boundary and “right-dislocated” will also be used specifically in this sense.

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The types of modifications tested were selected on the basis of claims made in the literature or traditional notions about one of the positions and on the basis of phenomena discussed in earlier work in closely related Xhosa on a group of perhaps unrelated phenomena characterised as quantifier float in Du Plessis & Visser (1992). We will now examine the distribution of the following types of DPs: focused DPs; *wh* phrases; DPs modified by ‘only’; DPs quantified by ‘all’ and ‘every’, and indefinites. DPs modified by ‘even’ will be discussed in the following section.

Focus. We begin with focus. In Bantu languages, in non-cleft-like constructions, focus has been strongly associated not only with VP-internal positions in general, but even more specifically with the immediately postverbal VP-internal position (Buell to appear, and references therein). For contrastive focus in Zulu, the fact that a focused item must appear inside the VP is most easily demonstrated using a logical subject, such as *Sipho* (a man's name) in (4).

- (4) a. Ku-cul-e uSipho.]_{VP}
 17SM-sing-PERF 1Sipho
 ‘SIPHO sang.’
 b. U-cule-ile]_{VP} uSipho.
 1SM-sing-PERF 1Sipho
 ‘Sipho sang.’

In this case, two positional diagnostics are in play: subject agreement and junctivity. In (4a), the verb bears default class 17 subject agreement and the logical subject is preceded by a conjoint verb form, indicating that the logical subject is inside the VP. In (4b), the verb agrees with the subject, which in turn follows a disjoint verb form, indicating that it is outside the VP. *Sipho* receives a focused interpretation in (4), but not in (4b). A similar pattern holds for objects, except that an object inside the VP may or may not receive a focused interpretation, while outside the VP only a non-focused interpretation is available.

Another type of focused DP which can only occur inside the VP is questioned subjects and objects. Like their contrastively focused counterparts, these never trigger subject or object marking on the verb and always occur in a (usually immediately) postverbal position, indicating that they are VP-internal. This is shown with a questioned object in (5).

- (5) a. U-cul-e iphi ingoma?]_{VP}
 2S.SM-sing-PERF 9which 9song

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- b. * U-(yi-)cul-ile]_{VP} iphi ingoma?
 2S.SM-9OM-sing-PERF 9which 9song
 ‘Which song did you sing?’

And finally, a third type of focused DP occurring only within the VP is one modified by a word meaning ‘only’. There are two such words in Zulu. The first is *kuphela*, an invariable word which follows the phrase it modifies. The sentences in (6) show that such a phrase must be VP-internal.

- (6) a. Ngi-bon-e uSipho kuphela.]_{VP}
 1S.SM-see-PERF 1Sipho only
 b. * Ngi-m-bon-ile]_{VP} uSipho kuphela.
 1S.SM-1OM-see-PERF 1Sipho only
 ‘I saw only Sipho.’

The second word in question is *-odwa*.⁴ This word means ‘only’ when it appears adjacent to the phrase it modifies. When stranded, it means ‘by oneself’, similar to the behaviour of English *alone*. A phrase modified by *-odwa* in the meaning of ‘only’ can only appear within the VP, as shown in (7).

- (7) a. Ngi-bon-e abangane bami bodwa.]_{VP}
 1S.SM-see-PERF 2friends 2my 2alone
 b. * Ngi-ba-bon-ile]_{VP} abangane bami bodwa.
 1S.SM-2OM-see-PERF 2friends 2my 2alone
 ‘I saw only my friends.’

Three different types of focused DPs thus confirm the generalisation that focused elements must appear VP-internally: contrastively focused DPs, questioned DPs, and DPs modified by ‘only’.

Indefiniteness. There is also a traditional notion that a Zulu object that fails to trigger agreement on the verb (thus, a VP-internal object, under our assumptions) has the ability to receive an indefinite interpretation in a way that one triggering agreement (that is, a VP-external one) cannot. However, this property is very difficult to test for. Consider, for example, the question ‘Why did you buy eggs?’ In English, the object in this question is indefinite, but in Zulu, to ask such a question using a purpose applicative, the object must be moved outside the verb phrase, as shown by the object marker in the grammatical question in (8b), even in an out-of-the-blue context.

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- (8) a. U-theng-e amaqanda.
 2S.SM-buy-PERF 6eggs
 ‘You bought (some) eggs.’
 b. U-wa-theng-el-e-ni]_{VP} amaqanda?
 2S.SM-6OM-buy-APPL-PERF-what 6eggs
 ‘Why did you buy eggs?’
 c. * U-theng-el-e-ni amaqanda?]_{VP}
 2S.SM-buy-APPL-PERF-what 6eggs

This and other contexts seem to allow right dislocation of an object even when the English equivalent is indefinite. The syntactician thus faces the question: is VP-external *amaqanda* in (8b) indefinite, or does the Zulu speaker accept use of a definite noun in cases where independent constraints prevent use of an indefinite one? One type of object suggests that the latter is the case, namely one modified with a number, as in (9). With the normal interpretation, i.e. one where it is not a particular discourse-salient set of three cakes being referred to, the noun cannot be dislocated out of the VP.

- (9) b. Ngi-zo-bhaka amakhekhe amathathu.]_{VP}
 1S.SM-FUT-bake 6cakes 6three
 a. * Ngi-zo-wa-bhaka]_{VP} amakhekhe amathathu.
 1S.SM-FUT-6OM-bake 6cakes 6three
 ‘I’m going to bake three cakes.’

Universal quantifiers. We now consider the quantifier *-onke*, two meanings of which concern us here. The first is in association with a plural DP, where it means ‘all’. A plural DP modified by this quantifier may appear in both in VP-internal and VP-external position, as shown with a logical subject in (10), in which the positional diagnostics are subject agreement and junctivity.

- (10) a. Ku-fik-e bonke abantu abe-bemenyiwe.]_{VP}
 17SM-arrive-PERF 2all 2people REL:2SM-had.been.invited
 b. Ba-fik-ile]_{VP} bonke abantu abe-bemenyiwe.
 2SM-arrive-PERF 2all 2people REL:2SM-had.been.invited
 ‘All the people invited came.’

Plural *-onke* may also occur as a floating quantifier, appearing non-adjacent to the DP it quantifies. *-Onke* may appear either inside or outside the VP in this usage. In (11) this is shown with an object, realised as an object marker. While both variants display an object marker on the verb, the conjoint verb form in

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(11a) shows that the following quantifier is inside the VP, while the disjoint verb form in (11b) shows that the quantifier is VP-external. The same distribution is shown with subject quantification in (12). In (12b) the conjoint form shows that the quantifier is VP-internal, while in (12a) it appears to be VP-external, because a subject can never follow an object within the verb phrase.⁵

- (11) a. Ngi-ni-bon-e nonke.]_{VP}
 1S.SM-2P.OM-see-PERF 2p.all
 b. Ngi-ni-bon-ile]_{VP} nonke.
 1S.SM-2P.OM-see-PERF 2p.all
 ‘I saw all of you.’
- (12) a. Izingane zi-thanda amaswidi]_{VP} zonke.
 10children 10SM-love 6sweets 10all
 b. Izingane zi-wa-thanda zonke]_{VP} amaswidi.
 10children 10SM-6OM-love 10all 6sweets
 ‘All (the) children like sweets.’

In contrast with the distribution of plural *-onke*, singular *-onke* in its usage as ‘every, each’ can only appear inside the VP. Attempting to use an object marker which agrees with a DP quantified by ‘every’ (the *m* in *ngimbonile*) results in ungrammaticality, as shown in (13).⁶

- (13) a. Ngi-bon-e wonke umfundi o-m-azi-yo.]_{VP}
 1S.SM-see-PERF 1every 1student REL:2S.SM-1OM-know-REL
 b. * Ngi-m-bon-ile]_{VP} wonke umfundi o-m-azi-yo.
 1S.SM-1OM-see-PERF 1every 1student REL:2S.SM-1OM-know-REL
 ‘I saw every student you know.’

The situation with subjects is less clear. While a logical subject quantified with singular *-onke* is perfectly grammatical in both VP-internal position and preverbal subject position, right dislocation of such a subject results in somewhat degraded grammaticality rather than outright unacceptability, as shown in (14).

- (14) a. Ku-fik-e wonke umfundi o-m-azi-yo.]_{VP}
 17SM-arrive-PERF 1every 1student REL:2S.SM-1OM-know-REL
 b. Wonke umfundi o-m-azi-yo u-fik-ile.]_{VP}
 1every 1student REL:2S.SM-1OM-know-REL 1SM-arrive-PERF

- c. ? U-fik-ile]_{VP} wonke umfundi o-m-azi-yo.
 1SM-arrive-PERF 1every 1student REL:2S.SM-1OM-know-REL
 ‘Every student you know came.’

This concludes the types of DPs whose distribution over the two positions was investigated. The distribution is summarised in the table in (20) in the conclusion. We now turn to the question of scope of negation.

3. Scope of negation

It will now be shown that both the VP-internal and VP-external positions fall under the scope of verbal negation. We begin with the VP-internal position. If the characterisation of this position as “VP-internal” is correct, then we fully expect the position to fall under verbal negation. That it indeed does can be shown in a variety of ways. We will limit ourselves here to the interpretation of a DP modified by *kuphela* ‘only’, as in (15), in which a logical subject appears VP-internally, as shown by the default class 17 subject marker.

- (15) A-ku-cul-anga uSipho kuphela.]_{VP}
 NEG-17SM-sing-NEG 1Sipho only
 ‘Not only Sipho sang.’ $\neg > \textit{only}$
 # ‘Only Sipho didn't sing.’ $\textit{only} > \neg$

As shown by the two conceivable translations, the only interpretation compatible with such a sentence is one in which ‘only’ scopes under negation. It thus appears that a VP-internal element cannot escape the scope of a negated verb.

What is perhaps more unexpected is that the VP-external position falls under the scope of verbal negation, as well. This fact can be shown with the interpretation of ‘all’, with the distribution of NPIs (negative polarity items), and with the behaviour of ‘even’. Consider first the two sentences in (16). In (16a) the quantifier is adjacent to the DP which it quantifies in preverbal subject position, and which is visibly higher than negation. In this sentence, the quantifier scopes over negation, as expected. This contrasts with (16b), in which the quantifier is floated in an arguably VP-external position, because a subject cannot follow an object VP-internally (a fact which can be demonstrated with the subject marker diagnostic).

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- (16) a. Izingane zonke a-zi-thand-i amaswidi.]_{VP}
 10children 10all NEG-10SM-love-NEG 6sweets
 ‘None of the children like sweets.’ $\forall > \neg$
- b. Izingane a-zi-thand-i amaswidi]_{VP} zonke.
 10children NEG-10SM-love-NEG 6sweets 10all
 ‘Not all children like sweets.’ $\neg > \forall$

A second way of showing that VP-external positions fall under verbal negation is with NPIs. Although the NPIs in question themselves cannot themselves trigger subject or object agreement, and although junctivity data in negated clauses is problematic, some NPIs can be clearly shown to occur VP-externally because they can follow a DP which itself is VP-external. Consider the sentence in (17). The direct object *le ndoda* ‘this man’ is clearly outside the VP because of the related object marker on the verb. The NPI *nakanye* ‘(not) even once’ which occurs to the object’s right is thus by transitivity also VP-external. The sentence is grammatical. Thus, because an NPI is assumed to be licensed by a c-commanding negative element, the VP-external positions fall under negation at least as far to the right as where the NPI *nakanye* appears.

- (17) A-ngi-yi-bon-anga]_{VP} le ndoda nakanye.
 NEG-1S.SM-9OM-see-NEG 9this 9man even.once
 ‘I didn’t see this man even once.’

A third way of showing that the VP-external position falls under the scope of negation involves (*ngisho*) *na-* ‘even’. (18) shows that a phrase with this modifier may occur in both the VP-internal and VP-external position. Curiously, though, this compatibility breaks down once the verb is negated, as in (19b).

- (18) a. Ngi-bon-e ngisho n-oSipho.]_{VP}
 1S.SM-see-PERF even and-1Sipho
 b. Ngi-m-bon-ile]_{VP} ngisho n-oSipho.
 1S.SM-1OM-see-PERF even and-1Sipho
 ‘I even saw Sipho.’
- (19) a. A-ngi-bon-anga ngisho n-oSipho.]_{VP}
 NEG-1S.SM-see-PERF even and-1Sipho
 ‘I didn’t even see Sipho.’
 b. * A-ngi-m-bon-anga]_{VP} ngisho n-oSipho.
 NEG-1S.SM-1OM-see-PERF even and-1Sipho

- c. Ngisho n-oSipho a-ngi-m-bon-anga.
 even and-1Sipho NEG-1S.SM-1OM-see-PERF
 ‘Even Sipho I didn't see.’

It is not clear what causes the ungrammaticality of (19b), but it would appear to involve the fact already established that verbal negation scopes over the VP-external position. This is supported by the fact that the sentence becomes grammatical when the object is left-dislocated as in (19c).

4. Discussion

The distribution of types of DPs over the right VP boundary of verbal predicates is summarised in the table in (20).⁷

(20)	type of DP	VP-internal	VP-external
	focus, indefinite, bare nouns, ‘each’, ‘even’ (negative)	OK	*
	‘all’, NPIs, ‘even’ (affirmative)	OK	OK

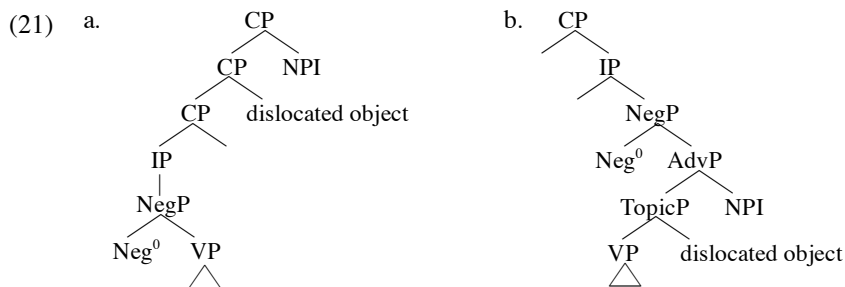
It has been proposed that items not interpreted as “given” in Zulu must appear inside the verb phrase (Cheng & Downing 2007, henceforth Ch&D). The fact that focused, indefinite, and bare nouns cannot be right-dislocated (nor occur in preverbal position) supports this view. The fact that some NPIs are clearly VP-external further shows that bare nouns must remain inside the VP not in order to be licensed by negation, but due to some other property such as indefiniteness, non-givenness, or focus.

The case of DPs modified by singular *-onke* ‘every’ is more complicated. These elements can appear in preverbal position. Thus, their ability to be right-dislocated seems to have less to do with a property of VP-internal positions than with a property specific to the right-peripheral VP-external position.

The case of (*ngisho*) *na-* ‘even’ is more interesting yet. In spite of being associated with focus, elements modified with this phrase may freely appear in preverbal position and both VP-internally and VP-externally following the verb. However, the element’s ability to be right-dislocated disappears if the verb is negated. This suggests an interaction between negation and focus. For example, although ‘even’ involves a focus, it might not be quite the same type of focus that in Zulu can only be licensed VP-internally. This would allow the modified

DP to be right-dislocated, while the type of focus which can be negated could be the type only licensed VP-internally.

The question arises as to where the VP-external position is situated in the syntactic structure. Ch&D argue that Zulu right-dislocated elements cannot be specifiers of complementiser-domain TopicP projections (as in Rizzi 1997) because they cannot serve as discourse topics. While this much seems to be correct, they further propose that these elements are clause-external, adjoined to CP. Ch&D's motivation for this analysis is to formulate the constraints regulating prosodic domain formation, but the analysis is not tenable in light of the negation facts presented here. Three types of evidence showed that the scope of negation extends beyond the right VP boundary, including to a position following a right-dislocated element. Consider the case of (17), which has a right-dislocated object followed by an adverbial NPI. Under the CP-adjunction analysis, this sentence would have the structure in (21a).



In this structure, the right-dislocated object appears as a right-branching adjunct to CP. To accommodate the fact that the NPI is sentence-final, the NPI must be adjoined to CP, as well. The inflectional domain has been simplified in (21a), but verbal negation is shown as a Neg⁰ head within that domain (as in Buell 2005, for example). The fact that the NPI is licensed by the Neg⁰ head is clearly not captured in this structure, because Neg⁰ does not c-command the NPI. The exact same problem will hold in the cases where verbal negation scopes over 'all' and 'even'. Only a structure in which Neg⁰ c-commands these elements will account for the scopal facts. Zulu thus lends support to Cecchetto's (1999) analysis of right dislocation in Italian, in which the right-dislocated element moves to the specifier of a sub-IP TopicP projection.⁸ For simplicity's sake, this is implemented in (21b) with right-branching specifiers for both the dislocation and the NPI, allowing material stranded in the VP (such as an object) to correctly appear to the left of any dislocated elements. It should be pointed out that under the assumption that the three diagnostics used throughout this paper (subject

markers, object markers, and junctivity) show where elements are located with respect to the right VP boundary, then the Zulu data does not support an alternative analysis under which a dislocated element is adjoined to VP, an idea is rejected by Cecchetto for independent reasons. However, future research may show that VP is not actually the highest relevant constituent for these tests.

Conclusion. This paper has cast right dislocation in terms of inside and outside the VP, but the behaviour of singular *-onke* ‘every’ and (possibly) of (*ngisho*) *na-* ‘even’ showed that there are significant differences between two VP-external positions: the preverbal subject position and the right dislocation positions. Further study is needed to determine the specific properties of the right-dislocation position, as contrasted against other VP-external positions. This is also necessary to be able to make informed cross-linguistic comparisons. For example, it was shown that, in Zulu, a right-dislocated element can be modified by either ‘all’ or ‘even’, but neither of these modifiers are compatible with right dislocation in Italian, as shown in (22).

- (22) Hanno letto questo libro, (*tutti, *perfino) gli studenti.
 have.PL read this book all even the students
 ‘(All, even) the students have read the books.’

In Zulu, the scope of negation can be used as evidence in a discussion of right dislocation because in Zulu, ‘all’ and ‘even’, elements interacting scopally with negation, can appear in a right-dislocated position. In Italian, such interactions simply cannot be shown, forcing Cecchetto to use other sorts of evidence, such as ECP and anti-reconstruction effects to argue for his analysis. Thus, although differences between Italian and Zulu right dislocation pose new questions of their own, it is precisely due to these differences that Zulu brings a new class of data to the structural analysis of right dislocation.

Notes

¹ “VP” is used in the broadest sense of the term throughout the paper, designating a constituent at least as high as that containing the underlying subject position.

² The status of class 17 as a default class is discussed in Buell (2007).

³ But this generalisation is less robust. For example, speakers sometimes accept a disjoint verb preceding another VP-internal element if the polarity of the predicate is in focus.

⁴ The flotation of *-odwa* is dealt with in du Plessis & Visser (1992).

⁵ It will be noted in (11) that *-onke* ‘all’ bears person agreement instead of noun class agreement for first and second person. The same is also true of *-odwa* ‘alone’, the only other word to my knowledge that displays this behaviour.

⁶ In examples (13) and (14), the quantified noun is modified by a relative clause because the informant often found the sentences to sound incomplete without them, presumably because of the lack of context.

⁷ Space limitations did not allow treatment of the pronominal doubles discussed in du Plessis and Visser (1992), pages 371-374. These were the only elements found to be excluded from VP-internal positions. They are allowed in both right-dislocated and preverbal positions.

⁸ Ch&D reject this possibility due to the fact that right-dislocated elements cannot serve as discourse topics, while Cecchetto assumes that sub-IP and complementiser-domain topics must have distinguishing properties.

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