12. Relative Clauses[*]

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Abstract

Bantu languages exhibit a big range of variation in the formation of relative clauses. The languages do not only differ in the nature of the relative marker (free vs. bound (prefix, suffix) form) but also in the position of the subject within the relative clause, in use of object marker, and the prosodic phrasing of the relative clause, just to name a few. This article provides an overview of the range of variation, the issues they raise syntactically, as well as a brief discussion of the syntactic analyses concerning these issues.

Keywords: object marker, subject inversion, relative suffix, tonal strategy, restrictive relative clause, relative complementizers, relative pronoun

12.1 Introduction

Relative clauses in Bantu languages have been extensively investigated dating back to Meeussen (1971) (see also Givón 1971 and Nsuka Nkutsi 1982 among others). In

general, Bantu languages have externally headed relative clauses, as can be seen

from an example of an object relative from Southern Sotho in (1):

(1) setulo [**seo** basadi ba-se-rek-ile-**ng** kajeno] [Southern Sotho]
    7.chair REL7 2.woman SM2-OM7-buy-PFV-REL today
    'the chair which the women bought today' (Zeller 2004: 77)

The example in (1) appears on the surface to be quite straightforward given a Bantu

basic SVO word order: a relative clause with a head noun (*setulo* 'chair'), a relative

marker *seo* (agreeing with the head noun), followed by a clause with SV order.

Nonetheless, there is a big range of variation within Bantu languages, when it comes

to the formation of relative clauses, leading to an abundance of issues concerning

relative formation. This article aims to first provide an overview of the range of

variation that will be discussed further, as well as an overview of the theoretical

issues raised by the variation, followed by a discussion of the various analyses of the

issues.

    For reasons of space, this article will concentrate on restrictive relative clauses.

Here and there, some comments will be made about non-restrictive relative clauses.

Furthermore, more attention will be paid to the syntax of relatives than the

morphological makeup of the relative markers/concords or their historical

connections.

    The article starts in section 12.2 with an overview of the strategies of marking a

relative clause, and sets out the issues to be discussed in later sections. In section

12.3, syntactic analyses of Bantu relative clauses are reviewed, taking into

consideration both the traditional analysis of relative clauses as well as the (more

recent) head-raising analysis. Section 12.4 concerns the presence/absence of object

markers in relative clauses as well as possible resumption in locative relatives. In

section 12.5, prosodic phrasing of relative clauses is discussed. Section 12.6

concludes the article.

12.2 The strategies for marking a relative clause

One of the biggest issues in the formation of relative clauses concerns the marker of

a relative clause. In the case of Bantu languages, this does not only relate to the

differences between subject relatives and non-subject (e.g., object, locative) relatives,

but also different strategies for the same type of relatives. In this section, I first

provide an overview of the marking strategies in non-subject relatives, focusing on

object relatives. In section 12.2.2, I discuss the strategies in subject relatives which

differ from the object relatives. Aside from segmental markings, we also discuss

non-segmental (i.e., tonal markings) in subject relatives. Other types of non-subject

relatives will be discussed in section 12.4.

12.2.1 Marking object relatives

One common strategy for marking object relatives is the use of a clause initial

marker, as we can see from the examples in (2) (as well as in (1)). In these examples,

the clause initial marker appears as a free morpheme. In some languages (such as

Southern Sotho (1), Bemba (2a) and, and Chichewa (2d)), the relative marker is based

on the demonstrative pronouns,[1] while in others (as in Swahili and Venda in (2b,c)), this is not the case.

(2) a abántú abó **ábo** n-a-mwééne maíló … [Bemba]
    2.people DEM2 REL2 SM1-TNS-see.PERF yesterday
    'those people who/that I saw yesterday…' (Kula and Cheng 2007: 124)
   b vi-tabu [**amba-vyo** Juma a-li-nunu-a] ni ghali [Swahili]
    8-book amba-REL8 Juma SM1-PST-buy-FV COP expensive
    'The books Juma bought are expensive.' (Ngonyani 2001: 61)
   c munna [**ane** nngwa dza **mu**-pandamedza] [Venda]
    1.man REL1 10.dog SM10 OM1-chase
    'the man whom the dogs are chasing' (Zeller 2004: 81)
   d [a-lendó a-**méné** á-ná-**wa**-bweretsérá m-phátsoo-**wo**] [Chichewa][2]
    2-visitor 2-REL SM2-PST2-OM2-bring.for 10-gift-REL2
    a-koondwa
    SM2.PERF-be.happy (Downing & Mtenje 2011: 76)
    'The visitors who they brought the gifts for are happy.'

The demonstrative type has been variously described either as a complementizer (Demuth and Harford 1999), or a relative pronoun (Zeller 2006), while the non-demonstrative type has been described as on a par with a complementizer. I return to this issue in section 12.3. It should also be noted that in all the above cases, the marker agrees with the head noun and there is a separate subject marker attached to the verb (bearing in mind that in the case of Swahili, *amba* has a suffixed agreement marker).

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[1] In Bemba, the relative marker takes the shape of two of the four series of demonstratives (the hearer-proximate and the distal); in Chichewa, the relative marker *-méné* is homophonous with the emphatic demonstrative (see Nsuka Nkutsi (1982) for more detailed discussion).

[2] The *méné* marker is optional. In section 12.5, I discuss the prosodic difference between relative clauses with and relative clauses without *méné*.

Aside from an unbound clause-initial marker, in some languages, a bound morpheme prefixed initially to the verb sequence is used to mark a relative clause. The examples in (3) represent a sample of such cases.

(3) a mbatya   **dze**-v-aka-son-era   vakadzi   mwenga   [Chishona]
       10.clothes REL10-SM2-PST-sew-APPL 2.women   1.bride
       'clothes which the women sewed for the bride' (Demuth & Harford 1999)

  b incwadi [isitshudeni **esi**-yi-funda-**yo**]   [Zulu][3]
      9.letter   7.student   REL7-OM9-read-REL
      'the letter that the student is reading' (Zeller 2004: 79)

  c nlúmé boNéo **wa**-bá-ka-bóna   [Ikalanga]
      1.man 2.Neo REL1-SM2-PST-see
      'the man that [Neo and others] saw' (Letsholo 2006)

  d vií-nu   **vy**-á=á-yúm-íite   [Makwe]
      8-thing 8-REL-SM1-buy-PRS.PFV.REL
      'the things that he has bought.' (Devos 2008: 394)

  e bitondo **bí**-ku-ténd-a   úzo   mwána   ta-bí-lí   [Kilega]
      8word   REL8-PROG-say-FV DEM1 1child   NEG-SM8-be
      bi-sóga
      SM8-good
      'The words that that child is saying are not good.' (Carstens 2005: 233)

Besides the bound vs. unbound nature of the morpheme as well as the question of the historical source of the morpheme,[4] the strategies illustrated in (3) raise other issues as well. First, as shown in Chishona (3a), the subject may be post-verbal (and in some languages obligatory). In the literature, this has been called "Relative inversion" (Henderson 2006) or "Subject Inversion" (Demuth and Harford 1999).

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[3] In Zulu, the relative marker *a* is phonologically merged with the subject marker. See Poulos 1981 and Zeller 2004 for more discussion.

[4] See Zeller (2004) for instance for a discussion of the historical connection between the relative markers in Nguni, Sotho and Tsonga; see also Nsuka Nkutsi (1982).

Second, the constituent with which the relative marker agrees with differs in Bantu languages. The relative marker may be solely agreeing with the head noun (as in Chishona (3a), Ikalanga (3c), Makwe (3d) and Kilega (3e)). However, in Chishona, Makwe and Ikalanga, the subject concord is marked by a different morpheme, but in Kilega, the subject marker appears to be absent. On the other hand, the relative marker can be agreeing with the subject only, as in Zulu (3b). Third, in some languages like Makwe (3d) (and also Ruwund, Konzo, Mongo), the relative marker is the same as the associative marker or connective (van de Velde 2013) used in possessives and other cases where a noun is connected to a noun, an adjective and a clause via a connective/associative marker. Lastly, as in Southern Sotho in (1), Chichewa (2d) and Zulu (3b), some languages have a relative suffix at the end of the verb or at the end of a phrase within a relative clause, co-occurring with the clause-initial relative marker.[5] These issues will be taken up in section 12.3.2.3.

In the examples above, the relative marker is either at the beginning of the relative clause, or at the beginning of the relative verbal complex. However, in some cases, the relative marker appears within the verbal complex, as in the Swahili examples in (4a,b).

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[5] Most of the examples in the literature with a suffixal relative marker appear at the end of the verbal sequence. Downing and Mtenje (2010) note that the -o relative enclitic in Chichewa is homophonouns with the remote demonstrative. In Downing and Mtenja (2011), they show that the relative suffix in Chichewa takes a phonological phrase as a host.

(4) a vi-tabu [a-li-**vyo**-nunu-a   Juma] ni   ghali   [Swahili]
       8-book 3SG-PST-REL8-buy-FV Juma COP   expensive
       'The books Juma bought are expensive.'
    b vi-tabu [a-si-**vyo**-som-a   Juma] ni-ta-vi-uz-a
       8-book 3SG-NEG-REL8-read-FV   Juma   SM1-FUT-OM8-sell-FV
       'The books that Juma does not read I will sell.
    c vi-tabu [a-nunu-a-**vyo**   Juma] ni   ghali
       8-book 3SG-buy-FV-REL8   Juma COP   expensive
       'The books Juma buys are expensive.' (Ngonyani 2001: 61)

Note that in the case of the Swahili relative marker, it is not restricted to the internal

part of the verbal complex; it can be attached to *amba* as in (2b), or it can occur at the

end of the verbal complex, following the final vowel as in (4c).[6] The question is

whether the relative suffix in languages like Zulu is similar to the relative suffix in

Swahili and Chichewa. I briefly address this issue in section 12.3.2.3.

Another aspect of the object relatives that we should pay attention to is

presence/absence of the object marker in the verbal complex. As we can see in (2),

there is an object marker in Venda and Chichewa, but not in Bemba and Swahili. The

question is whether the presence/absence of the object marker is obligatory and how

it is tied to regular object marking in non-relative sentences. This is discussed in

section 12.4.

12.2.2 Marking subject relatives

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[6] In Givón (1971), he suggests that the pattern in which the relative marker is suffixed to the verbal

sequence is the oldest, and the other patterns are derived from it.

In many languages, subject relatives are marked in a similar way as non-subject relatives, as we can see in (5) below.

(5) a. anyané   [a-**méné** á-kú-b-á   míkánda]   [Chichewa]
       2.baboons 2-REL   SM2-PRS-steal-FV 4.beads
       a-ku-dz-éts-á   chisokonezo
       SM2-PRS-come-CAUS-FV 7.confusion   (Mchombo 2004: 40)
       'The baboons that are stealing beads are bringing confusion.'
   b. ín-dod' [**é**-gqoke ísí-gqo:ko] í-bon-é   ízi-vaká:shi   [Zulu]
       9-man   REL9-wear 7-hat   9-see-PST 8-visitor
       'The man who is wearing a hat saw the visitors.' (Cheng & Downing 2007: 53)
   c. ngombe [**ya**-ká-ízéla]   [Ikalanga]
       9.cow   REL9-PST-sleep
       'the cow that is sleeping' (Letsholo 2006: 295)

As shown by the examples in (5), the relative marker agrees with the head noun, as expected. Further, since the head noun is also the subject of the relative clause, it can be the case that the relative marker encompasses both relative agreement and subject agreement. This is particularly indicated in Zeller (2004) for Southern Sotho for instance:

(6) ngwana [**ya**   bala-**ng** hantle]   [Southern Sotho]
     1a.child REL1a.SM1a   read-REL well
     'the/a child who studies well' (Zeller 2004: 77)

In Southern Sotho subject relatives, it is also clear that the form is different from the non-subject relatives in that the former does not use a demonstrative-based form. Such a difference is also found in Bemba, where subject relatives use a bound relative marker while the non-subject relatives use a demonstrative, unbound relative marker. Compare (2a) with (7).

(7) ba-kafúndishá **á**-bá-léé-lolesha   panse   ni   ba-Mutale   [Bemba]
     2-teacher   REL2-SM2-TNS-look   16.outside COP   2-Mutale
     'The teacher who is looking outside is Mr. Mutale.' (Kula 2007: 204)

Note that the relative marker *-á* is separated and differs from the subject marker *-bá* in (7), and it is not based on the demonstrative pronoun.

Furthermore, there are also languages in which subject relatives are not necessarily marked segmentally, for example with tone. This can also be illustrated in Bemba.[7] Aside from the segmental strategy illustrated in (7), in Bemba, it is also possible to use a tonal strategy to mark subject relatives. Compare (8a), a simple matrix sentence, with (8b), a sentence with a subject relative clause.

(8) a ba-kafúndisha b**á**-léé-lolesha panse   [Bemba]
       2-teacher   SM2-TNS-look   16.outside
       'The teacher is looking outside.'
    b ba-kafúndishá b**à**-léé-lolesha   panse   ni   ba-Mutale
       2-teacher   REL2.SM2-TNS-look   16.outside COP   2-Mutale
       'The teacher who is looking outside is Mr. Mutale.' (Kula 2007: 204)

In (8a), a regular main clause, the subject marker of the verb has a high tone. In contrast, in (8b), the marker *bà* is a subject marker plus relative function; and instead of having a high tone, it has a low tone. In addition, there is a conjoint high tone on the final syllable of the head noun *ba-kafúndishá* 'teacher' in (8b), which indicates that the relative is a restrictive relative.[8] Ciluba, Chokwe, Kaonde, Lunda, Luvale and Cinsenga (as well as many others) also use a tonal strategy to indicate a subject

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[7] See also Hyman and Katamba (2010) for a detailed discussion about the tonal and prosodic properties of relative clauses in Luganda, which also does not mark subject relatives segmentally.

[8] Note that in Bemba only the segmental strategy allows the head noun to appear without the conjoint high tone, which yields a non-restrictive relative. The tonal strategy can only be used for restrictive relatives.

restrictive relative clause (See Kamwangamalu 1988, Kawasha 2002, and Miti 2001).

In the literature, not a lot of attention is paid on the tonal contribution in the case of

relative clauses. As indicated by a number of authors, even when the relative marker

resembles a demonstrative, or a possessive in form, they usually differ in tone. The

questions raised are: Is the tone a tonal morpheme? Can the tonal strategy inform us

about the structure of the relative clauses? These questions await future work (but

see discussions of Bemba by Kula (2007)).

Lastly, in Venda, subject relatives have three strategies, which seem to be

determined on the basis of aspectual properties (see Zeller 2004 for more discussion).

(9) a. nngwa [dzi huvha-**ho**]   [Venda]
      10.dog SM10 bark-REL
      'the dogs which are barking'
  b. nngwa [dzi **no** huvha]
      10.dog SM10 REL bark
      'the dogs which bark'
  c. nngwa [**dzine**   dza   huvha]
      10.dog REL.COMP10   SM10   bark
      'the dogs which bark' (Zeller 2004: 80)

The first strategy, illustrated in (9a), shows a relative marker (-*ho*) suffixed to the

verb. (9b) shows the second strategy where a relative marker appears between the

subject prefix and the verb. The third strategy (9c) resembles the strategy in non-

subject relatives in Venda (as in (2c)), where the relative marker agrees with the head

noun in noun class.

In this section, a very brief overview of the strategies used to form subject and

non-subject relatives has been provided. In (10), I summarise briefly the issues that

we have mentioned in the above sections.

(10)   Summary of issues

- Relative markers (complementizers or relative pronouns)
  - Position of the relative markers
    - Relative clause initial
      - free morpheme
      - bound morpheme
        - » agreement with head noun only or not (non-subject relatives)
        - » the form may encompass both relative agreement and subject agreement (subject relatives)
    - Intermediate (within the verbal complex)
    - Suffix (are the various suffixes of the same nature?)

- Non-subject relatives
  - Obligatory object marker or not
  - Subject inversion or not

- Subject relatives
  - Tonal strategy – is the tone a tonal morpheme?

12.3 Syntactic analyses of the Bantu relative clause

In this section, I provide an overview of the syntactic analyses which touch upon

some of the issues mentioned above. I begin with the classic problem of

distinguishing a relative pronoun from a complementizer, since this discussion has

also featured prominently within Bantu linguistics. In section 12.3.2, I discuss how

the non-initial relative markers can be accommodated in a syntactic structure of

relative clauses. In section 12.3.3, I discuss the analyses of subject inversion.

12.3.1 Relative pronoun or Complementizer

Whether a relative marker is a relative pronoun or a complementizer is actually a

question that is more widespread than in Bantu syntax (see e.g., Boef 2013). To

understand the debate, let us consider a traditional analysis of restrictive relative

clauses in English, represented in (11a,b), where the relative clause (CP) is adjoined

to the head noun (NP):

(11) a. DP
```
       DP
      /  \
     D    NP
    the   / \
        NP   CP
        man  / \
          whoᵢ   C'
                / \
              C⁰   IP
              ø    / \
                  tᵢ left
```

b. DP
```
       DP
      /  \
     D    NP
    the   / \
        NP   CP
        man  / \
          Opᵢ   C'
                / \
              C⁰   IP
             that  / \
                  tᵢ left
```
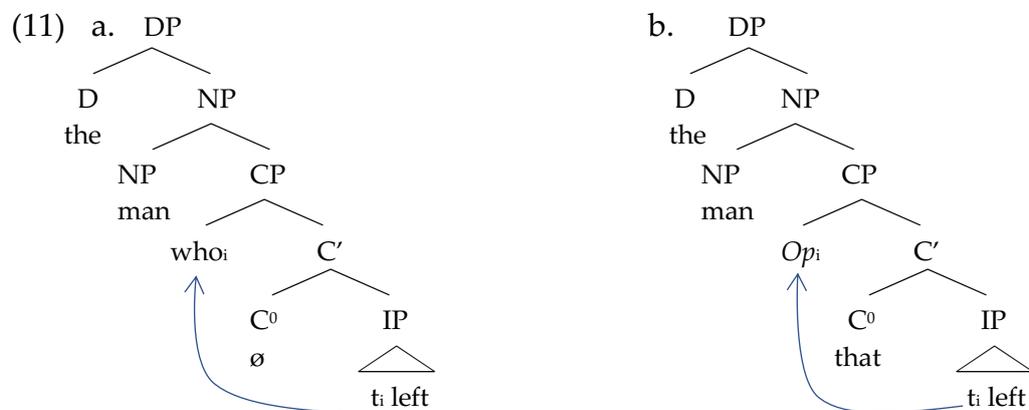
The structure in (11a) represents a structure containing the relative pronoun *who* and

a null complementizer (in C^0), while in (11b), the relative pronoun is null,

represented by the empty operator (Op), and the complementizer position is

occupied by *that*. In the case of English, the relative pronoun and the

complementizer are in complementary distribution. However, the presence of either

one allows the relative clause formation (i.e., creating an "open sentence" with a gap

in it).[9] Note that restrictive relative clauses differ from non-restrictive relative clauses

in that in the latter the CP is adjoined to the whole DP, instead of just the NP.

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[9] This allows the relative clause to become the modifier of the noun, and be interpreted as a predicate.

See for the interpretation of relative clauses, Heim and Kratzer (1998) among others.

In Bantu languages such as Ngemba and Bafu, however, the relative marker and the complementizer can co-occur, as shown in (12).[10]

(12) a nyung [**wá**   **bah**   a-keshung-**ne**   mung   wa   la]   [Ngemba]
      man   DEM/REL REL.COMP SM-TNS-beat-REL child   DET   DEF
      a   kung   atsang
      SM enter   into.prison
      'The man who beat the child went to prison.'   (Chumbow 1977:290)
    b mbú yá [**yìî**   **mɘ**   kɨ   kwôá] ywìinɘ̀mɘ́   [Bafut]
      dog   DET   DEM/REL REL.COMP TNS   die   resurrected
      'The dog which died was resurrected.' (Mutaka 2000:212)

For these two languages, we can tentatively consider the demonstrative based relative marker to be on a par with a relative pronoun (thus, in SpecCP) while the relative complementizer is positioned in C^0.

As Zeller (2004) indicates, however, despite the validity of the above conclusion for Ngemba and Bafut, we cannot extend this analysis automatically to all demonstrative based relative marker. In fact, Zeller (2004) argues that relative prefixes/concords in Nguni languages are derived from demonstrative pronouns historically, suggesting that demonstrative based relative markers can in fact be complementizers, which corroborates with the analysis of Sotho and Shona by Demuth and Harford (1999). Note that Zeller's underlying assumption is that a

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[10] *Bah* in Ngemba is optional in relative clauses, and it seems to only appear in subordinate clauses such as relatives and clefts. There is another complementizer for other cases of subordination (see Chumbow 1977 for detailed discussion). Chumbow (1977) also notes that there is a tonal difference between the demonstrative and the relative form of *wa*.

complementizer can agree with the head noun (see also Henderson 2006), and

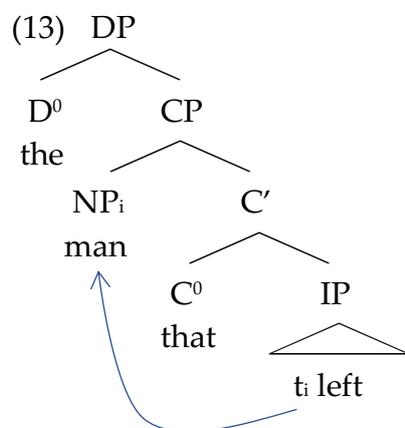interact with the following verb in terms of tense and aspect.[11]

Cheng (2006) distinguishes relative markers which are demonstrative based

from those that are possessive based (i.e., the ones using the associative

marker/connectives, as in Chishona (3a), Makwe (3e), Makonde (Nsuka Nkutsi

1982)). Adopting a head-raising analysis of relative clauses (see the next section),

Cheng treats the connective/associative marker to be on a par with C^0. More work

needs to be done to determine whether the possessive based type is more aligned

with the demonstrative type in terms of the position of the relative marker.

12.3.2 Non-initial relative markers

Most of the discussion in the literature assumes the traditional adjunction analysis of

relative clauses, i.e, either (11a) or (11b), depending on whether the relative marker

is a complementizer element in C^0 or not. Since the head-raising analysis of Kayne

(1994), some authors explicitly discuss evidence for the head-raising analysis for a

Bantu language (see below). In (13), I provide a simple illustration of the head-

raising analysis, again using an English example. There are a number of differences

between the adjunction analysis (11b) and the head-raising analysis: (a) the relative

clause is a complement of the D^0, instead of an adjunct to the head NP; (b) the head

NP is raised from within the relative clause, as indicated in (13). At first glance, the

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[11] See also Carstens (2005) for analyzing the Kilega relative marker (as shown in (3e)) as an agreeing complementizer.

head-raising analysis does not seem to yield different results when it comes to the

discussion concerning relative pronouns versus (relative) complementizers.

(13) DP

```
        DP
       /  \
     D⁰    CP
     the   / \
        NPᵢ    C'
        man    / \
             C⁰    IP
            that   /\
                 tᵢ left
```

Ngonyani (2001) provides a couple of arguments for the head-raising analysis. His

arguments are based on connectivity effects: Binding and scope reconstruction, and

idiom chunks from Swahili, can be used to show that the head noun has raised from

the clause internal position. Consider the idiom chunk *kupiga maji* [to.hit water] 'to

drink alchohol' in Swahili, illustrated in (14a). We see in (14b), when the verb is not

kupiga 'to hit', the idiomatic reading disappears.

(14) a komba   a-li-pig-a   ma-ji   sana   [Swahili]
         1.bushbaby SM1-PST-HIT-FV 6-water much
         'Bushbaby drank much beer.'
      b ma-ji   ya-li-ku-w-a   ma-kali
         6-water SM6-PST-INF-be-FV SM6-fierce
         'The water was strong.' (Not: 'The beer was strong.') (Ngonyani 2001: 68)

(15) ma-ji   amba-yo   komba   ali-ya-pig-a   ya-li-ku-w-a   [Swahili]
      6-water amba-REL6 1.bushbaby SM1-PST-1-hit-FV SM6-PST-INF-be-FV
      ma-kali
      SM6-fierce
      'The beer that Bushbaby drank was very strong.' (Ngonyani 2001: 68)

In (15), *maji* 'water' is the head of the relative clause, so it is literally outside of the

relative clause. Nonetheless, it still has the idiomatic interpretation. This illustrates

the classic connectivity effect. Under the traditional adjunction analysis of the relative clause, *maji* 'water' is never construed with the verb *kupiga* 'to hit' in the derivation of the relative clause. In contrast, under a head-raising analysis, *maji* 'water' starts out from within the relative clause, allowing for the idiomatic interpretation to be construed. Cheng (2006) provides similar arguments on the basis of Bemba data.

Cheng and Downing (2007), using prosodic data from Zulu, argue that a head-raising analysis can explain the contrast between a restrictive and a non-restrictive relative clause: the head in a restricted relative clause is within the CP (as shown in (13)), which also defines a prosodic phrase, while the head of a non-restrictive relative clause is outside of the CP. Under the prosodic analysis of Cheng and Downing (2007), the head noun and the restrictive relative clause belongs to one prosodic phrase, while the head noun and a non-restrictive relative clause will be parsed in two separate prosodic phrases (I return to a more detailed discussion of prosodic phrasing in section 12.5).[12]

One challenging issue for both the adjunction and head-raising analysis concerns cases where the relative marker or concord occupies a non-initial position

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[12] In his analysis of Swahili relative clauses, Ngonyani (2001) suggests that the head noun moves from SpecCP to D^0. This is probably related to the definite reading of the nouns. If Cheng and Downing (2007) is correct, there is no such movement in a language like Zulu, because the movement would yield a different prosodic phrasing.

within the relative clause. When a relative marker appears clause initially, as in (1) and (2a-d), the relative marker/concord can straightforwardly be analyzed as occupying C^0. The complication arises first in cases such as (3a) when the subject appears post-verbally. Second, there are cases in which the relative marker/concord appears after the subject, as in the case of Zulu (3b) and Ikalanga (3c). Third, there are verb-internal relative markers, as in the case of Swahili (4a,b), and lastly, there are verb-final relative markers (Swahili (4c), Sotho (6), Ngema (12a)). These cases are discussed in turn below.

12.3.2.1 Post-subject markers

Consider first cases such as Zulu and Ikalanga (3b,c) repeated here as (16a,b), where the relative marker/concord appears after the subject. There are two issues that these data present if the relative marker/concord is indeed in C^0. First, which position does the subject occupy? Second, in Zulu, there is no agreement between the relative marker and the head noun, while in Ikalanga there is. How does this agreement take place? These two patterns are both common in Bantu languages.

(16) a   incwadi [isitshudeni **esi**-yi-funda-**yo**]   [Zulu][13]
          9.letter   7.student   REL7-OM9-read-REL
          'the letter that the student is reading' (Zeller 2004: 79)
      b   nlúmé boNéo **wa**-bá-ka-bóna   [Ikalanga]
          1.man 2.Neo REL1-SM2-PST-see
          'the man that [Neo and others] saw' (Letsholo 2006)

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[13] In Zulu, the relative marker *a* is phonologically merged with the subject marker. See Poulos 1981 and Zeller 2004 for more discussion.

Regardless of whether one applies the adjunction or the head-raising analysis, the fact that the subject precedes the relative marker is problematic. Givón's (1972c) generalization that bound relative pronouns tend to be attracted to the verb in the relative clause is illustrated by (16a,b) (though in his proposal, subjects tend to postpose (see section 12.3.3)). Walusimbi (1996) provides examples from Luganda which show that relative pronoun attraction even takes place when the pronoun is a free pronoun, as in (17).

(17) omusajja Petero **gwe**   a-laby emusomesa   [Luganda]
      man   Petero whom AGR-have.seen teacher
      'The man that Peter has seen is a teacher.' (Walusimbi 1996: 37)

To ensure that the relative marker/concord can remain in C^0 in cases such as (16a,b), Letsholo (2002, 2009) and Henderson (2006) suggest that the subject appears in a topic position. This means that the CP domain has to be expanded to contain information structure related projections such as TopicP, and FocusP, etc. (along the lines of Rizzi 1997). Note however that the expansion is not a trivial matter, as agreement patterns also need to be accounted for. Henderson (2006), assuming a head-raising analysis, suggests that the relative head noun appears in the highest projection of the CP domain (which he considers to be ForceP), while the relative marker the lowest (which he considers to be Fin(ite)P), with the subject in an in-between TopicP, as shown in (18):

(18)   [FORCEP head noun [FORCE0 [TOPP subject [TOP0 [FINP [FIN0 REL [TP …

Though (18) can account for the order between the subject and the relative marker, it still has a problem relating to agreement, regardless of whether agreement is triggered by a Specifier-head configuration, or agreement is triggered by a functional head probing down to a c-command position. In (18), it is clear that the head noun or the subject is not in the Specifier position of the REL head, nor is it in a position where the REL head can c-command. Thus, the questions arise: how does the head noun agree with the relative marker in Fin^0, in a language like Ikalanga? and, how does the subject agree with the relative marker in Zulu? (see Henderson 2006 for an analysis).

Letsholo (2009), in analysing Ikalanga data, assumes the adjunction analysis of relativization, and argues that there is a relative projection (RelP) below TP and above VP. With V^0 to REL^0 to T^0 movement, it yields the right ordering as indicated in (19), based on (16b).

(19)   [DP   [NP nlúméi [TP boNéo [$_{T^0}$ wa-bá-ka-bóna]j [RelP Opi REL_j^0 [VP V_j^0 ti…
                    1.man   2.Neo   REL1-SM2-PST-see
        (simplified from the tree structure (32) in Letsholo 2009, p.147)

The structure in (19) differs from a typical adjunction analysis of relativization in that the NP is adjoined with a TP instead of a CP (as in (11a,b)). Though there is an empty operator (Op) in (19) creating an open sentence just like (11b), what this open sentence is supposed to be predicated of (i.e., the head NP) has an intervening noun phrase (i.e., the subject *boNéo* 'Neo and others'), making the predication relation quite long distance. Furthermore, though the relative head (REL^0) is the closest to the

verb, the morpheme order in (19) shows that the tense morpheme, and the subject marker are closer to the verb than the relative marker.

Regardless of how one solves the variation of agreement in sentences such as (16a) and (16b), it should be noted that the topic analysis of the initial subject is not as straightforward as it might seem, in particular in a language like Zulu. As Cheng and Downing (2009) show, subjects in Zulu are not always prosodically phrased separately from the rest of the sentence, as they are expected to be if topicalized. However, as mentioned in section 12.3.2, in Zulu, the head noun and the whole relative clause are phrased as one prosodic phrase (see also section 12.5). If Cheng and Downing are correct about prosodic phrasing in Zulu, then it is problematic to treat the subject as a topic, at least in Zulu: it is not phrased separately from the rest of the relative clause, neither is it phrased separately from the head noun.

12.3.2.2 *Verb-internal markers*

The most well-known examples we see with a verb-internal relative marker are from Swahili, as in (4), repeated here as (20). Note that in Swahili, subject and non-subject relatives can use all the strategies, i.e., with *amba* or without *amba* (and with the different position of the relative marker).

(20) a vi-tabu [a-li-**vyo**-nunu-a   Juma] ni   ghali   [Swahili]
         8-book 3SG-PST-REL8-buy-FV   Juma COP expensive
         'The books Juma bought are expensive.'
      b vi-tabu [a-si-**vyo**-som-a   Juma] ni-ta-vi-uz-a
         8-book 3SG-NEG-REL8-read-FV   Juma   SM1-FUT-8OM-sell-FV
         'The books that Juma does not read I will sell.

c   vi-tabu [a-nunu-a-**vyo**   Juma] ni   ghali
    8-book 3SG-buy-FV-REL8   Juma   COP   expensive
    'The books Juma buys are expensive.' (Ngonyani 2001: 61)

Ngonyani (1999, 2001) assumes that the relative marker -*o* is in C^0. Under a head-raising analysis, the head noun first moves to SpecCP (triggering agreement with C^0), before incorporating to D^0, as illustrated in (21). The subject *Juma* in SpecTP agrees with the subject marker. To ensure that the subject marker and the tense morpheme or negation precede the relative marker –*o* (as in (20a)), Ngonyani suggests that these elements are attracted by the relative marker, and incorporate into C^0. Only in cases where incorporation is blocked, would *amba* be used (as in (2b) repeated here in (22)).

(21) [$_{DP}$ D^0 [$_{CP}$ vitabu$_i$ [$_{C^0}$ -o [$_{TP}$ Juma a-li-nunu-a t$_i$

(22)   vi-tabu [**amba-vyo** Juma   a-li-nunu-a]   ni   ghali   [Swahili]
         8-book amba-REL8   Juma   SM1-PST-buy-FV   COP   expensive
         'The books Juma bought are expensive.'   (Ngonyani 2001: 61)

However, as we see in (20a), the verb also precedes the subject. In Ngonyani's analysis, the verb also has to be moved, but to somewhere to the right of C^0 (since it appears after the subject marker plus tense but before the subject). Nonetheless, it is not clear which head position the verb moves to.

Buell (2002) provides an alternative analysis. Buell relies on evidence such as word stress to show that in cases like (20a), the subject marker, tense and the relative marker form a phrasal constituent independently of the verb plus object marker and final vowel, which also form a phrasal constituent. To derive the correct constituent

structure, Buell, adopting a head-raising analysis, proposes a structure involving

remnant movement of AgrsP to CP domain (see the simplified structure in (23)).

(23)   [NP vitabu$_i$ [CP [AgrsP t$_k$ alicho t$_i$ [CliticP kisoma]]$_m$ [FP Juma$_k$ t$_m$]

As show in (23), after the head noun and the subject has moved out of the AgrsP

(i.e., the sentence), the whole AgrsP moves to the CP domain. This analysis avoids

the problem of moving the verb plus its object marker to an unknown head (as

Ngonyani has to assume), but it requires moving a whole AgrsP to the CP area as an

remnant.

In the data that we presented above, there is only one other case where the

relative marker is never initial or final: one of the strategies for forming Venda

subject relatives (9b). More data, in particular, data involving prosodic information,

is needed to see whether the derivation of this strategy involves more

straightforward head movement to C^0, or a more complex derivation involving

remnant movement.

12.3.2.3 *Verb-final markers*

We have so far seen a number of examples of verb final relative markers. In some

languages, including Southern Sotho (1), Chichewa (2d), Zulu (3b) and Ngemba (12),

the verb-final relative marker is not the sole marker, but co-occurs with another

(often initial) relative marker. In other cases, including Swahili non-subject relatives

(4c) and Venda subject relatives (9a), it is the sole relative marker. Very little work

specifically addresses the nature of these final markers, especially those that co-occur

with another relative marker. Zeller (2004) points out that in Nguni languages, the verb in relative clauses is extended by a relative suffix, which appears when the predicate is phrase-final. If this is correct, the relative suffix is connected to the conjoint-disjoint form distinction, and thus not particularly related to relative clause formation (see also Poulos 1981).

On the other hand, the relative suffix seen in Southern Sotho (as well as in Tswana and Northern Sotho, see Zeller 2004) and Swahili may not be related to the conjoint-disjoint distinction, as we can see in (1), (4c) and (6) since the verb plus the relative suffix does not seem to be phrase-final. In Downing and Mtenja (2011), they argue that the relative suffix in Chichewa takes a phonological phrase as a host. To see whether a prosodic account is more promising or not, more research on the syntax-prosody interface is needed before we can understand the nature of the relative suffix, and whether the "doubled" marker in languages like Southern Sotho, and Chichewa may be a kind of "discontinued" morpheme.

12.3.3 Subject inversion

One keenly debated issue is the position of the subject, in particular, the post-verbal subject within Bantu relative clauses. Demuth and Harford (1999), following a proposal by Givon (1972c), propose that in Shona, the relative marker in non-subject relatives is a prosodic clitic. The prosodic requirement can be satisfied by V-to-I-to-C movement, yielding the order in which the subject follows the verbal complex with the relative marking. In contrast, if a relative marker is not a prosodic clitic (e.g., an

unbound (demonstrative) relative pronoun), no subject inversion takes place.

Demuth and Harford extend this proposal to Dzamba, Lingala and Kilega.

However, both Kawasha (2008) and Letsholo (2009) provide data which call

into question both the generalisation and analysis in Demuth and Harford (1999)

(and thus Givon 1972c). Letsholo (2009) shows that although the Ikalanga relative

marker is an affix, and thus a prosodic clitic, the subject is not post-verbal (3c).

Kawasha (2008) on the other hand, shows that subject inversion is obligatory in

Chokwe (24a) and Luvale (24b) even in cases where the relative marker is a relative

pronoun, an independent pronominal element:

(24) a ly-onda **lízé** a-a-mbách-ile   pwo   [Chokwe]
         5-egg   REL5 SM1-TNS-carry-REM   1.woman
         'the egg which the woman carried'
      b chi-twámó **chízé** a-a-neh-á-nga   mu-kwézé   [Luvale]
         7-chair   REL7 SM1-TNS-bring-FV-PST 1-youth
         'the chair that the youth brought' (Kawasha 2008: 50)

The examples in (24) shows that within the relative clause, there is agreement

between the relative marker and the head noun, as well subject-verb agreement.

Kawasha (2008) points out that subjects are obligatorily post-verbal in Chokwe and

Luvale non-subject relatives, contradicting Henderson's (2006) claim that post-verbal

subject is optional when there is agreement between the head noun and the relative

marker, as well as subject-verb agreement.

Consider now data from Nzadi[14] and its implication for the subject-inversion debate. In Nzadi, both *nà,* and *ŋg'* are used in relative clauses. Hyman (2012) notes that in non-relatives, *nà* marks a null head within the noun phrase (e.g., *nà ènân* 'big ones'), while *ng'* appears in question words such as *ngè* 'which', *ngò* where' and *ngà mbyɛ* 'how'. Hyman (2012) suggests that in relative clauses, the combination *nà ŋg'* is literally 'that which, that whom'. In object relatives, the subject is obligatorily post-verbal (25a), unless there is a post-verbal pronoun that agrees with the subject (contrast (25a) and (25b)).

(25) a mwàán (nà) (ŋg') ò mɔ́n **òkáàr**   [Nzadi]
        child   (that)(which) PST see   woman
     b mwàán (nà) **òkáàr** ò mɔ́n **ńdé**
        child   (that) woman PST see she
        'the child that the woman saw' (Hyman 2012: 100, 101)

Hyman (2012) argues that the pronoun in (25b) is not related to a possessive pronoun. Future work on subject inversion should take into consideration such patterns.

Lastly, there are also languages with optional subject inversion, such as Chimwiini, as illustrated by the examples in (26) (/ indicates prosodic phrasing).

(26) a faṯuura(/)y-a Nuuru/ṯa-k-uuló   [Chimwiini]
        'the car/that Nuura/will buy'
     b faṯuura(/)ṯa-k-ulo Nuurú
        'the car/will buy Nuuru'   (Kisseberth 2010: 124)

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14 Nzadi is spoken by a community of fishermen on the Kasai River in the Democratic Republic of the Congo.

The data in Chimwiini are interesting for two reasons. First, when the subject is postposed (26b), the relative marker (with the associative *-a*) is omitted. Secondly, though typical subject postposing (in non-relatives) yields a prosodic phrasing that separates the verb and the postposed subject, in the case of relative clauses, the postposed subject is phrased with the verb. This tell us that the postposing of subjects (at least in Chimwiini) is not right-dislocation, which entails that the subject remains internal to the core of the sentence (TP).

12.4 Object marker and resumption

Not all Bantu languages allow object markers in object relatives, even when it is possible for object noun phrases to appear with object markers in non-relatives. Zeller (2014) argues that there are three types of object marking languages, instead of only two types that Henderson (2006) suggests. Object markers of the first type are agreement markers: the object markers can co-occur with object DPs in regular sentences (such as Swahili and Sambaa (see the Sambaa examples in (27)).[15]

(27) n-za-ha-**chi**-**m**-nk-a   **Stella   kitabu** haja   [Sambaa]
      1SG-PRF.DJ-OM16-OM7-OM1-give-FV 1.Stella   7.book DEM16
      'I gave Stella a book there.' (Riedel 2009: 60)

The second type of language does not allow the object marker to co-occur with the object DPs, such as Kinyarwanda (28) and Herero.

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[15] Riedel (2009) notes that in Sambaa, though object marking is optional in sentences such as (27), the presence of the locative marker is preferred.

(28) *a-ba-aana   ba-a-ra-**bi**-ri-ye   i-bi-ryo   ejo   [Kinyarwanda]
　　 AUG-2-child SM2-REM-DJ-OM8-eat-PERF AUG-8-food yesterday
　　 Intended: 'The children ate the food yesterday.' (Zeller 2014: 349)

Zeller (2014) argues that aside from these two types, there is a third type of language, where the object marker obligatorily appears when an object DP is dislocated, as in Zulu, the Sotho-Tswana languages and the Nguni languages.[16]

(29) a *Ngi-**m**-theng-el-a   **u-m-ngane**   **wa-mi**   [Zulu]
　　　 1SG-OM1-buy-APPL-FV AUG-1-friend POSS1-my
　　　 le   moto   namhlanje
　　　 DEM9   9.car   today   (Zeller 2014: 351)
　　 b Ngi-**m**-theng-el-a   le   moto **u-m-ngane**   **wa-mi**   namhlanje
　　　 1S-OM1-buy-APPL-FV DEM8   9.car AUG-1-friend POSS1-my today
　　　 'I'm buying this car for my friend today.' (Zeller 2014: 351)

The contrast between (29a) and (29b) shows that when the object marker corresponding to *umngane wami* 'my friend' appears, the canonical word order IO > DO cannot be maintained (29a). Instead, the indirect object has to be dislocated to a vP-external position (29b) (see Zeller 2014 for more detailed discussion as well as relevant articles on this topic).

　　 Zeller argues that these three types lead to three distinct patterns in the appearance of object markers in object relatives: (a) object markers are never required; (b) object markers are never possible; and (c) object markers are always compulsory. Pattern (a) corresponds to the type 1 languages (e.g., Swahili, Chichewa and Sambaa) where object markers that are agreement markers. As the example

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[16] The dislocation here is the so-called A-bar movement, as in *wh*-movement, topicalization, as well as relativization.

from Sambaa (30) shows, this type of language allows optional object markers in

relative clauses.

(30) **matonte** n-(**ya**)-**m**-nk-iye-yo   ya-aa-izw-iye   [Sambaa]
    6.banana 1SG-(OM6)-OM1-give-PRF-REL   SM6-REM.DJ-ripen.PASS-PRF.CJ
    'The bananas which I gave him are ripe.' (Riedel 2009: 160)

However, it should be noted that not all type 1 languages exhibit pattern (a). There

are type 1 languages (which allow optional object markers in regular sentences), but

do not allow object markers in relative clauses. These languages includes Manyika,

Lozi, and Bemba. The examples in (31) illustrate this.

(31) a   n-álì-**mú**-món-à   Chìsángá   [Bemba]
       1SG-PST-OM1-see-FV   1.Chisanga
       'I saw Chisanga.'   (Marten, Kula & Thwala 2007:261)
    b   *ici-puna   ico   umu-anakashi a-**ci**-mweene
       7-chair   REL7   1-girl   SM1-OM7-see.PERF
       'the chair which the girl saw' (Marten, Kula & Thwala 2007: 275)

Pattern (b) corresponds to languages in which object markers are pronominal clitics,

as in Kinyarwanda: the object markers cannot appear with the corresponding object

DPs ((28) is repeated here as (32b)).

(32) a. A-ba-aana   ba-a-ra-**ya**-nyo-ye   [Kinyarwanda]
       AUG-2-child   SM2-REM-DJ-OM6-drink-PRF
       'The children drank it.' (Zeller 2014: 349)
    b. *A-ba-aana   ba-a-ra-**bi**-ri-ye   **9-bi-ryu**   ejo
       AUG-2-child   SM2-REM-DJ-OM8-drink-PRF   AUG-8-food   yesterday
       Intended: 'The children ate the food yesterday.' (Zeller 2014: 349)
    c. *i-bi-tabo   u-mu-kozi   a-**bi**-bar-a
       AUG-8-book   AUG-1-worker   SM1-OM8-count-FV
       Intended: 'the books that the worker counts'   (Zeller 2014:357)

As shown in (32c), object markers in Kinyarwanda are also not allowed within a

relative clause.

Lastly, in the type 3 languages, the object marker in relative clauses is obligatory, as illustrated in (33). Zeller (2014) suggests that the movement involved in the formation of relative clauses (e.g., movement of the empty operator in (11b)) in Zulu (and this type of language more generally) needs to move via a position that triggers the object marking, leading to obligatory object marking in object relativization.[17]

(33)   **A-ba-ntwana** [o-**ba**-nik-e   i-zin-cwadi]   ba-ya-jabul-a   [Zulu]
      AUG-2-child   REL2S-OM2-give-PST AUG-10-book   SM2-DJ-be.happy.FV
      'The children to whom you gave the books are happy.'   (Zeller 2014: 362)

Nonetheless, the typology provided by Zeller is still problematic for two reasons. First, it is not clear why a subset of the languages fall under pattern (a) do not allow object marking at all in relativization. Future work needs to look into the relativization strategy in these languages and to compare it systematically with the other type of languages within pattern (a) to see whether there is any correlation between the strategy and the obligatory absence of object marking. Second, though Henderson (2006) and Zeller (2014) consider Chichewa to be a type 1 and pattern (a) language, Downing and Mtenje (2010) point out further nuances for Chichewa: despite of the fact that Chichewa allows optional object markers in relative clauses

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[17] The idea Zeller pursues is that the type of movement connected to object marking exhibited in this type of language is related to anti-focus movement. He does not provide a special name for the projection, simply calling it X.

involving direct objects, the optionality disappears when indirect objects are

relativized (paratheses indicate prosodic phrases):

(34) ([Mw-aná a-méné Bándá   á-ná-**mu**-pátsá   m-pháatso]) [Chichewa]
       1-child 1-REL   1.Banda SM1-PST2-OM1-give 9-gift
      (a-ku-(mú)-theokòózá)
      SM1-PROG-(OM1)-thank
      'The child who Banda gave gifts to thanks him.' (Downing & Mtenje 2010: 55)

The direct vs. indirect object asymmetry in such cases requires further investigation,

in particular in the pattern (a) languages which allow optional object marking with

direct objects.

12.4.1 Locative relatives

In this section, I turn to a less frequently discussed topic: resumption in locative

relatives. In Zulu, the form of the resumptive marker connected to a locative

depends on the function of the locative in the relative clause. Consider the sentences

in (35) (where the paratheses indicates prosodic phrase marking).

(35) a (Ú-Síphó ú-ngené   **é-ndl:-iní**)   (ú-Thémba   [Zulu]
         1-Sipho   SM1-enter.PST LOC-9.house-LOC 1-Themba
         á-**yí**-thengí:le).
         REL1-OM9-buy.PST
         'Sipho went into the house that Themba bought.'
      b (Ngi-thánd' **í:ndl'**)   (ú-Síphó á-hlálá **kú-yo:na**).
          I.SG-like   9.house   1-Sipho REL1-live LOC-9.PRON
         'I like the house that Sipho is living in.'
      c (Ú-yê: **kú-lé-máke:thé**) (ésí-zo-hlangana   no-Síphó
         SM1-go.pst   LOC-DEM-9.market REL.we-FUT-meet with-Sipho
         kú-yo:na).
         LOC-9.PRON
         'She went to this market where we will meet with Sipho.'
                                            (Cheng & Downing 2010: 40)

In (35a), although the locative head noun is marked with locative affixes, it is resumed with a regular object marker. In contrast, (35b,c) show that when the locative noun has a locative meaning/function within the relative clause, the locative pronoun *kúyona* is used.

Riedel (2010) shows that in Haya, both relative prefixes (36a) and relative enclitics (36b) can be used at the same time (see also Diercks 2009 for similar data in Bukusu).

(36) a o-mu-nju   omwo   n-ka-**ha**-bona   [Bugabo Haya]
         AUG-LOC18-9.house   REL.DEM18   SM1S-PST3-OM16-see
         ha-lungi
         16-nice
         'The house which I saw the inside of is nice.' (Riedel 2010: 222)
      b o-mu-nju   omwo   n-ka-**ha**-bona-**mu**
         AUG-LOC18-9.house   REL.DEM18   SM1S-PST3-OM16-see-LOC18
         ha-lungi
         16-nice
         'The house which I saw the inside of is nice.' (Riedel 2010: 223)

The Haya and Bukusu facts are interesting in that in both Haya and Bukusu, object markers cannot be used in object relative clauses. However, in locative relatives, the locative enclitics/prefixes can be used. Chichewa, on the other hand, does not use resumptive clitics or prefixes for locative relatives (or in other adjunct relatives) (see Downing and Mtenje 2010). Future research into the differences between object relatives and adjunct relatives (including locative, temporal, instrument, etc.) has the potential to offer a better understanding of the structural differences in locative/adjunct relativization and object relativization (see more discussion in the next section).

12.5 Prosodic phrasing

In recent years, more attention has been paid on the prosodic phrasing of the various types of relative clauses in Bantu. To fully understand the nature of prosodic phrasing of relative clauses, it is important to understand the nature of prosodic phrasing in regular sentences, bearing in mind that languages can have different prosodic phrasing rules (e.g., every XP is a prosodic phrase vs. every syntactic phase is a prosodic phrase (see Downing (this volume)).[18] Nonetheless, this section is intended as a brief summary of the prosodic patterns observed in recent literature on Bantu relative clauses.

One important point of variation concerning the prosodic phrasing of relative clauses is whether the head noun is phrased together with the relative clause. For restrictive relative clauses, Bantu languages seem to represent all logical possibilities: (a) head noun must phrase together with the relative clause (i.e., no prosodic break between them), as in Zulu and Luganda; (b) there is an optional prosodic break between the head noun and the relative clause (as in Chimwiini and Mbochi); and (c) there is an obligatory prosodic break between the head noun and the relative clause (Símákonde and Tswana).

The range of variation above may be due to at least two different factors: (a) the prosodic phrasing rules of the languages are different; and/or (b) the

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[18] Within the Minimalist Program, a syntactic phase usually corresponds to vP or CP. (See Chomsky 2001 and subsequent literature.)

relativization structures are different (e.g., a head-raising structure vs. an adjunction structure). It should be noted that a single language may employ both types of relativization structure. Consider once more the locative relative examples in (35) (repeated here as (37)).

(37) a (Ú-Síphó   ú-ngené   **é-ndl:-iní**)   (ú-Thémba   [Zulu]
          1-Sipho   SM1-enter.PST LOC-9.house-LOC 1-Themba
          á-**yí**-thengí:le).
          REL1-OM9-buy.PST
          'Sipho went into the house that Themba bought.'
      b (Ngi-thánd' **í:ndl'**)   (ú-Síphó á-hlálá   **kú-yo:na**).
           I.SG-like   9.house   1-Sipho REL1-live LOC-9.PRON
          'I like the house that Sipho is living in.'
      c (Ú-yê: **kú-lé-máke:thé**) (ésí-zo-hlangana no-Síphó
          SM1-go.pst   LOC-DEM-9.market REL.we-FUT-meet with-Sipho
          kú-yo:na).
          LOC-9.PRON
          'She went to this market where we will meet with Sipho.'
                                                      (Cheng & Downing 2010: 40)

The sentences in (37) raise a number of issues. First, their prosodic phrasing differs from that of direct and object relatives in Zulu in that the locative relative clause does not phrase with the head noun prosodically. Second, the head noun does not seem to be easily "reconstructable" into the relative clause. In (37b) for example, the head noun does not have locative marking. In the main clause, the head noun *indlu* 'house' is the object of the verb 'to like'. On the other hand, within the relative clause, it indicates a location and should have locative affixes, as in (37a). Further, in (37b), we see that the locative marking within the relative clause yields a different type of "object marking" for the head noun *indlu* 'house'. In particular, the strong pronoun form is used together with a locative marker *ku*.

The prosodic phrasing data in (37) suggest that these locative relatives are formed differently from direct and object relatives: they are not formed by raising the head noun. Cheng and Downing (2010) argue that an adjunction analysis is more adequate in accounting for locative relatives in Zulu.

Another case where the prosodic phrasing of restrictive relative clauses varies within the same language is Chichewa, when the relative marker *-méné* is omitted. Contrast (38a) with (38b).

(38) a ([M-balá) í-ná-bá   n-dalámá z-angáa-yo])   [Chichewa]
        9-thief   SM9-PST1-steal 10-money 10-my-REL
        (i-ku-tháawa)
        SM9-PROG-run.away
     b ([M-balá **i-méné** í-ná-bá   n-dalámá z-angáa-yo])
        9-thief 9-REL   SM9-PST1-steal 10-money 10-my-REL
        (i-ku-tháawa)
        SM9-PROG-run.away   (Downing & Mtenje 2010: 54)
        'The thief who stole my money is running away.'

As we can see, when the relative marker *-méné* is present (38b), the head noun and the relative clause are phrased together. Interestingly, when the relative marker is omitted (38a), the head noun is phrased separately from the relative clause.

So far in this paper, we haven't touched upon non-restrictive relative clauses. In terms of prosodic phrasing, it is interesting to note that non-restrictive relative clauses are prosodically phrased differently from restrictive relative clauses across Bantu languages. This is an important generalization, as non-restrictive relatives have a different structure from restrictive relative clauses, regardless of whether restrictive relatives are subject to head-raising or adjunction analysis. In particular,

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in non-restrictive relatives, the relative clauses are always an adjunct to a DP, rather than an NP (as in adjunction analysis of restrictive relatives).

12.6 Conclusion

The present article offers a sense of the range of variation in the relative clause formation in Bantu languages. It is clear that most of the issues remain unresolved. It is still unclear whether there is any definitive way of determining whether a relative marker is a relative pronoun or a complementizer. When the relative marker appears post-subject, what is the structure of the relative clause? Is it a post-subject marker an indication that the structure is different from typical relative clauses? Do different relative marking strategies indicate different relative clause structures, or are they variations of the same theme? What is the nature of the relative suffix? Is there a doubling phenomenon when the relative suffix appears with another relative marker?

Based on the discussions above, it seems clear that we need to reconsider some of the relativization strategies, consider the tonal contribution as well as prosodic phrasing to see whether these can further our understanding of the variation and the structure of relative clauses in Bantu.

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