Claire Halpert* and Jochen Zeller

Right dislocation and raising-to-object in Zulu

Abstract: In this paper, we analyze an unusual type of right dislocation in Zulu. We demonstrate that the construction in question combines A-movement of a DP out of an embedded finite CP into a matrix argument position (raising-to-object; RtO) with right dislocation of both the raised DP *and* the clause out of which it raises. The existence of such a construction is noteworthy for several reasons. First, the conclusion that Zulu allows A-movement out of a finite CP is at odds with standard Minimalist analyses of raising and also with the alternative analysis of RtO from finite clauses proposed in Bruening (2001, 2002). Second, on our proposed analysis, RtO can take place out of a CP-complement, which is subsequently dislocated and adjoined to a maximal projection, supporting Büring and Hartmann (1997), who argue that movement from an extraposed CP happens before CP-dislocation. Our findings thus provide a strong argument for a movement analysis of CP-extraposition. We finally conclude that these constructions present a number of complications for recent analyses of right dislocation as leftward movement plus clausal ellipsis (Ott and de Vries 2014, and Ott and de Vries (in press)), due to the interaction between A-movement and dislocation and the word order resulting from CP-extraposition.

Keywords: raising-to-object, right dislocation, CP-extraposition, Bantu languages

1 Introduction

Across the Bantu languages, right dislocation is a common strategy for encoding information structure (Bresnan and Mchombo 1987; Buell 2008; van der Wal 2009; Zerbian 2006, a.o.). Dislocated elements are typically interpreted as given

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information, and are incompatible with a focus interpretation. (1b) provides an example of object right dislocation in the Southern Bantu language Zulu:[1]

(1) a. U-Mbali   u-thand-a   u-Sipho]$_{vP}$
       AUG-1a.Mbali 1.SM-love-FV AUG-1a.Sipho
       "Mbali loves Sipho."
    b. U-Mbali   u-ya-**m**-thand-a]$_{vP}$ **u-Sipho**
       AUG-1a.Mbali 1.SM-DIS-1.OM-love-FV AUG-1a.Sipho
       "Mbali loves (him,) Sipho."

In (1a), the object-DP *uSipho* is in its base position inside the vP, but in (1b), it has been right-dislocated to a vP-external position and co-occurs with an object agreement marker (or object clitic) on the verb. Consequently, (1b), in contrast to (1a), cannot be used to answer an object question such as "Who does Mbali love?", which demonstrates that right-dislocated elements cannot be interpreted as new information.

    In this paper, we provide a thorough analysis of an unusual type of right dislocation in Zulu, which is shown in (2):

(2) Ngi-ya-**m**-fun-a   ]$_{vP}$ **u-Sipho** [ukuthi a-phek-e   i-qanda]$_{CP}$
     1SG-DIS-1.OM-want-FV   AUG-1a.Sipho that 1.SM-cook-SUBJ AUG-5.egg
     "I want Sipho to cook an egg."

As we demonstrate in detail below, the sentence in (2) involves right dislocation of both the DP *uSipho*, which again exhibits object agreement with the matrix predicate in (2), and of the CP-complement of the matrix verb, which follows the dislocated DP. Importantly, we also show that the right-dislocated DP in constructions such as (2) does not originate in the matrix vP, but is first merged inside the complement-CP, as the external argument of the embedded predicate. From this position, it undergoes *raising-to-object* (RtO) into an argument position in the matrix vP. RtO is then followed by right dislocation of the raised DP, and in a subsequent step, the CP from which raising has taken place is also right-dislocated (extraposed), to a position following the dislocated DP.

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1 All examples in this paper are from Zulu, which belongs to the Nguni group of languages spoken in South Africa and some of its neighboring countries. Nouns in Bantu languages belong to noun classes that determine gender and number properties. Following standard practice, we mark Bantu noun class prefixes and corresponding agreement markers through numbers. Morphemes are glossed as follows: 1SG, 2SG = first, second person singular; ADJ = adjectival agreement; APPL = applicative; AUG = augment; CAUS = causative; DIS = disjoint verb form; EXPL = expletive; FUT = future tense; FV = final vowel; INF = infinitive; LOC = locative; NEG = negation; OM = object marker; PASS = passive; PAST = (recent) past tense; POSS = possessive; PRON = strong (absolute) pronoun; Q = question particle; SM = subject marker; SUBJ = subjunctive.

In Section 2 of the paper, we establish that certain matrix predicates in Zulu license A-movement from an argument position inside a finite complement clause to a vP-internal argument position in the matrix clause. In Section 3, we show that this RtO movement can then *feed* right dislocation of the raised object, followed by extraposition of the CP from which RtO has occurred. Section 4 discusses the conclusions we draw from this analysis and its consequences for existing analyses of raising, right dislocation and CP-extraposition.

2 Raising-to-object in Zulu

Certain predicates in Zulu that take a finite CP-complement optionally allow the embedded subject to appear to the left of the embedded complementizer, as illustrated in (3b) and (4b) below:

(3) a. Ngi-fun-a   [ukuthi **u-Sipho**   a-phek-e   i-qanda]$_{CP}$
         1SG-want-FV   that   AUG-1a.Sipho 1.SM-cook-SUBJ AUG-5.egg
         "I want Sipho to cook an egg."
     b. Ngi-fun-a   **u-Sipho**   [ukuthi a-phek-e   i-qanda]$_{CP}$
         1SG-want-FV AUG-1a.Sipho that   1.SM-cook-SUBJ AUG-5.egg
         "I want Sipho to cook an egg."

(4) a. Ngi-lindel-e [ukuthi **uSipho**   a-theng-is-e   i-moto
         1SG-expect-FV   that   AUG-1a.Sipho 1.SM-buy-CAUS-SUBJ AUG-9.car
         ya-khe]$_{CP}$
         9.POSS-his
         "I expect Sipho to sell his car."
     b. Ngi-lindel-e **uSipho**   [ukuthi a-theng-is-e   i-moto
         1SG-expect-FV AUG-1a.Sipho that   1.SM-buy-CAUS-SUBJ AUG-9.car
         ya-khe]$_{CP}$
         9.POSS-his
         "I expect Sipho to sell his car."

Except for the position of the embedded subject DP (in bold in (3) and (4)), the pairs in (3) and (4) are identical: the matrix predicate appears in the so-called conjoint form[2] and the embedded predicate is an agreeing subjunctive clause.

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2 See Section 2.2 for a discussion of conjoint/disjoint verbal alternations in Zulu.

The word orders in (3b) and (4b) are potentially compatible with a number of different syntactic structures. In this section, we consider three families of possible constructions that fit the surface patterns in (3b) and (4b), but which differ with respect to 1) the *origin*, and 2) the *surface position*, of the pre-complementizer DP. The first type of construction is what we refer to as the *prolepsis/control* family of structures. These structures involve an overt argument DP in the matrix clause that is coreferential with a silent subject in the embedded clause. In proleptic constructions, the lower subject is a coindexed *pro* (see Davies 2005), (5), while in control constructions, it is a PRO controlled by the matrix object (see Krapova 1998; Landau 2004; Terzi 1997 a.o. for analyses of constructions involving control into finite subjunctive clauses), (6):

(5) *Prolepsis*:
     [Ngilindele **uSipho**$_i$ [ukuthi *pro*$_i$ athengise imoto yakhe]$_{CP}$]$_{CP}$

(6) *Control*:
     [Ngilindele **uSipho**$_i$ [ukuthi PRO$_i$ athengise imoto yakhe]$_{CP}$]$_{CP}$

Both the prolepsis and the control structure express a thematic relation between the pre-complementizer DP and the matrix verb. According to the prolepsis account presented by Davies (2005) for Madurese, the DP *uSipho* in (4b) would be the thematic equivalent of a "prepositional object" (and (4b) would be best translated as "I expect *of Sipho* that he sells his car"), while the control structure implies that *uSipho* receives a theme theta role from the verb. We will show below that the distinction between control and prolepsis is largely irrelevant to our discussion of Zulu; because the overt DP in Zulu does not receive a theta role in the matrix clause, neither of these constructions can possibly account for the Zulu data in (3b) and (4b).

The second possible analysis of the word orders in (3b) and (4b) involves a structure in which the pre-complementizer DP originates inside the embedded clause and undergoes A-bar movement to the edge of the embedded CP, as has been proposed by Bruening (2001, 2002) for Passamaquoddy and Japanese:

(7) *CP-level dislocation*:
     [Ngilindele [**uSipho** ukuthi ~~uSipho~~ athengise imoto yakhe]$_{CP}$]$_{CP}$

According to (7), the surface position of the embedded subject to the left of the complementizer is still inside the embedded clause.

The third analysis of the word orders in (3b) and (4b) – the one that we argue for in this paper – assumes that (3b) and (4b) are instances of *raising-to-object*

(RtO). In this construction, the thematic subject of the embedded CP undergoes A-movement from the subject position in the embedded clause into a vP-internal position in the matrix clause, along the lines of what has been proposed for English by, for example, Postal (1974), Lasnik and Saito (1991), Tanaka (1999), and Chomsky (2008). The difference between the example in (3a) and the one in (3b), on this account, is solely in whether this A-movement has occurred:

(8)   *Raising-to-object*:
        [Ngilindele **uSipho** [ukuthi ~~uSipho~~ athengise imoto yakhe]_{CP}]_{CP}

Our goal in this section is to provide evidence in favor of the RtO-analysis shown in (8). In Section 2.1 we present various syntactic diagnostics that establish a *low origin* of the pre-complementizer DP inside the embedded CP, thereby arguing against the prolepsis/control analysis shown schematically in (5) and (6). In Section 2.2, we present arguments for a *high destination* of the pre-complementizer DP in constructions such as (3b) and (4b). We show that the final landing site of this DP is a position inside the matrix vP and rule out the CP-level dislocation analysis illustrated by the structure in (7). We conclude that only the RtO-analysis in (8) can adequately capture the properties of Zulu constructions such as (3b) and (4b).

2.1 Low origin arguments

As we saw in examples (3) and (4), the pre-complementizer DP is semantically linked to the lower predicate; it corresponds to the highest, "subject" theta role of the embedded clause (agent in an active clause, theme in a passivized clause). This correspondence is compatible with any of the proposals listed above: on a prolepsis/control account, the DP is co-indexed with or controls a silent element that receives the embedded theta role, while on an RtO or CP-level dislocation account, the DP itself receives the theta role (and subsequently moves to a higher position). However, we can distinguish between these accounts by demonstrating that this DP is *only* linked to the lower predicate and bears no thematic relation to the matrix verb.

Consider the examples in (9). The sentence in (9b), with the DP *impi*, 'war', in pre-complementizer position, is equivalent to the sentence in (9a), where *impi* is inside the embedded clause. In this pair, the overall meaning of the sentence (that war is not wanted) is incompatible with a structure in which the DP receives a theme theta role from the verb (which would imply that war is wanted), contrary to what we would expect on a control-type analysis.

Similarly, because the DP *impi* in (9) can have a non-specific, generic interpretation, a structure in which the matrix DP is a "prepositional object" binding a pronoun (as argued by Davies (2005) for Madurese prolepsis), yielding an interpretation along the lines of "I want of war that it end", is also unexpected:

(9)   a. Ngi-fun-a   [ukuthi i-m-pi   i-gcin-e]$_{CP}$
       1SG-want-FV   that   AUG-9-war 9.SM-end-SUBJ
       "I want (the) war to end."
      b. Ngi-fun-a   i-m-pi   [ukuthi i-gcin-e]$_{CP}$
       1SG-want-FV AUG-9-war   that   9.SM-end-SUBJ
       "I want (the) war to end."

[Halpert 2012: 66]

Instead, the sentences in (9), like the sentence pairs in (3) and (4), show semantic identity, regardless of the position of the DP. This pattern contrasts with another class of predicates in Zulu that do seem to involve control into a finite subjunctive complement clause.[3] In Zulu, the verb *-cela*, 'ask', shows a very similar surface pattern to the alternations in (3) and (4): a DP that is interpreted as the embedded subject can either precede or follow the embedded complementizer. Unlike in (3) and (4), however, the position of the DP has a clear consequence for the interpretation of the sentence:

(10) a. Ngi-cel-e   [ukuthi uSipho   a-siz-e   u-Mary]$_{CP}$
        1SG-ask-PAST   that   AUG-1a.Sipho 1.SM-help-SUBJ AUG-1a.Mary
        "I asked that Sipho help Mary." (indirect desire/request)
      b. Ngi-cel-e   u-Sipho [ukuthi a-siz-e   u-Mary]$_{CP}$
        1SG-ask-PAST AUG-1a.Sipho that   1.SM-help-SUBJ AUG-1a.Mary
        "I asked Sipho to help Mary." (direct request of Sipho)

This class of control predicates forms an instructive contrast to *-funa* and *-linedele* with respect to these thematic properties. For example, we can find additional evidence for the semantic independence of the pre-complementizer DP from the matrix predicate in (3b) and (4b) by passivizing the lower predicate. In the pair in (11), the result of passivizing the embedded predicate and "flipping" the arguments is a roughly equivalent interpretation, since the only theta roles involved are those assigned by the embedded predicate (see Rosenbaum 1967, who was the first to use this test to distinguish raising from control constructions):

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3 We analyze these constructions as control constructions, rather than prolepsis, because they are restricted to specific matrix predicates which can assign an optional theme theta role to a matrix object.

(11) a. Ngi-fun-a   u-Sipho   [ukuthi a-siz-e   u-Mary]_{CP}
          1SG-want-FV AUG-1a.Sipho that   1.SM-help-SUBJ AUG-1a.Mary
          "I want Sipho to help Mary."
      b. Ngi-fun-a   u-Mary   [ukuthi a-siz-w-e   ng-u-Sipho]_{CP}
          1SG-want-FV AUG-1a.Mary that   1.SM-help-PASS-SUBJ 'by'-AUG-1a.Sipho
          "I want Mary to be helped by Sipho."

In contrast, as (12) shows, passivizing the embedded predicate of the control-class verb *-cela* in (10b) and flipping the arguments has a significant effect on the meaning of the sentences, because *-cela* assigns a theta role to the pre-complementizer DP:

(12) Ngi-cel-e   u-Mary   [ukuthi a-siz-w-e   ng-u-Sipho]_{CP}
      1SG-ask-PAST AUG-1a.Mary that   1.SM-help-PASS-SUBJ 'by'-AUG-1a.Sipho
      "I asked Mary to be helped by Sipho." (direct request of Mary)

We find a similar contrast in behavior between these two types of predicates when it comes to idioms. With predicates like *-funa*, 'want', or *-lindela*, 'expect', as in (3) and (4), a pre-complementizer DP can participate in a subject idiom. In (13), the agreeing preverbal subjects *iqhina*, 'steinbok', and *ilanga*, 'sun', receive idiomatic interpretations:

(13) a. I-qhina   li-phum-e   e-m-bize-ni
          AUG-5.steinbok 5.SM-exit-PAST LOC-9-pot-LOC
          "The secret came out." (lit. "The steinbok left the cooking pot.")
      b. I-langa   li-khiph-a   i-n-hlanzi e-manzi-ni.
          AUG-5.sun 5.SM-take-FV AUG-9-fish LOC-6.water-LOC
          "It's very hot." (lit. "The sun takes the fish out of the water.")

Idioms allow us to be even more precise about the location of a DP within a clause: dislocated subjects, such as high topics, typically resist idiomatic interpretation in Zulu. In (14b), the high adverb *namhlanje*, 'today', intervenes between the subject and the verb, which forces a topic interpretation of the subject. Consequently, the idiom interpretation is lost:

(14) a. Namhlanje i-qhina   li-phum-e   e-m-bize-ni
          today   AUG-5.steinbok 5.SM-exit-PAST LOC-9-pot-LOC
          "Today the secret came out."
      b. I-qhina   namhlanje li-phum-e   e-m-bize-ni
          AUG-5.steinbok today   5.SM-exit-PAST LOC-9-pot-LOC
          "Today the steinbok left the cooking pot." (literal meaning only)

However, when a subject-idiom occurs in the complement clause to -*lindela*, the idiomatic reading is preserved, even with the subject-DP in pre-complementizer position:[4]

(15) a. Ngi-lindel-a [(ukuthi) i-qhina   li-phum-e   e-m-bize-ni]$_{CP}$
         1SG-expect-FV that   AUG-5.steinbok 5.SM-exit-SUBJ LOC-9-pot-LOC
         "I expect the secret to come out."
    b. Ngi-lindel-a i-qhina   [(ukuthi) li-phum-e   e-m-bize-ni]$_{CP}$
         1SG-expect-FV AUG-5.steinbok   that   5.SM-exit-SUBJ LOC-9-pot-LOC
         "I expect the secret to come out."

By contrast, with a control verb like -*khutaza*, 'encourage', the idiomatic reading is not possible with the DP in pre-complementizer position:

(16) a. A-ngi-khutaz-anga   [(ukuthi) i-qhina   li-phume
         NEG-1SG-encourage-NEG.PAST that   AUG-5.steinbok 5.SM-exit-SUBJ
         e-m-bize-ni]$_{CP}$
         LOC-9-pot-LOC
         "I didn't encourage that the secret get out."
    b. A-ngi-khutaz-anga   i-qhina   [(ukuthi) li-phume
         NEG-1SG-encourage-NEG.PAST AUG-5.steinbok   that   5.SM-exit-SUBJ
         e-m-bize-ni]$_{CP}$
         LOC-9-pot-LOC
         "I didn't encourage the steinbok to leave the pot." (literal meaning only)
                                                       [Halpert 2012: 67]

We find the same pattern with idiomatic complements of -*funa*: the subject still participates in the idiom when it appears before the complementizer, as in the sentence in (17b):

(17) Ngi-fun-a   i-langa[ukuthi li-khiph-e   i-n-hlanzi e-manzi-ni]$_{CP}$
     1SG-want-FV AUG-5.sun that   5.SM-take-SUBJ AUG-9-fish LOC-6.water-LOC
     "I want it to be very hot."

In contrast, with a control verb such as -*thembisa*, 'promise', the DP cannot participate in the embedded idiom when it appears in pre-complementizer position, as illustrated by (18b):

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4 Note that this contrast is also evidence against a CP-level dislocation analysis of the pre-complementizer DP, as we will discuss in Section 2.2.

(18) a. Ngi-thembis-a [ukuthi i-langa   li-zo-khiph-a   i-n-hlanzi
          1SG-promise-FV   that   AUG-5.sun 5.SM-FUT-take-FV AUG-9-fish
          e-manzi-ni]CP
          LOC-6.water-LOC
          "I promise that it will be hot."
     b. *Ngi-thembis-a i-langa [ukuthi li-zo-khiph-a   i-n-hlanzi
          1SG-promise-FV AUG-5.sun that   5.SM-FUT-take-FV AUG-9-fish
          e-manzi-ni]CP
          LOC-6.water-LOC

The evidence presented above shows that the behavior of embedding predicates like *-funa*, 'want', and *-lindela*, 'expect', in Zulu differs systematically from the behavior of control predicates like *-cela*, 'ask', *-khuthaza*, 'encourage', or *-thembisa*, 'promise'. While both types of predicates allow a DP that is thematically linked to the lower predicate – and that matches the subject agreement of the lower predicate – to appear in pre-complementizer position, matrix control predicates exhibit evidence that they are also linked to the pre-complementizer DP, while the matrix predicates in (3) and (4) that we are concerned with here show no such thematic link. In addition, the idiom-data in (15b) and (17b) also provide strong evidence against a prolepsis-account along the lines of Davies (2005). As Davies shows, idiomatic readings are *not* available in Madurese proleptic constructions, because a thematic relation exists between the matrix predicate and the pre-complementizer DP, which makes it impossible for the latter to be interpreted as part of an embedded idiom. The fact that, in contrast to Madurese, idiomatic interpretations are available in the Zulu examples in (15b) and (17b) therefore supports an alternative analysis, according to which the pre-complementizer DP originates in the embedded CP. Because idioms do not typically allow topicalization in Zulu, we conclude that the idiomatic pre-complementizer DPs must be introduced in an argument position in the embedded clause.

2.2 High destination arguments

We have demonstrated that a DP that appears in a position between the matrix verb and the complementizer in constructions such as (19) originates as the thematic subject of the embedded CP, ruling out analyses in which it is thematically linked to the matrix predicate. In this section, we show that despite the lack of a matrix theta role, this DP is located in a vP-internal position inside the matrix clause. This conclusion implies that the embedded subject in these examples has undergone RtO:

(19) Ngi-fun-a u-Sipho]ᵥₚ [꜀ₚ   ukuthi u-Sipho a-sebenz-e   e-si-tolo
1SG-want-FV   AUG-1a.Sipho that   1.SM-work-SUBJ LOC-7-store
sa-mi]
7.POSS-1SG
"I want Sipho to work in my store."

(20)
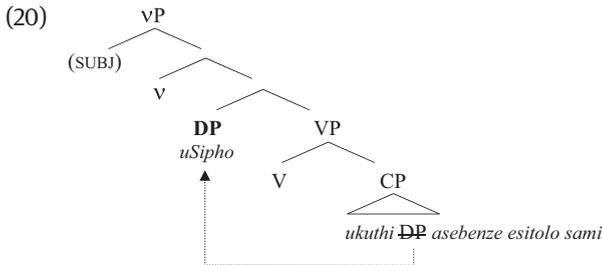
The idea that RtO targets a position inside the matrix vP has been put forward, for example, by Postal (1974), Lasnik and Saito (1991), Tanaka (1999), and Chomsky (2008) for English. What is perhaps unexpected about the raising operation depicted in (20) is that Zulu allows for RtO to take place out of a finite CP-complement. However, it is well-known that many Bantu (and indeed non-Bantu) languages license this sort of "hyperraising", with different matrix predicates, and various analyses of this phenomenon have been put forward in the literature (see e.g. Carstens 2011; Carstens and Diercks 2013; Diercks 2012; Halpert 2012; Perez (Harford) 1985; Zeller 2006). In this paper, we will not offer a new analysis of RtO but simply assume that one of the existing theories of hyperraising in Bantu can also account for RtO in Zulu. Instead, our aim in this subsection is to provide empirical arguments for an RtO-analysis of constructions such as (19) by showing that the thematic subject of the embedded CP has indeed moved into an A-position inside the matrix vP. Our analysis therefore differs fundamentally from the alternative proposal made in Bruening (2001, 2002), according to which the embedded subject DP in (19) would still be located inside the embedded clause. Bruening discusses constructions comparable to (19) in Passamaquoddy and Japanese in which the subject of an embedded finite clause appears to the left of an embedded complementizer. However, Bruening argues against the view that in these constructions, RtO out of finite clauses has taken place. He suggests instead that the embedded subject DP has undergone A-bar movement to the specifier position of the embedded CP. According to this analysis, the structure of (19) would have to be represented as in (21) (see also (7) above):

(21)   Ngifuna]ᵥₚ [꜀ₚ uSipho ukuthi u̶S̶i̶p̶h̶o̶ asebenze esitolo sami]

A first piece of evidence against a CP-level left-dislocation analysis comes from the idiom patterns that we presented in the previous subsection. As we showed in (14b) above, subjects may not participate in idioms from dislocated positions. However, in the examples in (15b) and (17b), in which the subject of an idiom appears in pre-complementizer position, the idiomatic interpretation of this moved DP was retained. This result does not follow from a Bruening-style dislocation analysis and suggests instead that the moved DP is in an A-position.

This conclusion gains further support from the position of adverbs relative to the raised DP. In Zulu, a "low" adverb like *kabi*, 'badly', which is right-adjoined to VP, cannot intervene between a VP-internal object and the verb:

(22) a. Ngi-fun-a   u-Sipho   kabi
          1SG-want-FV   AUG-1a.Sipho   badly
          "I really want Sipho."
      b. *Ngi-fun-a   kabi   u-Sipho
          1SG-want-FV   badly   AUG-1a.Sipho
          "I really want Sipho."

In examples such as (23c), *kabi* cannot intervene between the matrix verb and the pre-complementizer DP either, which demonstrates that this DP occupies the same position in the matrix clause as regular objects:

(23) a. Ngi-fun-a   **kabi**]$_{VP}$ ukuthi u-Sipho   a-phek-e   i-qanda
          1SG-want-FV badly   that   AUG-1a.Sipho 1.SM-cook-SUBJ AUG-5.egg
          "I really want Sipho to cook an egg."
      b. Ngi-fun-a   u-Sipho   **kabi**]$_{VP}$ ukuthi a-phek-e   i-qanda
          1SG-want-FV AUG-1a.Sipho badly   that   1.SM-cook-SUBJ AUG-5.egg
          "I really want Sipho to cook an egg."
      c. *Ngi-fun-a **kabi**]$_{VP}$ u-Sipho   ukuthi a-phek-e   i-qanda
          1SG-want-FV badly   AUG-1a.Sipho that   1.SM-cook-SUBJ AUG-5.egg

(23a) shows that the matrix adverb *kabi* can intervene between the matrix verb and the embedded CP, a possibility which is licensed because CPs in Zulu can be dislocated (we return to this point below). (23b) demonstrates that the adverb can also intervene between the raised DP and the embedded CP. This word order cannot be explained by Bruening's analysis, according to which the DP *uSipho* in (23b) would still be part of the embedded clause. Furthermore, a CP-level dislocation analysis cannot explain why *kabi* cannot intervene between the verb and the pre-complementizer DP, as shown in (23c). The dislocation-analysis would predict (23c) to be grammatical, with the syntax in (24):

(24) *Ngifuna **kabi**]$_{vP}$ [uSipho [ukuthi ~~uSipho~~ apheke iqanda]]$_{CP}$

The fact that (23c) is ill-formed shows unequivocally that the final landing site of the raised DP is not inside the embedded clause, but inside the matrix vP.[5] Given the results of Section 2.1, which demonstrated that this DP originates inside the embedded CP, we can conclude that the DP *uSipho* in (23b) has undergone RtO out of the finite CP-complement.

There is further evidence against a Bruening-style account, and in favor of our RtO-analysis of the Zulu data. As shown in Halpert (2012), in its pre-complementizer position, the embedded subject DP can bind a DP inside the embedded clause:

(25) a. Ngi-lindele   [ukuthi ngo-ku-tatazela   ku-ka-Sipho$_i$ (yena$_i$)
          1SG-expect-FV   that   with.AUG-15-haste 15.POSS-1a-1a.Sipho 1.PRON
          a$_i$-khohlw-e   uku-phek-a   i-dina]$_{CP}$
          1.SM-forget-SUBJ 15.INF-cook-FV   AUG-5.dinner
          "I expect that in Sipho's haste he forgets to cook dinner."
      b. *Ngi-lindele yena$_i$[ukuthi ngo-ku-tatazela   ku-ka-Sipho$_i$
          1SG-expect-FV 1.PRON that   with.AUG-15-haste 15.POSS-1a-1a.Sipho
          ~~yena$_i$~~ a-khohlw-e   uku-phek-a   i-dina]$_{CP}$
                  1.SM-forget-SUBJ 15.INF-cook-FV   AUG-5.dinner
          Intended: "I expect him$_i$ to forget to cook dinner in Sipho$_i$'s haste."
      c. Ngi-lindele   yena$_i$[ukuthi ngo-ku-tatazela   kwa-khe$_i$
          1SG-expect-FV 1.PRON   that   with.AUG-15-haste 15.POSS-his
          ~~yena$_i$~~ a-khohlw-e   uku-phek-a   i-dina]$_{CP}$
                  1.SM-forget-SUBJ 15.INF-cook-FV   AUG-5.dinner
          "I expect him to forget to cook dinner in his haste."

          [Halpert 2012: 66–67]

The subject of the embedded CP in (25a) is pronominal (either silent *pro*, or the strong pronoun *yena*). The CP also includes an adjunct modifier which contains the R-expression *Sipho*. In (25a), no raising has taken place. Therefore, *Sipho* and the subject pronoun can be coreferential, because neither of the two DPs c-commands the other. In (25b), the embedded pronominal subject *yena* has undergone raising.

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5 A raised subject can also appear to the left of matrix adverbs in Japanese. Bruening (2002) suggests that this word order may be the result of a re-ordering process that inverts the order of the raised subject (which is located in the embedded [Spec, C] in his analysis) and matrix adverbs at PF. We find this proposal *ad hoc*. In addition, as an anonymous reviewer points out, this type of reordering process seems to be unattested elsewhere in Zulu, or Bantu more generally.

Importantly, co-reference of the pronoun and *Sipho* is no longer possible in (25b). This means that the raised pronoun must be located in an A-position from which it c-commands *uSipho* in the embedded adjunct, causing a Condition C-violation. This fact is consistent with our claim that the embedded subject pronoun has undergone raising into an object position in the matrix vP, and demonstrates that RtO in Zulu is not A-bar movement. Moreover, (25c) shows that co-reference is possible again when the R-expression inside the adjunct is replaced by a pronominal. The implication is that the raised subject pronoun must be outside the local domain of the embedded adjunct, since no Condition B violation is attested in (25c). This fact also follows from our claim that the raised DP is no longer in a position inside the embedded CP.

The argument status of the raised subject is further confirmed by the fact that, when the matrix verb is passivized, the embedded DP can become the subject of the matrix clause:

(26) U-Sipho   u-fun-w-a   [ukuthi a-phek-e   i-qanda]$_{CP}$
       AUG-1a.Sipho 1.SM-want-PASS-FV   that   1.SM-cook-SUBJ AUG-5.egg
       "Sipho is wanted to cook an egg."

(27) I-langa   li-fun-w-a   [ukuthi li-khiph-e   i-n-hlanzi
       AUG-5.sun   5.SM-want-PASS-FV   that   5.SM-take-SUBJ AUG-9-fish
       e-manzi-ni]$_{CP}$
       LOC-6.water-LOC
       "The people want it to be very hot."

In (26) and (27), the embedded subject-DP is realized as the matrix subject.[6] Passive constructions such as these further confirm that verbs like *-funa* license hyperraising out of a finite clause into a matrix A-position in Zulu. Notice that the raised subject-DP in (27) corresponds to the subject of an embedded idiom and that the idiomatic reading is preserved in (27). This again provides evidence that the raised subject in this passive construction originates in the embedded clause.[7]

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6 We leave it open whether promotion-to-subject has taken place directly from the embedded subject position or whether the matrix subject has moved cyclically from the embedded subject position to a vP-internal position in the main clause, and from there further to the matrix subject position.

7 We highlight this conclusion here, because it refutes another aspect of the analysis proposed in Bruening (2001, 2002). As noted above, Bruening argues that a DP in pre-complementizer position has not raised into the matrix clause, but has undergone A-bar movement into the embedded [Spec, C]. However, he also observes that both Japanese and Passamaquoddy have constructions in which this DP has seemingly undergone A-movement in the matrix clause (A-scrambling in Japanese, and a passive-like operation in Passamaquoddy called the inverse).

We find additional support for the claim that RtO in Zulu targets a position inside the matrix vP if we examine evidence of vP-boundaries in these constructions. In Zulu, a number of morphosyntactic, prosodic and semantic/pragmatic processes distinguish between different syntactic positions in the postverbal field. These processes converge to delineate two major postverbal domains: vP-internal (where *in situ* arguments and "low" VP-adverbs are located), and vP-external (where we find higher adverbs and right-dislocated material). As we will see below, the pre-complementizer DP in Zulu RtO-constructions patterns with vP-internal elements, exhibiting parallel behavior to *in situ* objects. Before we present the relevant data, we review some of the key properties and phenomena that are associated with, or highlight the differences between, vP-internal and vP-external material in Zulu.

The most visible marker of the vP-boundary in Zulu is the morphological form of the verb. In the present and recent past tenses, Zulu verbs alternate between the so-called disjoint ("long") and conjoint ("short") verb form. As has been established in numerous studies (see e.g., Buell 2005 and Buell 2006; Halpert 2012; Van der Spuy 1993, a.o.), the conjoint form is only licensed if the verb is followed by vP-internal material (that is, arguments in their base position, or "low" adverbs, which are adjoined to VP). In contrast, the disjoint verb form (marked in the present tense by the prefix *ya-* and in the recent past by the suffix *-ile*) signals that the verb is the final element within vP. For example, the conjoint form is licensed when a transitive verb appears with an object, (28a), but when the verb is used intransitively, with no following material, the conjoint form is ungrammatical, (28b), and the disjoint form is instead required, (28c):

(28) a. U-Sipho   u-phek-a   i-qa:nda]$_{vP}$
         AUG-1a.Sipho 1.SM-cook-FV AUG-5.egg
         "Sipho is cooking an egg."
     b. *U-Sipho   u-phek-a]$_{vP}$
         AUG-1a.Sipho 1.SM-cook-FV
         Intended: "Sipho is cooking."

Bruening argues that in these constructions, the DP does not *move* to the embedded [Spec, C], but is *base-generated* in this position, from where it can undergo A-movement into the main clause. According to Bruening, when the DP is base-generated in [Spec, C], it binds a null pronoun in the embedded subject position, and he claims that it is this binding relation that prevents the A-moved DP from being interpretable as part of an embedded subject idiom in Japanese. However, in contrast to Japanese, (27) shows that the A-moved DP in the matrix subject position of the comparable Zulu construction can be interpreted as part of the idiom, which confirms that it originates in the embedded subject position, and not in [Spec, C].

    c.   U-Sipho   u-ya-phe:k-a]_{vP}

         AUG-1a.Sipho 1.SM-DIS-cook-FV

         "Sipho is cooking."

The disjoint form is also required when the verb is followed by postverbal material that clearly appears outside vP. Buell (2005, 2006) shows that a verb that immediately precedes yes/no question particles in Zulu must take a disjoint form:

(29) a. A-ba-fana ba-ya-dla:l-a]_{vP} **na** pha:ndle]_{CP}?

         AUG-2-boy 2.SM-DIS-play-FV Q   outside

         "Are the boys playing outside?"

     b. *Ba-dlal-a]_{vP} **na** pha:ndle]_{CP} ?

         2.SM-play-FV Q   outside

         "Are they playing outside?"

                               [Buell 2006: 15; adapted]

The question particle *na* attaches at the CP level (see Buell 2006 and Section 3), which implies that *na* and the following adverb in (29) are both outside vP. The fact that the verb in (29) must be in the disjoint form shows that the conjoint/ disjoint alternation in Zulu is sensitive to the syntactic position of postverbal material (i.e. whether this material is inside or outside vP).

    There is also prosodic evidence that verbs in the disjoint form are final in vP. For example, the penultimate syllable of the final word inside a prosodic phrase is lengthened in Zulu (see e.g. Khumalo 1987). As shown by Cheng and Downing (2009), the relevant prosodic phrases marked by penultimate lengthening correlate with the right edges of vP and CP in Zulu. The examples in (28c) and (29a), in which we have indicated penultimate vowel length, demonstrate that the disjoint form of the verb has the prosodic properties that are associated with words at the right edge of vP (see Buell 2005 and Buell 2006; Cheng and Downing 2009; Van der Spuy 1993).

    As processes that demarcate syntactic constituency, the conjoint/disjoint alternation and penultimate lengthening in Zulu can serve as diagnostics that distinguish between *in situ* (vP-internal) and dislocated (vP-external) objects. In (30a), which repeats example (28a), the transitive verb *-pheka*, 'cook', is in the conjoint form, which implies that the following object-DP is inside the vP. However, (30a) contrasts with (30b), where the verb appears in the disjoint form and exhibits penultimate lengthening, which indicates that the following object is dislocated and in a vP-external position:

(30) a. U-Sipho   u-phek-a   i-qa:nda]_{vP}

        AUG-1a.Sipho 1.SM-cook-FV AUG-5.egg

        "Sipho is cooking an egg."

b. U-Sipho   u-ya-li-phe:k-a]vP   i-qa:nda
  AUG-1a.Sipho 1.SM-DIS-5.OM-cook-FV AUG-5.egg
  "Sipho is cooking it, the egg."

Notice that in (30b), a so-called object marker (also called object prefix or object concord in the Bantu literature) is attached to the verb and agrees in noun class with the dislocated object-DP. In Zulu, object right-dislocation is directly correlated with object marking (a point to which we return in Section 3); object marking without dislocation and dislocation without object marking are both impossible:

(31) a. *U-Sipho   u-li-phek-a   i-qa:nda]vP
           AUG-1a.Sipho 1.SM-5.OM-cook-FV AUG-5.egg
      b. *?U-Sipho   u-ya-phe:k-a]vP i-qanda
           AUG-1a.Sipho 1.SM-DIS-cook-FV AUG-5.egg

Another phenomenon which is linked to the vP-domain in Zulu is information structure. In Zulu, focus is strongly associated with the vP: vP-internal material presents new (or non-topical) information, while constituents outside the vP can never be interpreted as focused (Buell 2005, Buell 2006; Cheng and Downing 2009; Zeller 2008, and Zeller 2015). For example, DPs in the preverbal subject position [Spec, T] cannot be realised as wh-phrases (which are inherently focused) and cannot be modified by the focus marker *kuphela*, 'only', in Zulu:

(32) a. *U-bani   u-fun-a   i-qanda?
           AUG-1a.who 1.SM-want-FV AUG-5.egg
           "Who wants an egg?"
      b. *U-Sipho   kuphela u-fun-a   i-qanda
           AUG-1a.Sipho only   1.SM-want-FV AUG-5.egg
           "Only Sipho wants an egg."

The same holds for dislocated object-DPs in Zulu. The following examples, taken from Buell (2008), illustrate that only vP-internal object-DPs can be focused; vP-external objects are incompatible with focus:

(33) a. Ngi-bon-e   u-Sipho   kuphela]vP
           1SG-see-PAST AUG-1a.Sipho only
           "I saw only Sipho."
      b. *Ngi-m-bon-ile]vP   u-Sipho   kuphela
           1SG-1.OM-see-PAST.DIS AUG-1a.Sipho only

                                                    [Buell 2008: ex. (6)]

(34) a. U-cul-e   i-phi   i-n-goma]$_{vP}$?
          2SG-sing-PAST 9.ADJ-which AUG-9-song
          "Which song did you sing?"
      b. *U-yi-cul-ile]$_{vP}$ i-phi   i-n-goma?
          2SG-9.OM-sing-PAST.DIS 9.ADJ-which AUG-9-song
                                                          [Buell 2008: ex. (5)]

In the (a)-examples, the conjoint form of the verb signals that the following object is inside vP, and in these constructions, object focus is possible. In contrast, the disjoint verb form and the object marker in the (b)-examples indicate that the postverbal objects are in vP-external positions, and in these constructions, object focus is excluded.[8]

Finally, the distribution of augmentless DPs, i.e. DPs whose head nouns have lost their initial vowel (a determiner-like element that precedes the noun class prefix in Zulu) also depends on their syntactic position with respect to vP. Augmentless DPs in Zulu are licensed in vP-internal subject and object positions, where they are often interpreted as negative polarity items (NPIs). In (35a), the augmentless subject-DP is in its base position in [Spec, v] (where it follows the verb, which shows expletive/default agreement); in (35b), it is realised in the vP-internal object position:

(35) a. A-ku-fik-anga   mu-ntu
          NEG-EXPL-arrive-NEG.PAST 1-person
          "No one arrived."
      b. A-ngi-bon-i   mu-ntu
          NEG-1SG-see-NEG 1-person
          "I don't see anybody."

---

8 In light of the correlation between object dislocation and object marking, an anonymous reviewer suggests an alternative interpretation of data such as (33b) and (34b). According to the reviewer, the ungrammaticality of these examples may not be a consequence of object dislocation; rather, (33b) and (34b) may be impossible because object-marked objects in Zulu simply cannot be focused. However, as shown by Buell (2006), vP-external adverbs are also incompatible with focus in Zulu, even though adverb dislocation is not correlated with object marking:

(i)   a. Ba-dlal-a   pha:ndle]$_{vP}$.
           2.SM-play-FV   outside
           "They're playing OUTSIDE."
       b. Ba-ya-dla:l-a]$_{vP}$ pha:ndle.
           2.SM-DJ-play-FV   outside
           "They're playing outside."

                                                          [Buell 2006: 21]

The conjoint verb form in (ia) signals that *phandle*, 'outside', is located inside the vP, and (ia) is compatible with contrastive focus on the adverb. In contrast, the adverb in (ib) follows the disjoint form of the verb, which signals that it is vP-external. As Buell notes, adverb focus in (ib) is excluded.

However, augmentless DPs are ungrammatical in vP-external positions (Halpert 2012):[9]

(36) a. *Mu-ntu   a-ka-fik-anga
         1-person NEG-1.SM-arrive-NEG.PAST
         Intended: "No one arrived."
     b. *Mu-ntu   a-ngi-m-bon-i
         1-person NEG-1SG-1.OM-see-NEG
         Intended: "Anyone, I don't see."
     c. *A-ngi-m-bon-i   muntu
         NEG-1SG-1.OM-see-NEG 1-person
         Intended: "I don't see anybody."

(36a) shows that an augmentless nominal is not licensed in the vP-external subject position [Spec, T]. In (36b) and (36c), the augmentless DPs are (left and right) dislocated (as indicated by the presence of the object marker),[10] and again, the resulting constructions are ungrammatical.

    The above data provide us with a set of (partially correlated) diagnostics to establish the syntactic position of the pre-complementizer DP in constructions such as (19) in Zulu. Let us begin by examining these constructions with respect to the conjoint/disjoint alternation. As noted in relation to (23a) above, most CPs in Zulu can optionally dislocate[11] to a vP-external position, so disjoint *ya-* is optional:

(37) a. Ngi-fun-a   [ukuthi u-Sipho   a-phek-e   i-qanda]$_{CP}$]$_{vP}$
         1SG-want-FV   that   AUG-1a.Sipho 1.SM-cook-SUBJ AUG-5.egg
         "I want Sipho to cook an egg."
     b. Ngi-**ya**-fun-a]$_{vP}$ [ukuthi u-Sipho   a-phek-e   i-qanda]$_{CP}$
         1SG-DIS-want-FV   that   AUG-1a.Sipho 1.SM-cook-SUBJ AUG-5.egg
         "I want Sipho to cook an egg."

---

9 The ungrammaticality of an example like (36c) is not due to problems with scope of negation; as Buell (2008) shows, right-dislocated elements can scope under predicate negation in Zulu.
10 Notice that negated verbs in Zulu do not mark the conjoint/disjoint alternation morphologically. However, dislocation of the object-DP in (36c) can be inferred from the presence of the object marker, which would not be licensed if the postverbal DP was vP-internal (compare (31a)).
11 However, see Halpert (2012) for a discussion of CPs headed by the complementizer *sengathi*, which cannot dislocate.

In (37), the embedded subject DP *uSipho* is located in the pre-verbal subject position ([Spec, T]) inside the CP-complement of the verb. However, when this DP appears to the left of the complementizer, the conjoint verb form is required:

(38) a. Ngi-fun-a   u-Sipho]ᵥₚ   [ukuthi a-phek-e   i-qanda]꜀ₚ
          1SG-want-FV AUG-1a.Sipho   that   1.SM-cook-SUBJ AUG-5.egg
          "I want Sipho to cook an egg."
      b. *Ngi-**ya**-fun-a u-Sipho]ᵥₚ   [ukuthi a-phek-e   i-qanda]꜀ₚ
          1SG-want-FV AUG-1a.Sipho   that   1.SM-cook-SUBJ AUG-5.egg

The contrast between (37b) and (38b) provides strong evidence that the DP *uSipho* in (38a) is inside the matrix vP. The obligatoriness of the conjoint form in (38) tells us that there is some vP-internal material following the verb. Since CPs are otherwise compatible with the disjoint form in constructions like (37b), it must be the DP, and not the CP, that is the cause of the conjoint form in (38).

Our claim that the embedded subject in constructions such as (19), (23b) or (38a) has raised into the matrix vP is also supported by the information-structural properties of the construction. First, as demonstrated in Halpert (2012), the interpretation of an embedded subject depends on whether or not it has undergone raising:

(39) A: Yini   i-n-daba   u-ngi-cel-a   uku-thol-a   u-Sipho?
              9.what AUG-9-matter 2SG-1SG.OM-ask-FV 15.INF-get-FV AUG-1a.Sipho
              "Why did you ask me to get Sipho?"
      B: a. # Ngi-fun-a   u-Sipho   [ukuthi a-phek-e   i-qanda]꜀ₚ
              1SG-want-FV AUG-1a.Sipho   that   1.SM-cook-SUBJ AUG-5.egg
         b.   Ngi-fun-a   ukuthi [u-Sipho   a-phek-e   i-qanda]꜀ₚ
              1SG-want-FV that   AUG-1a.Sipho 1.SM-cook-SUBJ AUG-5.egg
              "I want Sipho to cook an egg."

[Halpert 2012: 66]

(39B) shows that in a response to a question such as (39A), RtO of *uSipho* is impossible. This is because in its raised position, *uSipho* is interpreted as new information, and this interpretation is at odds with the context established by A. The interpretation of the raised DP as providing new information supports our claim that the raised DP in RtO-constructions ends up in a vP-internal A-position in the main clause.

Furthermore, because vP-internal DPs can be narrowly focused, our analysis predicts that DPs that have undergone RtO can be questioned and modified with focus particles. This prediction is confirmed by the following data:

(40) a. U-fun-a   bani   [ukuthi a-sebenz-e   e-si-tolo   sa-kho
       2SG-want-FV 1a.who   that   1.SM-work-SUBJ LOC-7-store 7.POSS-2SG
       kusasa]$_{CP}$?
       tomorrow
       "Who do you want to work in your store tomorrow?"

    b. Ngi-fun-a   u-Sipho   kuphela [ukuthi a-sebenz-e   e-si-tolo
       1SG-want-FV AUG-1a.Sipho only   that   1.SM-work-SUBJ LOC-7-store
       sa-mi   kusasa]$_{CP}$
       7.POSS-1SG   tomorrow
       "I want only Sipho to work in my store tomorrow."

In (40a), the raised subject-DP is a wh-phrase; in (40b), it is modified by *kuphela*, 'only'. This shows that the information-structural properties of pre-complementizer DPs in these examples match those of the vP-internal object DPs in (33a) and (34a). This is consistent with our claim that the pre-complementizer DPs in these constructions have undergone raising to a position inside the matrix vP.

    Our RtO-analysis also aligns with the distribution of augmentless nominals. When the subject of the CP-complement of a verb such as *-funa* has remained inside the embedded [Spec, T]-position, it cannot be realised as an augmentless nominal, (41a). In contrast, when the embedded subject appears before the complementizer, the augment can be dropped, (41b):

(41) a. *A-ngi-fun-i]$_{vP}$ [ukuthi mu-ntu   a-phek-e   i-qanda]$_{CP}$
       NEG-1SG-want-NEG   that   1-person 1.SM-cook-SUBJ AUG-5.egg

    b. A-ngi-fun-i   mu-ntu]$_{vP}$ [ukuthi a-phek-e   i-qanda]$_{CP}$
       NEG-1SG-want-NEG 1-person   that   1.SM-cook-SUBJ AUG-5.egg
       "I don't want anyone to cook an egg."

                                       [Halpert 2012: 99]

Given the impossibility of realizing augmentless nominals in vP-external positions, the grammaticality of (41b) would be difficult to explain in a Bruening-style analysis, according to which the augmentless nominal would be located in the embedded [Spec, C]-position. In contrast, (41b) is correctly predicted by our RtO-analysis, according to which the final landing site of DP-movement is a vP-internal position in the matrix clause.

    The data discussed thus far provide evidence that after raising, the thematic subject of the embedded CP adopts properties of a matrix object. One final object-property exhibited by a raised DP in RtO-constructions is provided by examples such as (42), which show that DPs that undergo RtO can trigger object agreement with the matrix verb:

(42) Ngi-ya-**m**-fun-a   **u-Sipho**   ukuthi a-phek-e   i-qanda
      1SG-DIS-1.OM-want-FV   AUG-1a.Sipho   that   1.SM-cook-SUBJ   AUG-5.egg
      "I want Sipho to cook an egg."

<div align="right">[Halpert 2012: 66]</div>

In (42), the object marker agrees in noun class with the raised subject of the embedded clause. Notice that object agreement between the matrix verb and the embedded subject is not possible when the latter has remained inside the complement-CP:

(43) *Ngi-(ya)-m-fun-a   [ukuthi u-Sipho   a-phek-e   i-qanda]$_{CP}$
       1SG-DIS-1.OM-want-FV   that   AUG-1a.Sipho   1.SM-cook-SUBJ   AUG-5.egg
       "I want Sipho to cook an egg."

(42) hence provides a final argument for our claim that the subjects of the finite CP-complements of certain matrix predicates in Zulu can undergo RtO and as a result behave like matrix objects.

However, (42) differs from the other examples discussed in this section in an important respect. As we shave shown in (31a) above, agreeing objects in Zulu are not tolerated in vP-internal positions. This means that, in contrast to a non-agreeing raised DP, which has moved to a position inside the matrix vP, the raised subject in constructions such as (42) is *not* located inside the vP, but occupies a vP-external position in the matrix clause. Additional evidence for this assumption, and the syntactic implications that follow from it, are discussed in the next section.

3 Raising-to-object and (double) right dislocation

As we saw in (42) in Section 2.2, a raised DP in RtO can agree with the matrix predicate, just like a non-raised object. However, we have also shown above that agreeing object-DPs in Zulu are never licensed inside the vP. Instead, object-marked DPs in Zulu are obligatorily dislocated to a vP-external position (cf. Adams 2010; Buell 2005, Buell 2006; Cheng and Downing 2009; Halpert 2012; Van der Spuy 1993; Zeller 2012). In this section, we show that the same holds for agreeing DPs that have become objects as a result of RtO in Zulu. In Section 3.1, we demonstrate that an embedded subject-DP that agrees with the matrix verb after it has undergone RtO is in a vP-external position. In Section 3.2, we argue that this position is still inside the matrix clause, a claim which leads us to conclude that in constructions such as (42), both the raised DP and the CP from

which raising has taken place are right-dislocated. Section 3.3 provides arguments against an alternative (Bruening-style) analysis of agreeing RtO-constructions according to which the agreeing DP is located in the specifier of the complement-CP.

3.1 The agreeing DP is outside vP

In Section 2.2, we showed on the basis of evidence from the conjoint/disjoint alternation and penultimate lengthening that object-marked objects in Zulu are dislocated. These diagnostics also confirm that the same holds for DPs that have become objects as a result of RtO. When a raised subject-DP shows object agreement with the matrix verb in Zulu, the verb must be in the disjoint form (provided no other material appears inside the matrix vP):

(44) a. Ngi-**ya**-m-fun-a   u-Sipho   ukuthi a-phek-e   i-qanda
          1SG-DIS-1.OM-want-FV AUG-1a.Sipho that   1.SM-cook-SUBJ AUG-5.egg
          "I want Sipho to cook an egg."
      b. *Ngi-m-fun-a   u-Sipho   ukuthi a-phek-e   i-qanda
          1SG-1.OM-want-FV AUG-1a.Sipho that   1.SM-cook-SUBJ AUG-5.egg

Recall that the conjoint form is required whenever a verb is followed by overt material inside the vP. The ungrammaticality of (44b) therefore demonstrates that the raised DP in (44a), and also the CP that follows it, are outside the matrix vP.

This claim is further supported by the intonational properties of the construction in (44a). As we saw in the previous section, Zulu systematically puts a prosodic boundary at the right edge of the vP, which is signaled by lengthening of the penultimate vowel of the phrase-final word (Buell 2005; Cheng and Downing 2009; Van der Spuy 1993). In constructions such as (44a), in which the raised DP agrees with the matrix verb, the penultimate vowel of the verb is lengthened, which signals that the DP is outside the vP:

(45) Ngi-**ya**-m-fu:n-a)   u-Si:pho)   ukuthi a-phas-e   i-exa:mu)
      1SG-DIS-1.OM-want-FV AUG-1a.Sipho that   1.SM-pass-SUBJ AUG-5.test
      "I want Sipho to pass the test."

Next, consider the position of the object-marked DP in relation to low adverbs. We showed above that a vP-internal object DP obligatorily precedes manner

adverbs such as *kabi*, 'badly'. However, this word order is no longer licensed when the object-DP is object-marked. An agreeing object-DP cannot appear before a low adverb, (46a), but must follow it, (46b) (notice that the verb in (46b) is in the conjoint form because *kabi* is a VP-adjunct and therefore located inside the vP):

(46) a. *Ngi-m-funa   uSipho   kabi
          1SG-1.OM-want-FV AUG-1a.Sipho badly
      b. Ngi-m-fun-a   kabi   u-Sipho
          1SG-1.OM-want-FV badly   AUG-1a.Sipho
          "I really want Sipho."

Importantly, an agreeing DP which has undergone RtO must also follow a low adverb, suggesting that it is not inside the matrix vP:

(47) a. *Ngi-m-fun-a   u-Sipho   kabi   ukuthi a-phek-e   i-qanda
          1SG-1.OM-want-FV AUG-1a.Sipho badly that   1.SM-cook-SUBJ AUG-5.egg
      b. Ngi-m-fun-a   kabi   u-Sipho   ukuthi a-phek-e   i-qanda
          1SG-1.OM-want-FV badly AUG-1a.Sipho that   1.SM-cook-SUBJ AUG-5.egg
          "I really want Sipho to cook an egg."

Furthermore, it was shown in Section 2.2 that vP-external material cannot be focused or questioned in Zulu. As (48a) and (48b) demonstrate, agreeing raised DPs differ from non-agreeing DPs in that they can no longer be focused or questioned. This provides further evidence that the agreeing DPs are in a dislocated, vP-external position:

(48) a. *U-ya-m-fun-a   bani   ukuthi a-sebenz-e
          2SG-DIS-1.OM-want-FV 1a.who   that   1.SM-work-SUBJ
          e-si-tolo   sa-kho   kusasa?
          LOC-7-store   7.POSS-2SG tomorrow
          Intended: "Who do you want to work in your store tomorrow?"
      b. *Ngi-ya-m-fun-a   u-Sipho   kuphela ukuthi a-sebenz-e
          1SG-DIS-1.OM-want-FV AUG-1a.Sipho   only   that   1.SM-work-SUBJ
          e-si-tolo   sa-mi   kusasa
          LOC-7-store   7.POSS-1SG   tomorrow
          Intended: "I want only Sipho to work in my store tomorrow."

Finally, when the raised DP is object-marked, it can no longer be realized without an augment, (49). Since vP-external DPs cannot be augmentless (see

(36) in Section 2.2 above), this observation is also consistent with the view that a DP which has undergone RtO is located in a position outside the matrix vP when it agrees with the verb:

(49) *A-ngi-m-fun-i   mu-ntu   ukuthi   a-phek-e   i-qanda
     NEG-1SG-1.OM-want-NEG   1-person   that   1.SM-cook-SUBJ   AUG-5.egg
     Intended: "I don't want anyone to cook an egg."

We conclude from these data that, in contrast to a non-agreeing raised DP, an object-marked DP in RtO-constructions is in a vP-external position.

3.2 DP and CP are both dislocated

The data discussed in Section 3.1 have shown that an agreeing DP in RtO-constructions is right-dislocated. However, if *only* the raised DP was right-dislocated, then we would expect the resulting word order to be V > CP > DP. Furthermore, the verb should be in the conjoint form, since the CP-complement would still be located in its VP-internal argument position. But as (50a) shows, constructions with this word order and verb morphology are not acceptable in Zulu. The only possible word order of an RtO construction with an agreeing object is V > DP > CP, with the verb in the disjoint form, (50b):

(50) a. *?Ngi-m-fun-a   [ukuthi   a-sebenz-e   e-si-tolo
        1SG-DIS-1.OM-want-FV   that   1.SM-work-SUBJ   LOC-7-store
        sa-mi   kusasa]_{CP}]_{VP} [uSipho]_{DP}
        7.POSS-1SG tomorrow   AUG-1a.Sipho
        "I want Sipho to work in my store tomorrow."
    b. Ngi-ya-m-fun-a]_{VP}   [u-Sipho]_{DP}   [ukuthi   a-sebenz-e
        1SG-DIS-1.OM-want-FV   AUG-1a.Sipho   that   1.SM-work-SUBJ
        e-si-tolo   sa-mi]_{CP}
        LOC-7-store   7.POSS-1SG
        "I want Sipho to work in my store."

Since the DP in (50b) precedes the CP, and the verb appears in the disjoint form, we conclude that in RtO-constructions with an agreeing DP, *both* the DP and the CP-complement from which raising has taken place are right-dislocated. Our proposed derivation for a construction such as (50b) is represented by the diagram in (51):

(51)
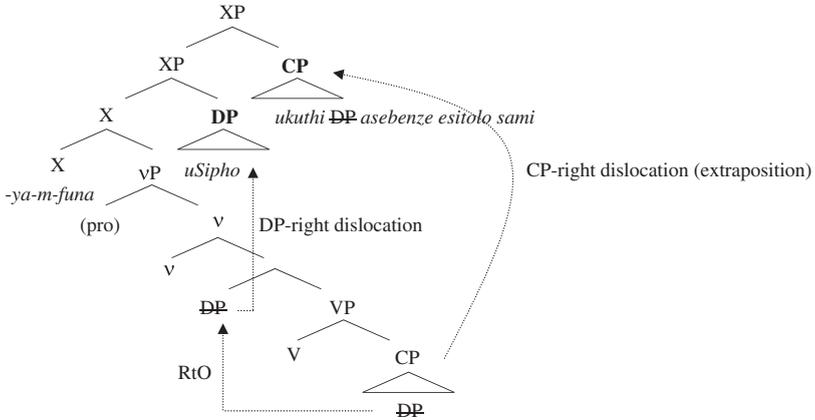
(51) illustrates what we consider to be the key aspects of the syntax of RtO-constructions in which the raised DP agrees with the matrix verb. The DP originates in the embedded CP, from which it first undergoes A-movement into the matrix clause. However, in order to agree with the matrix verb, the raised DP must be right-dislocated and realized in a vP-external position. Following Buell (2008) and Zeller (2015), we take this position to be the right-branching specifier of a functional category above vP, which we simply label "XP".[12] Right dislocation of the DP is then followed by right dislocation of the CP from which RtO has taken place. In (51), we represent CP-dislocation as right-adjunction to XP, which produces the word order DP > CP observed in constructions such as (50b).

The derivation in (51) raises two questions. First, why is agreement with the raised DP correlated with right dislocation of the DP? And second, what causes the dislocation of the complement-CP in constructions with agreeing dislocated DPs?

As noted above, the fact that object agreement is only possible with right-dislocated object-DPs is a general property of Zulu grammar, and not peculiar to constructions in which the agreeing DP has undergone RtO. In fact, in many Bantu languages, agreement is quite generally only attested with vP-external DPs. For example, it is well-known that subject agreement in languages such as Zulu, Northern Sotho, Kilega or Kinande requires the subject-DP to be located in the vP-external subject position [Spec, T]; vP-internal subjects only license default (expletive) agreement on the verb (see e.g. Baker 2003, Baker 2008; Carstens 2005; Halpert 2012; Zeller 2008; Zerbian 2006 a.o.). Beyond subject and object agreement, it has

---

12 The assumption that right dislocation is movement into a specifier position is of no particular significance for our analysis. We are not ruling out the possibility that right-dislocated DPs are right-adjoined to vP, as is assumed, for example, in Adams (2010), Cheng and Downing (2009), and Zeller (2012).

been observed that other types of agreement in Bantu languages, including post-verbal linker morphology in languages like Kinande and DP-internal associative agreement, also seem to require movement of the agreeing element to a higher position (e.g. Baker 2008; Baker and Collins 2006; Carstens 2005; Collins 2005). One way in which these observations can be accounted for theoretically is to assume that agreement in Bantu languages requires "derivational sisterhood" (cf. Epstein et al. 1998; Epstein and Seely 2006): for example, for a subject-DP and T to agree, it is not sufficient that T c-commands the subject, the subject also needs to c-command T (sisterhood is defined as mutual c-command). While T c-commands (the copy of) the subject-DP in its base position in [Spec, v], sisterhood can only be established derivationally, i.e. via movement of the subject out of the vP, to a position from where it can also c-command T (e.g. [Spec, T]).

We suggest that object agreement in Zulu is indeed established via derivational sisterhood. We assume that the object marker reflects an Agree-relation between the object-DP and a functional head F above VP (F=either v or X).[13] While F c-commands a vP-internal object-DP, the Agree-relation necessary for object agreement can only be established if the object moves out of vP, to a position from where it c-commands F. In (51) and (52) below, we represent this position as [Spec, X]:

(52)

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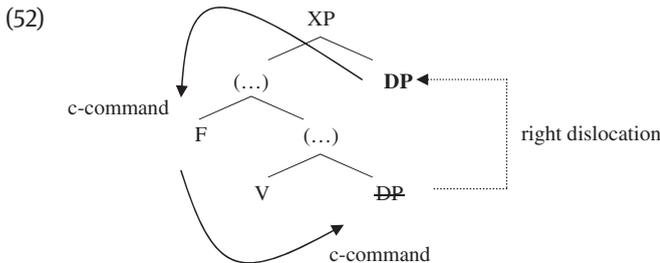
13 Since the object moves to [Spec, X], a natural assumption would be that the object marker spells out the head of XP, giving rise to Spec-Head agreement. An anonymous reviewer points out that on such a view, some independent factor would be necessary to account for why the subject-DP, which also starts out in the c-command domain of X and moves to a position that c-commands X, does not trigger object agreement. One way to rule out such a possibility would be to appeal to locality: since the object-DP more immediately c-commands X, it controls object agreement. Because object agreement obtains even when the object undergoes further A-bar movement, we would need an additional assumption that movement to [Spec, X] obtains as a first step in this construction. An alternative view would be that the uninterpretable φ-features which are responsible for object agreement are associated with a functional head below X, namely v. According to this view, right-dislocation of an object-DP would be triggered by the head X, but as a result would produce a derivational sisterhood-relation between the dislocated DP and v which gives rise to object agreement. In a derivation of this type, *only* the object-DP – and not the subject-DP – would be able to trigger object agreement: because the subject-DP originates above v, derivational sisterhood between it and v will never hold.

Note that we are not suggesting that object agreement is the reason why right dislocation takes place. Rather, we assume that right dislocation of an object-DP is triggered by discourse conditions which are independent of agreement. As already noted in Sections 1 and 2, right-dislocated DPs in Zulu are typically interpreted as given, whereas only vP-internal constituents can present new information. This means that right dislocation of an object-DP may be triggered by the information structure of the sentence: a discourse-old DP needs to be evacuated from the vP in order to be removed from the focus domain (cf. Cheng and Downing 2009; Zeller 2015). However, as a result of dislocation, the higher copy of the dislocated DP now c-commands F. Since its lower copy is c-commanded by F, the object-DP and F have become (derivational) sisters, and this syntactic configuration gives rise to object agreement. In RtO-constructions in which the raised DP is not focused, it therefore needs to be dislocated to a vP-external position in the matrix clause, and this operation derives a configuration in which object agreement can be established.

The second question that needs to be answered is why dislocation of the raised DP in constructions such as (50b) triggers dislocation of the CP. We have shown in (50a) that RtO-constructions with an agreeing DP and the CP *in situ* are ill-formed in Zulu. Interestingly, however, when the raised-DP is moved out of the vP via *left* dislocation, the acceptability of constructions with the conjoint form of the verb improves, which suggests that in these constructions, it is possible to leave the CP in its base position inside the matrix vP:

(53) ?[U-Sipho]$_{DP}$ [ngi-m-funa   [ukuthi a-sebenz-e   e-si-tolo
AUG-1a.Sipho 1SG-1.OM-want-FV   that   1.SM-work-SUBJ LOC-7-store
sa-mi   kusasa]$_{CP}$]$_{vP}$
7.POSS-1SG   tomorrow
"Sipho, I want him to work in my store tomorrow."

Furthermore, when the raised subject is the silent pronominal *pro*, the CP can also remain inside the matrix-vP:

(54) Ngi-m-fun-a [ukuthi a-sebenz-e   e-si-tolo   sa-mi
1SG-1.OM-want-FV that   1.SM-work-SUBJ LOC-7-store 7.POSS-1SG
kusasa]$_{CP}$]$_{vP}$ [*pro*].
tomorrow
"I want him to work in my store tomorrow"

These data suggest that RtO-constructions with an agreeing DP in which the CP-complement is *in situ* are not ruled out for syntactic reasons. Instead, we

assume that the markedness of these constructions is due to external performance factors (possibly having to do with processing constraints, along the lines of Hawkins 1994 or Wasow 2002), which cause finite CPs to be preferably realized at the right edge of the clause in Zulu at PF. Note that the tendency to dislocate the CP-complement of the verb when an object-DP is right-dislocated is not peculiar to RtO-constructions in Zulu. When the right-dislocated object is an argument of the matrix verb, CP-dislocation is required as well:[14]

(55)   a.   %Ngi-m-tshel-a [ukuthi   u-Sipho   u-sebenz-a   e-si-tolo
         1SG-1.OM-tell-FV   that   AUG-1a.Sipho   1.SM-work-FV   LOC-7-store
         sa-mi]$_{CP}$]$_{vP}$ [u-Langa]$_{DP}$
         7.POSS-1SG   AUG-1a.Langa
         Intended: "I'm telling him that Sipho is working in my store, Langa."
    b.   Ngi-ya-m-tshel-a]$_{vP}$ [u-Langa]$_{DP}$ [ukuthi   u-Sipho   u-sebenz-a
         1SG-DIS-1.OM-tell-FV   AUG-1a.Langa   that   AUG-1a.Sipho   1.SM-work-FV
         e-si-tolo   sa-mi]$_{CP}$
         LOC-7-store   7.POSS-1SG
         "I'm telling Langa that Sipho is working in my store."

A requirement to extrapose finite CPs is also observed in non-Bantu languages such as English and German:

(56)   a.   John understands [his mother]$_{DP}$ completely
     b.   *John understands completely [his mother]$_{DP}$

(57)   a.   ??John understands [that his mother is angry]$_{CP}$ completely
     b.   John understands completely [that his mother is angry]$_{CP}$

---

14 (55a) represents the judgments of our two Zulu informants. While one of these informants completely ruled out this example, the other did not judge it as ungrammtical, but merely expressed a preference for the alternative word order DP > CP. We represent these results by marking (55a) as %. Notice that the judgments of both informants regarding (i), in which the dislocated DP is the subject argument of the matrix verb, matched their judgments regarding (55a):

(i)   %U-ngi-tshel-a [ukuthi u-Sipho   u-sebenz-a   e-si-tolo   sa-khe]$_{CP}$]$_{vP}$ [u-Langa]$_{DP}$
    1.SM-1SG.OM-tell-FV   that   AUG-1a.Sipho   1.SM-work-FV   LOC-7-store   7.POSS-his   AUG 1a.Langa
    Intended: "He's telling me that Sipho is working in his store, Langa."

(58) a. Ich mag [Raucher]$_{DP}$ nicht
        I   like   smokers   not
        "I don't like smokers."
    b. *Ich mag nicht [Raucher]$_{DP}$
        I   like   not   smokers

(59) a. *Ich mag [dass du rauchst]$_{CP}$ nicht
        I   like   that   you   smoke   not
    b. Ich mag nicht [dass du rauchst]$_{CP}$
        I   like   not   that   you   smoke
        "I don't like that you smoke."

In Zulu RtO-constructions, an *in situ* CP-complement of the verb is at the right edge of the clause at PF when the raised subject DP is inside the matrix vP, dislocated to the left, or phonologically null. In these contexts, CP-extraposition is therefore not required. However, when the raised DP has been dislocated to the right, a finite CP-complement can only appear in clause-final position if it is extraposed, i.e. dislocated to a position further to the right of the agreeing DP.

    Although we assume that CP-extraposition in (52) takes place for reasons that are independent of narrow syntax – in other words, that the syntax in principle permits both the dislocated and non-dislocated versions, while extra-syntactic factors rule out the *in situ* version – we nevertheless analyze the dislocation of the CP as a syntactic process. The main reason for this assumption is that constructions with two dislocated arguments are not only attested when one of the two arguments is a CP. As shown in Adams (2010) and Zeller (2015), "double right dislocation" can also apply to both DP-arguments of a ditransitive verb in Zulu:

(60)   Ngi-ya-ba-tshel-a   a-ba-ntwana   i-n-daba
       1SG-DIS-2.OM-tell-FV   AUG-2-child   AUG-9-story
       "I am telling the children a story."

In (60), both internal DP-arguments of the verb are right-dislocated, as indicated by the fact that the verb is in the disjoint form (see Zeller 2015 for further arguments). The existence of constructions such as (60) suggests that "double right dislocation" is a syntactic operation in Zulu that can apply whenever more than one internal argument needs to be removed from the VP via movement.

    In (61), we summarize the three major steps of the derivational cycle that we propose to account for constructions such as (50b):

(61)   Step 1: Raising of DP out of the complement-CP
              Step 2: Right dislocation of the raised DP, giving rise to object agreement
              Step 3: Right dislocation (extraposition) of the complement-CP

3.3 The agreeing DP is not in [Spec, C]

Before we discuss the conclusions that we draw from the analysis summarized in (61), we have to rule out an alternative analysis of RtO-constructions with agreeing DPs. Recall that according to Bruening (2001, 2002), constructions with an embedded subject-DP in a pre-complementizer position are derived by A-bar movement to the [Spec, C]-position of the embedded CP. We have shown in Section 2.2 above that this analysis is not applicable to "ordinary" instances of RtO in Zulu, because a non-agreeing pre-complementizer subject-DP is unquestionably located in a νP-internal position. However, our arguments do not apply to RtO-constructions in which the raised DP agrees with the verb, since we have just demonstrated that agreeing DPs in RtO are *not* inside the matrix νP. One could therefore consider a Bruening-style analysis of RtO-constructions with agreeing DPs, according to which the agreeing DP is located inside the embedded [Spec, C]:

(62)   ngiyamfuna [[uSipho]_{DP} [ukuthi ~~uSipho~~ asebenze esitolo sami]]_{CP}

However, there are good reasons to reject a Bruening-style analysis for agreeing RtO-constructions as well. The first argument against such an analysis derives from the fact (discussed in Section 3.1) that in agreeing RtO-constructions with V > DP > CP word order, the matrix verb must be in the disjoint form (unless the conjoint form is licensed because of a low adverb inside the main clause νP):

(63) a. Ngi-ya-m-fun-a   u-Sipho   ukuthi a-sebenz-e   e-si-tolo
            1SG-DIS-1.OM-want-FV AUG-1a.Sipho that   1.SM-work-SUBJ LOC-7-store
            sa-mi.
            7.POSS-1SG
            "I want Sipho to work in my store."
      b. *Ngi-m-fun-a   u-Sipho   ukuthi a-sebenz-e   e-si-tolo
            1SG-1.OM-want-FV AUG-1a.Sipho that   1.SM-work-SUBJ LOC-7-store
            sa-mi.
            7.POSS-1SG

Given the evidence discussed in Section 2.2 above, the obligatoriness of the disjoint verb form means that in RtO-constructions such as (63a), both the raised DP and the CP must be outside of the matrix vP. In order to derive this fact, proponents of a Bruening-style analysis would only have to postulate one movement step, i.e. string-vacuous right dislocation of the CP, which pied-pipes the subject DP in its specifier:

(64)   ngiyamfuna ~~CP~~]$_{vP}$ [[uSipho]$_{DP}$ [ukuthi ~~uSipho~~ asebenze esitolo sami]]$_{CP}$

The first problem with the structure in (64) is that it is not clear why CP-dislocation is obligatory. Given that CP-dislocation is otherwise optional in Zulu (see (37) in Section 2.2 above), the fact that rightward movement of the CP is required in constructions in which the DP in [Spec, C] agrees with the matrix verb simply does not follow from any aspect of the analysis. For example, CP-dislocation cannot be explained by the derivational sisterhood condition on object agreement, because in the configuration in (64), the DP in the specifier of the dislocated CP does not c-command any material inside the matrix clause. Neither can CP-dislocation in (64) be due to the requirement to realize finite CPs at the right edge of a clause, because the CP already appears at the right edge before dislocation takes place. Moreover, it is also not clear how agreement between the raised DP in [Spec, C] and the matrix verb would be established in (64). Since the CP is in a vP-external position, the DP in [Spec, C] would be outside the c-command domain of the "low" functional head F responsible for object agreement. One would therefore have to assume that object agreement is established before the CP is dislocated, i.e. in a configuration in which F c-commands the DP in [Spec, C]. However, this assumption is problematic too, since it incorrectly predicts that object marking of vP-internal object-DPs should also be possible in Zulu: if F can trigger object agreement with a DP in the specifier of a CP-complement of the verb, then it should also be able to agree with a DP-complement of the verb, since the c-command relations are the same. In sum, the analysis represented in (64) fails to explain why dislocation must take place and how object agreement is established. In contrast, our proposal offers answers to these questions: DP-dislocation follows from the discourse properties of the raised DP, object agreement is a consequence of derivational sisterhood, and CP-dislocation must take place in order to realize the CP at the right edge of the clause.

    A second problem for the analysis sketched in (64) is raised by the data in (55) above, repeated in (65), which show that the word order verb > agreeing DP > CP is also preferred in constructions in which both the DP and the CP are arguments of the verb (see also footnote 14):

(65) a. %Ngi-m-tshel-a   ukuthi   u-Sipho   u-sebenz-a   e-si-tolo
      1SG-1.OM-tell-FV   that   AUG-1a.Sipho   1.SM-work-FV   LOC-7-store
      sa-mi   u-Langa
      7.POSS-1SG   AUG-1a.Langa

     b.   Ngi-ya-m-tshel-a   u-Langa   ukuthi   u-Sipho   u-sebenz-a
      1SG-DIS-1.OM-tell-FV   AUG-1a.Langa   that   AUG-1a.Sipho   1.SM-work-FV
      e-si-tolo   sa-mi
      LOC-7-store   7.POSS-1SG
      "I'm telling Langa that Sipho is working in my store."

Since the verb in (65b) is in the disjoint form, both the DP- and the CP-object of the verb must be outside the matrix-vP. A Bruening-style analysis is clearly untenable here, because a DP-argument of the matrix verb cannot be realized inside the embedded [Spec, C]. This means that the only possible derivation for the word order in (65b) is the "double right dislocation" analysis we have proposed in (51) in Section 3.2. However, if this analysis has to be assumed anyway, in order to account for the word order of constructions such as (65b), then applying the same analysis to RtO-constructions such as (63a) is clearly a more parsimonious approach than postulating an alternative analysis for these constructions, with a fundamentally different syntax.

A final argument against the view that raised DPs which agree with the matrix verb are in an embedded [Spec, C]-position is provided by the observation that certain main clause elements can appear between the DP and the complementizer. Recall that in yes-no questions, Zulu employs the question particle *na*. As we showed in Section 2.2, *na* is a CP-level element and external to the vP. It therefore must follow the disjoint form of the verb:

(66)   U-ya-sebenz-a]$_{vP}$ na?
      2SG-DIS-work-FV   Q
      "Are you working?"

In RtO-constructions with an agreeing DP, *na* is preferably realized either before or after both the raised DP and the embedded CP:[15]

---

15 (67a) suggests that the requirement of finite CPs to appear at the right edge of a clause is not violated by a right-peripheral question particle, for reasons that are not entirely clear to us. One possibility is that the question particle in fact cliticizes onto preceding material and so allows the final word of the CP to remain the final prosodic word of the sentence.

(67) a. U-ya-m-lindel-a   u-Mdu   ukuthi a-sebenz-e   *na*?
      2SG-DIS-1.OM-expect-FV AUG-1a.Mdu that   1.SM-work-SUBJ Q
      "Are you expecting Mdu to work?"
    b. U-ya-m-lindel-a   *na* u-Mdu   ukuthi a-sebenz-e?
      2SG-DIS-1.OM-expect-FV Q   AUG-1a.Mdu that   1.SM-work-SUBJ
      "Are you expecting Mdu to work?"

However, although this word order is slightly marked, *na* can also appear between the raised subject and the CP:

(68) ?U-ya-m-lindel-a   u-Mdu   *na* ukuthi a-sebenz-e?
      2SG-DIS-1.OM-expect-FV AUG-1.Mdu Q   that   1.SM-work-SUBJ
      "Are you expecting Mdu to work?"

If the DP *uMdu* was located inside the embedded [Spec, C], then the word order in (68) should be impossible. In contrast, all three versions of the yes-no question in (67a), (67b) and (68) can be derived in the analysis that we have proposed above. Following Buell (2006), we assume that *na* is the head of the category Force in the C-domain of the clause. The word order in (67a) therefore follows from the analysis illustrated in (51) above, since both DP and CP are right-dislocated to positions associated with XP, which is below Force. (67b) shows that in addition to these low right dislocation positions, Zulu also allows right dislocation to "higher" positions in the C-domain. For example, if we assume that DP and CP can also be right-adjoined to ForceP in Zulu, then the word order in (67b) follows. Finally, (68) can then be derived by assuming that the DP is located in [Spec, X], while the CP has been adjoined to ForceP.[16]

     We conclude that (51) is the correct representation of RtO-constructions such as (63a). A raised DP which agrees with the matrix verb has been dislocated to a position outside the matrix vP. The word order in (63a) follows from a second dislocation step, when the CP from which RtO has taken place is extraposed to a position following the right-dislocated DP. In the final section of this paper, we discuss some of the consequences of this analysis for theories of raising and right dislocation.

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16 We speculate that the markedness of (68) is because elements dislocated to a high position in Zulu are interpreted as afterthoughts. However, interpreting the CP as an afterthought may produce difficulties when the embedded subject which has been raised from the CP is associated with a low dislocation position.

4 Conclusions

In this paper, we have provided substantial empirical evidence that Zulu allows (optional) RtO out of an agreeing finite clause into a vP-internal position in the matrix clause. Furthermore, we have shown that a raised object can be object-marked in the matrix clause, in which case both the agreeing object and the CP from which it has raised are right-dislocated to vP-external positions in the matrix clause.

We consider the following conclusions noteworthy. First, we have shown that RtO in Zulu can take place out of finite clauses (following Halpert 2012). As previous work on raising-to-*subject* in Bantu has discussed (e.g. Carstens 2011; Carstens and Diercks 2013; Diercks 2012; Halpert 2012; Zeller 2006), this result is at odds with standard Minimalist analyses of raising constructions, according to which A-movement should only be possible out of "defective" infinitives. Our data provide new evidence that the conclusion that Zulu allows A-movement out of a finite CP with an overt complementizer cannot be avoided. In particular, the Zulu data are not compatible with the alternative analysis of RtO-constructions proposed in Bruening (2001, 2002). According to Bruening's analysis, an embedded subject DP in pre-complementizer position has not raised into the matrix clause, but has undergone A-bar movement to [Spec, C]. We have demonstrated in detail that this analysis fails to explain the properties of RtO in Zulu.

Second, according to the analysis we have proposed in this paper, RtO can take place out of a CP-complement, which is subsequently dislocated and adjoined to a maximal projection. This analysis supports the view, defended in Büring and Hartmann (1997) with data from German and English, that movement from an extraposed CP happens before the CP is dislocated. While Büring and Hartmann show this to be the case with respect to long A-bar movement, our analysis extends the scope of their analysis by showing that their conclusion also applies to A-movement out of CP-complements. Moreover, if one assumes (as we have done) that extraposed CPs are adjoined to a maximal projection outside vP, our findings also provide a strong argument for a movement analysis of CP-extraposition. If an extraposed CP was base-generated in an adjoined position at the right edge of the clause, then the existence of RtO-constructions with agreeing DPs would imply that raising can take place out of adjuncts. However, as is well-known, extraction out of adjuncts is cross-linguistically ruled out (Huang 1982; Jurka 2010; Nunes and Uriagereka 2000; Stepanov 2007). Since A-movement out of a CP can only take place if the CP has been in an argument position at some stage of the derivation, CP-extraposition to a vP-external position must have taken place via movement.

Finally, our analysis of RtO and right dislocation in Zulu raises interesting questions for a recent line of analysis of dislocation constructions (Ott and de Vries 2014, Ott and de Vries in press; Ott 2014). Ott and de Vries propose a biclausal analysis of right dislocation. They argue that 1) all sentences with right dislocation involve two (nearly) identical CPs; 2) the right dislocated element undergoes leftward movement to the edge of the second CP (CP-2); 3) all material in CP-2 that is identical to the first CP is deleted in the mapping to PF. The German example in (69) is represented syntactically as in (70) in their analysis (see Ott and de Vries 2014, ex. (1) and (2)):

(69) Ich kenne ihn   gut, den Peter
       I   know   him well the Peter
       "I know him well, Peter."

(70) [ich kenne ihn gut]$_{CP-1}$ [den Peter ~~kenne ich *t* gut~~]$_{CP-2}$

According to the analysis sketched above, the fronted DP *den Peter* in CP-2 of (70) is only cataphorically, but not derivationally, linked to the object pronoun *ihn* in CP-1 (labeled the "correlate" in Ott and de Vries (2014, in press)). Ott (2014) expands this story to instances of left dislocation, adding a further assumption: 4) left dislocation involves movement and deletion in CP-1, rather than CP-2 (see Ott 2014: 269–270):

(71) Den Peter, den habe ich gesehen
       the Peter   him have   I   seen
       "I saw Peter."

(72) [den Peter ~~habe ich *t* gesehen~~]$_{CP-1}$ [den habe ich *t* gesehen]$_{CP-2}$

This approach thus reduces all instances of dislocation to cases of movement to [Spec, C] (or some similar non-dislocated position in the left periphery).

However, the Zulu constructions that we have argued here involve RtO and subsequent dislocation provide a challenge to this cataphoric view of dislocated elements. On an Ott and de Vries-style approach, the right-dislocated DP in a construction such as (73) would have to be located in the left periphery of a juxtaposed CP-2 whose remaining content has been deleted, as shown in (74):

(73) Ngi-ya-m-fun-a   **u-Sipho**   ukuthi a-phek-e   i-qanda
       1SG-DIS-1.OM-want-FV   AUG-1a.Sipho   that   1.SM-cook-SUBJ AUG-5.egg
       "I want Sipho to cook an egg."

(74) [ngiyamfuna *pro* [ukuthi . . . *t*]$_{CP-3}$]$_{CP-1}$ [[uSipho]$_{DP}$ [~~ngiyamfuna [ukuthi . . . *t*]$_{CP-4}$~~]]$_{CP-2}$

As (74) shows, the right dislocated DP *uSipho* has moved to the left periphery of the elided CP-2 after undergoing RtO from CP-4 into CP-2. In CP-1, the argument which has undergone RtO from CP-3 is a phonologically null pronominal *pro*, which triggers agreement with the matrix verb and which serves as the correlate of *uSipho*.

A general problem with this type of approach for any instance of right dislocation in Zulu concerns the nature of the leftward movement operation that has applied to the "right-dislocated" DP in CP-2: while left dislocation is frequently attested in Zulu (see e.g. example (53) in Section 3.2), movement to [Spec, C] of the type required by Ott and de Vries's analysis is not independently attested. It is therefore not clear what kind of leftward movement (if any) could achieve the type of derivation shown in (74).

Beyond the issue of whether the predicted type of leftward movement is available in Zulu, the order of the dislocated DP and following CP presents a further complication for the Ott and de Vries approach to right dislocation. Given their starting assumption that right dislocation always involves deletion of identical material in CP-2, the predicted word order, as shown in (74), is V > CP > DP. Instead of this predicted order, the attested order in (73) is in fact V > DP > CP, a result that is not straightforwardly available on their account.[17] In light of these complications, we conclude that more (comparative) research on right dislocation in languages outside the Germanic family – and in particular, on the type of construction involving A-movement with subsequent dislocation discussed here – is needed in order to establish whether this construction can be reduced cross-linguistically to leftward movement plus clausal ellipsis. Indeed, as we have outlined above, the particular combination of A-movement, dislocation, and CP extraposition that we have demonstrated to be the structure of this

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17 Dennis Ott (p.c.) suggests an alternative in which the (eventually elided) CP-2 is parenthetically inserted before the embedded extraposed CP-3 in the matrix clause:

(i)   [ngiyamfuna *pro* CP-3 [[uSipho]$_{DP}$ [ngiyamfuna [ukuthi . . . *t*]$_{CP-4}$]]$_{CP-2}$ [ukuthi . . . *t*]$_{CP-3}$]$_{CP-1}$

While structures of this type work straightforwardly in German by assuming that the parenthetical CP contains only the matrix clause (and not the embedded CP), the A-movement effects displayed by the dislocated DP in Zulu would require the embedded clause to appear in both CP-2 (the elided clause) and CP-1 (the main clause), where it is pronounced in its extraposed position. This yields a configuration where the ellipsis site contains both material that follows and material that precedes the relevant correlates. Equivalent sentences in German are degraded, if not altogether ungrammatical for some speakers; as we have demonstrated for Zulu, RtO with dislocation shows no such effect.

Zulu construction makes it an ideal resource for better identifying the properties of all three of these more general phenomena.

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