

On word order restrictions in Bantu Relative clauses

Nancy Kula, ULCL/University of Leiden, n.c.kula@let.leidenuniv.nl

1. Introduction

Hypothesis à la Demuth & Harford (1999), Harford & Demuth (1999) following Meeussen (1971) and Givón (1972a):

Subject inversion in RCs occurs when the relative complementizer is a bound morpheme.

(1) Sesotho (Demuth 1995)

(1a) Setulo **seo** basadi ba-se-rek-ile-ng kajeno
 7chair 7REL 2women 2AGR-7OBJ-buy-PERF-RL today
 ‘the chair which the women bought today’

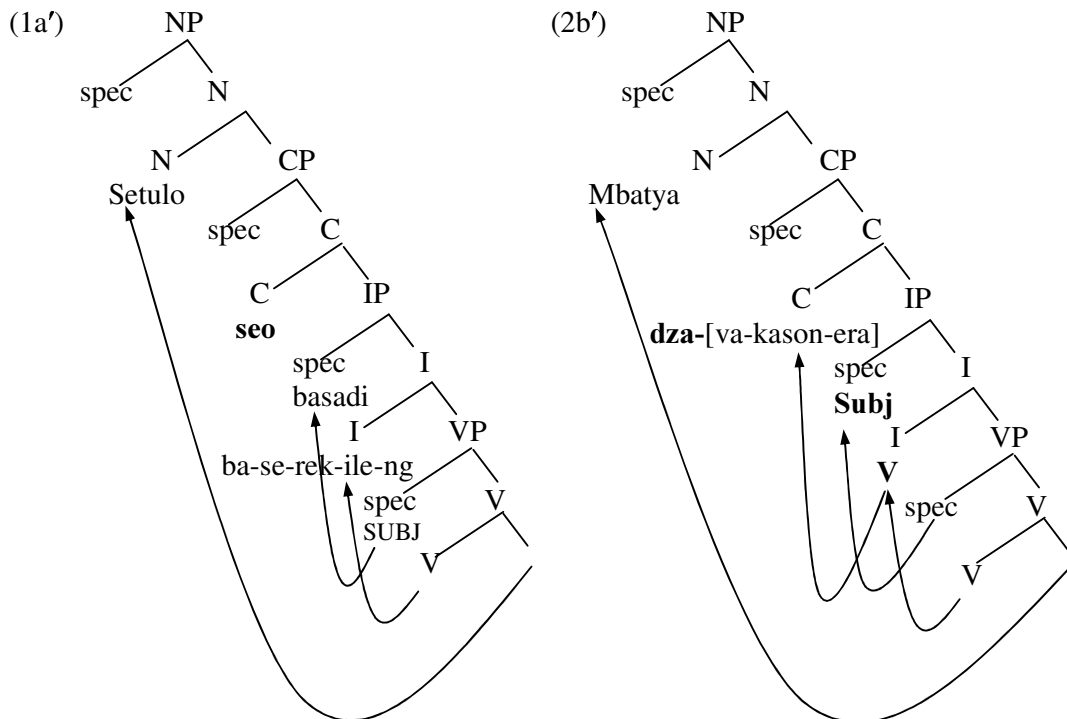
(1b)* Setulo seo ba-se-rek-ile-ng basadi kajeno
 7chair 7REL 2AGR-7OBJ-buy-PERF-RL 2women today
 ‘the chair which the women bought today’

(2) Shona (Demuth & Hartford 1999)

(2a) *mbatya **dza** vakadzi va-kason-era mwenga
 10clothes 10REL 2women 2AGR-sewed-APL 1bride
 ‘clothes which the women sewed for the bride’

(2b) Mbatya dza-va-kason-era vakazi mwenga
 10clothes 10REL-2AGR-sewed-APL 2women 1bride
 ‘clothes which the women sewed for the bride’

Possible syntactic analysis (acc. to H&D 1999):



[Movement of the head noun (HN) in RCs to a position above CP as depicted in (1a' and 2b') is to be construed as head movement, the formalisation of which is to be worked out.

A possible analysis, following Kayne (1994), is to treat RCs as involving complex DP movement where the RC itself is a CP complement of a determiner. A complex DP, headed by a relative pronoun and taking the HN as its NP complement, is generated inside the RC CP. The complex DP is then moved to spec CP (of the RC). The HN then moves out of the complex DP to spec CP, a position preceding the relative pronoun. Whether for the 2b' case this would mean an empty operator for the relative pronoun is a matter for further thought if this analysis is to be pursued.]

2. Bantu languages with relative pronouns

[The criterion for treating the relative constituents/markers as more like pronouns rather than as more like coplimentizers still needs to be teased out. Agreement is more pronoun-like but the pronoun route seems to entail some binding restrictions that I am not quite sure how they would figure in RCs.]

a. Subject inversion

[In the following data *no* means subject inversion does not occur, *SV* order is retained, while *yes* means there is subject inversion so *VS* order surfaces.]

(3) Luganda: *no* (Walusimbi 1996)

(3a) omusajja Petero gwe o-la-ye musomesa
 man Peter REL SM-pres-buy-FV teacher
 'the man that Peter has seen is a teacher'

[Interesting here for Luganda is that Walusimbi presents REL as an independent word but it never precedes the subject, so *gwe petero o-la-ye* is ungrammatical and nothing seems to be able to occur between the verb and REL so it may be a dependent constituent rather than a prosodic word making the *SV* order here interesting. Unfortunately no agreement markers are given in the glosses but *man* and *Peter* are probably in class 2 which may say something if this agreement applies to other nouns or nothing if it's just a reflection of two human class nouns.]

(4) Nsenga: *yes* (relative pronoun only in future tenses) (Miti 2001)

(4a) munthu wícítí cikapáyé cisílu
 mu-nthu wi-ci-ti ci-ka-pay-e ci-silu
 1-person 1REL-7SM-REL 7SM-fut-kill-FV 7-fool
 'the person who the fool will kill'

(5) Bemba: subject inversion is possible so both *SV* and *VS* order are possible.

(5a) ici-tabo icyó úmwaná a-á-mwééné (Givón 1972b)
 book REL 1child 1SM-pst-see
 'the book that the child saw'

(5b) ici-tabo icyó a-á-mwééné úmwaná
 book REL 1SM-pst-see 1child
 'the book that the child saw'

- * (5c) ici-tabo úmwaná icyó a-á-mwééné
 book 1child REL 1SM-pst-see
 'the book that the child saw'

[example parallel to Luganda (3a) is ungrammatical.]

- (6) Swahili: subject inversion is allowed so both SV and VS order are possible.

- (6a) chakula amba-cho Mariamu a-meki-pik-a
 7food 7REL Mariamu 1SM-perf-7OM-cook-FV
 'the food which Mariamu has cooked'

- ?? (6b) chakula amba-cho a-meki-pik-a Mariamu jana
 7food 7REL 1SM-perf-7OM-cook-FV Mariamu today
 'the food which Mariamu has cooked today'

[(6b) is disputed; grammatical for some and not for others.]

- (6c) chakula amba-cho a-me-ki-pik-a Mariamu
 7food 7REL 1SM-perf-7OM-cook-FV Mariamu
 'the food which Mariamu has cooked'

- (6d) kitabu amba-cho a-me-ki-on-a mtoto (Givón 1972a: 291)
 7book REL 1SM-perf-7OM-see-FV child
 'the book that the child has seen'

[Givón suggests (6d) is possible with a reading that does not treat *mtoto* as postposed so equivalent to (6b)]

- (7) Sotho grp: Southern Sotho, Northern Sotho: no, Tswana: ? (Zeller 2002)

- (7a) monna yô batho ba-mo-nyats-a-ng (Tswana)
 1man 1REL 2person 2SM-OM-disrespect-FV-REL
 'the man whom the people disrespect'

[In Tswana there is no subject inversion, but REL precedes the subject. Transcription suggests that REL is a prosodic word but this example may be parallel to Nguni where REL may optionally attach to a subject as will be seen later.]

- (8) Tsonga: no

- (8a) buku leyi munhua yi hlay-a-ka
 9book 9REL 1person 1SM 9OMread-FV-REL
 'the book that the person is reading'

b. Can subject precede relative pronoun?

[Question motivated by Luganda example (3a).]

Bemba, Swahili, Nsenga, N.Sotho, S.Sotho, (Tswana), Tsonga: no

- (9) Luganda: yes

- (9a) omusajja gwe o-la-bye musomesa
 man whom you-have-seen teacher
 'the man that you have seen is a teacher'

[Trivially so in subject relative]

(9b) omusajja Petero gwe o-la-bye musomesa
 man Petero whom you-have-seen teacher
 'the man that Petero has seen is a teacher'

* (9c) omusajja gwe Petero o-la-bye musomesa

These data present the following scenario:

- The relative pronoun and the verb may require strict adjacency, in which case the subject may optionally precede the pronoun-verb sequence.

[Nsenga and Luganda (Swahili and Bemba also have this option) may be treated here, with only Luganda using the option to have the subject preceding the REL-VERB sequence.]

- Or no strict adjacency is required between the relative pronoun and the verb and they may be separated by the subject but subject may never precede the relative pronoun. The relative pronoun must agree with the head noun.

[All the *no subject inversion* cases can be treated here; Sotho group, Tswana, Swahili and Bemba. This category may be a clearer reflection of real free pronouns and *strict adjacency* may simply be viewed as dependency on the verb in which case the Swahili and Bemba data may be viewed differently. But note that Miti (2001) for Nsenga clearly differentiates between free and bound RELs.]

- In all cases the relative pronoun must agree with the HN to which it is adjacent.

[It is not clear whether REL in Luganda (9b) agrees with the HN.]

3. Bantu languages with an affixal relative concord (pronominal clitic)

a. Subject inversion

(10) Nsenga: yes

(10a) mkaka wúkákumwa kamwâna
 m-kaka u-u-ka-mu-a ka-mwana
 3-milk 3REL-OM-12SM-drink-FV 12-child
 'the milk which the child drinks'

*(10b) mkaka kamwâna wúkákumwa
 m-kaka ka-mwana u-u-ka-mu-a
 3-milk 12-child 3REL-OM-12SM-drink-FV
 'the milk which the child drinks'

(11) Swahili: yes

(11a) chakula a-li-cho-ki-pik-a Mariamu Jana
 7food 1SM-past-7REL-7OM-cook-FV Mariamu yesterday
 'the food which Mariamu cooked'

(11b) *chakula Mariamu a-li-cho-ki-pik-a

(11c) chakula a-ki-pik-a-cho Mariamu
 7food 1SM -7OM-cook-FV-7REL Mariamu
 ‘the food which Mariamu cooks’

(11d) *chakula Mariamu a-ki-pika-cho

(12) Nguni: Xhosa, Swati, Zulu: no (Zeller 2002)

(12a) incwadi isitshudeni a-isi-yi-fund-a-yo (Zulu)
 9letter 7student 1SM-7REL-9OM-read-FV-REL
 ‘the letter that the student is reading’

(12b) indoda amakhwenkwe a-yi-bon-ile-yo (Xhosa)
 9man 6boy 6REL-9OM-see-PERF-REL
 ‘the man whom the boys saw’

(12c) umfati tintfombi la.iti-m-elekelela-ko (Swati: Nhlanhla Thwala p.c.)
 1woman 10girl 10REL-1OM-help-REL
 ‘the woman whom the girls help’

(12d) *umfati la.iti-m-elekelela-ko tintfombi
 1woman 10REL-1OM-help-REL 10girl
 ‘the woman whom the girls help’

[Subject must precede verb despite cliticized REL, thus (12d) with subject inversion is ungrammatical. Notice also that in all these examples REL does not agree with the HN but with the preceding subject.]

(13) Swati subject relatives

(13b) umfana lo-ti-senga-ko tinkomo
 1boy 1REL-10OM-milk-REL 10cow
 ‘the boy who milks the cows’

b. What does relative affix/concord attach to?

- Nsenga: prefixes to verbal complex.
- Swahili: suffixes or infixes verbal complex.
- Nguni: Xhosa, Swati, Zulu: prefixes to verb or optionally to subject of RC.

(13) Zulu possessive RCs (Poulos 1982: 111, Poulos & Msimang 1998)

(13a) inkosi e-mntwana wa-yo u-ya-gula
 9chief 9REL-1child 1POSS-9PC 1SM-FOC-be.sick
 ‘the chief whose child is ill’

(13b)??inkosi umntwana wa-yo o-gula-yo
 9chief 1child 1POSS-9PC 1REL-be.sick-REL
 ‘the chief whose child is ill’

[(13b) is marginally acceptable but notice that REL agrees with the subject of the RC.]

(14) Xhosa possessive RCs (Pahl 1983: 217)

(14a) umfazi o-ndoda ya-khe i-swelek-ile-yo
 1woman 1REL-9man 9POSS-1PC 9SM-die-PERF-REL
 ‘the woman whose man died’

(14b) izithethi ezi-ntetho za-zo si-zi-phulaphule-yo namhlanje
 10speakers 10REL-talk 1 POSS-10PC 1stPL-10OM-listen.to-REL today
 ‘the speakers whose talks we listened to today’

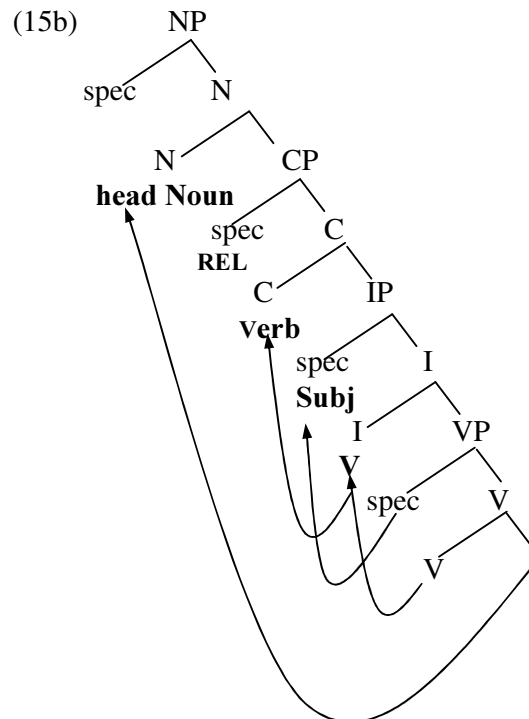
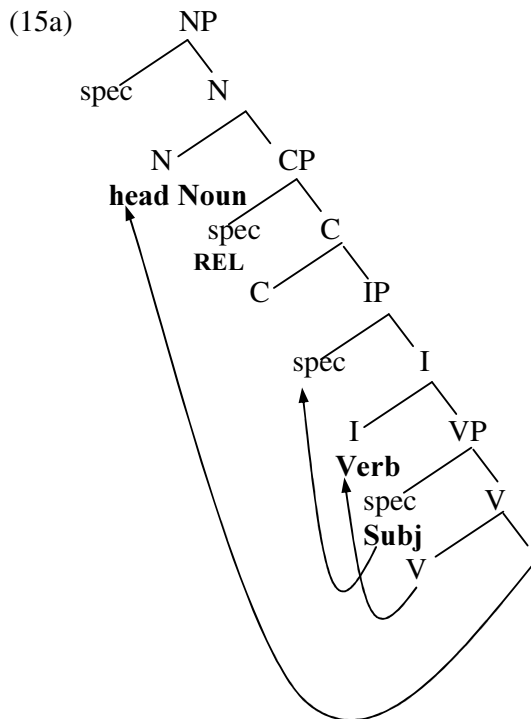
[In these examples (13-14) where REL attaches to subject, agreement between REL and HN is restored.]

Summary:

- Agreement between the head noun and the relative marker is only possible if the constituent containing the relative marker and the head noun are adjacent.
- If agreement between REL and the head noun is retained subject inversion takes place.
- If subject inversion does not apply then the head noun and REL are not adjacent and agreement must be between the subject of the relative clause and REL.
- Affixing REL to the subject of the relative emerges as a way of resolving the strong requirement for agreement between the head noun and REL (or the relative predicate?)

4. Towards an analysis

(15) Pronoun REL and subject inversion



(15a): Sesotho, N.Sotho, Tsonga (Swahili, Bemba)

(15b): Swahili, Bemba, Nsenga

[Hypothesis: agreement, which is only attained under strict adjacency of the agreeing constituents, is the main motivating factor for the ordering restrictions in RCs. REL as a prosodic word sits in spec of CP, a position that satisfies adjacency requirements with the HN for agreement.

If the verb requires to be adjacent to REL for reasons yet to be fully investigated (focus may be a possibility) then the verb moves up to C as in (15b), otherwise SV order as in (15a) is retained.]

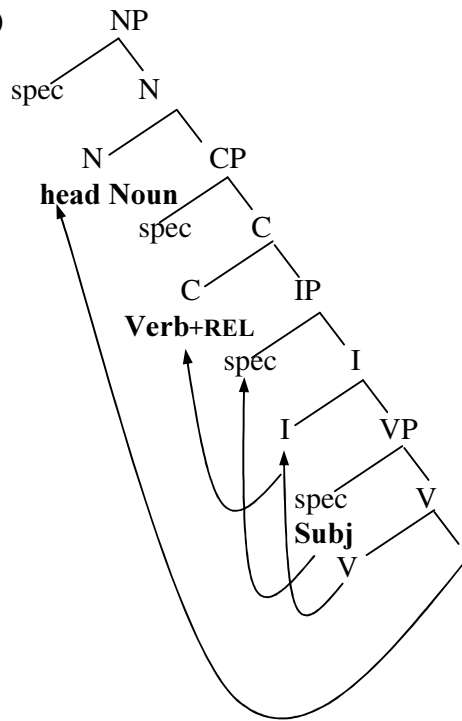
(15c) a possibility for focus reasons within the embedded clause.

(5b) ici-tabo icyó a-á-mwééné *úmwaná*
 book REL 1SM-pst-see 1child
 ‘the book that the child (and not the adult) saw’

[RCs by their very nature seem to evoke focus of the relativized constituent and hence it is less likely that a second constituent could also be focused, but this is presumably by no means impossible. And if the post verbal position is the preferred position for contrastive focus as has been argued for most Bantu (Downing recent work) then verb movement in Bemba and Swahili could be attributed to this. This option however entails that the SV order is more canonical, raising a big question for Nsenga, if (15b) is its only option. Miti (2001) does not give the SV order in Nsenga at all, either as grammatical or not, so this needs to be checked out. This is reasonably easily done.]

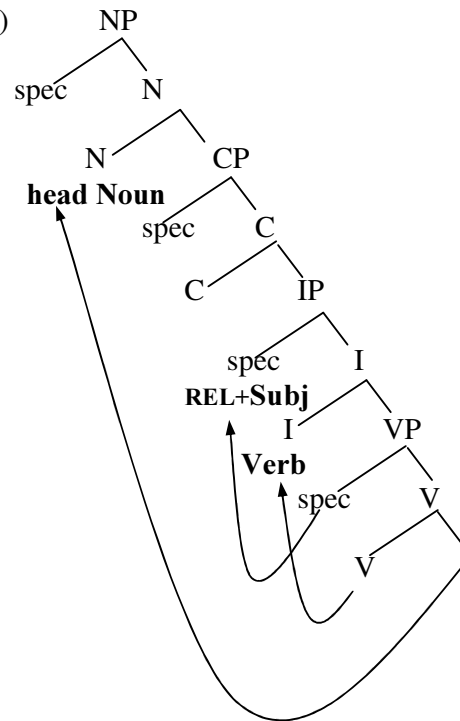
(16) pronominal clitic REL and subject inversion

(16a)



Nsenga, Swahili

(16b)



Xhosa, Swati, Zulu

[In Nsenga and Swahili where REL is cliticized to the verb, subject inversion takes place to ensure adjacent agreement between the HN and REL which is attached to the verb (16a). (16b) presents another manner of achieving the same goal, namely agreement between REL and the HN by cliticizing REL to the subject of the RC. In this case the verb has no reason to move to C.

If adjacency between the HN and REL fails to be achieved as in the Nguni examples where REL attaches to the verb (examples 13-14), then REL does not agree with the head noun but with the subject of the relative. Phonological phrasing may be responsible for the lack of adjacency between the HN and REL in Nguni (and Luganda). In most Nguni a phonological phrase boundary is marked by penultimate lengthening as illustrated in (17).]

(17) Swati

| | | | |
|---------------------------------|------------|--------------------------------------|---------|
| [umfaati] _p | [tintfombi | la.iti-m-elekelelaa-ko] _p | (Swati) |
| 1woman | 10girl | 10REL-10M-help-REL | |
| 'the woman whom the girls help' | | | |

[So REL must be in the same phonological phrase as the HN if it is to agree with it. I guess there would have to be some distinction between strong and weak agreement languages where the former (16a: Swahili, Nsenga) mandatorily require REL to agree with the HN and the latter (Nguni) may have an option, under specific phonological phrasing, not to. (Again one will have to look at binding issues here). This will be the phrasing also predicted for Luganda (9b) and REL will there be expected to agree with the subject of the RC and not the HN. This is yet to be tested.]

Conclusion: We still retain the claim that the prosodic status of the relative pronoun determines whether subject inversion in object RCs occurs or not. Movement is however motivated by strong agreement conditions for the head noun. When REL is a prosodic word it is generated in spec of CP and satisfies agreement requirements with the HN. In this case the verb only moves for other reasons such as focus.

Agreement between the head noun and the relative pronoun or the relative clitic hosted by a verb or by the subject of the relative must be within the same phonological phrase.

The assumption of agreement between the HN and REL, under adjacency within a phonological phrase, as central to the word order restrictions in RCs, makes it possible to incorporate what would otherwise be blatant counter examples to expected mandatory verb movement when REL is cliticized (12: Nguni), and expected mandatory lack of movement when REL is a prosodic word (Bemba (5b), Swahili (6b/d)). Cliticization to a different host other than the verb and the lack of verb movement seen there, also lends support to the agreement hypothesis.

[The agreement relation (and configuration) itself remains to be characterised in syntactic terms.]

5. Bantu languages with no (or option of no) segmental relative marker

(18) Kinyarwanda

(Kimenyi 1978)

(18a) umugore boonyé ni Violah
 woman I saw is Violah
 'The who woman I saw is Violah'

(18b) umugore boonye ni Violah
 woman I saw is Violah
 'The woman I saw is Violah'

(18c) Ingitabo Hassan ya-guze ni kiiyza
 book Hassan SM-bought is good
 'The book Hassan bought is good'

(18d) Ingitabo Hassan ya-guzé ni kiiyza
 book Hassan SM-bought is good
 'The book which Hassan bought is good'

[Not terribly informative, Kimenyi grammar just says there's a high tone on the verb to express a relative and (18b/c) are supposed to be the non-relative counterparts of (18a/d) respectively, but they are also relatives as far as I can see. It may be a restrictive vs. non-restrictive distinction being drawn on. But there's a new Kimenyi (2002) tonal grammar of Kinyarwanda that may be more insightful but that I haven't looked at yet. The question is whether you can form an object relative with just tone so that the word order actually stays the same as opposed to (18d) for example.]

(19) Nsenga: subject relatives

(19a) msímíbí wáwútúka
 'the girl who has run away'

(19b) msímíbí wáwútúká wafwa
 m-simbi u-a-wutuk-a u-a-fu-a
 1-girl 1OM-pst-run-FV 1SM-pst-die-FV
 'The girl who has run away had died'

(19c) [wáwútúká msímíbí wáfwa]_{PPH/IP}
 's/he who has run away from the girl has died'

(19d) [[wáwútúka]_{PPH} [msímibi]_{PPH} [wáfwa]_{PPH}]_{IP}
 Lit: she who has run away, the girl, has died
 'the girl who has run away has died'

[Different phonological phrasing results in different interpretations of the RC; thus parsing (19b) as an intonational phrase consisting of only one phonological phrase (19c) gives a headless relative interpretation while a different phrasing in (19d) does not.

(20) Chichewa (Mtenje p.c.)

(20a) chimanga chimene ana a-na-dya
 maize which 1children 1OM-pst-eat-FV
 'the maize which the children ate'

*chimanga ana anadya

(20b) chí mánga á ná dyá aná
 'the maize which the children ate'

[(20a) gives a RC with a relative pronoun where the word order has to be REL-SUBJ-VERB and (20b) the same relative denoted by tone with the order VERB-SUBJ. Question is why there is subject inversion when there is no cliticized REL. If the tone marking of the relative is expressed primarily on the verb, as in Kinyarwanda, then the constituent that has the REL tone is adjacent to the HN but its not clear what this says about agreement. It may be that RELs (whatever its form) adjacency to the HN is more important than agreement or a reflection that the two are separate issues.]

(21) Umbundu (Schadeberg 1990: 45)

(21a) tánga úkánda ekamba lyángè lyásonèha
 read letter friend poss write
 'read the letter which my friend has written!'

(21b) tánga úkánda wásonèha ekamba lyángè
 read letter write friend poss
 'read the letter which my friend has written!'

[In Umbundu, unlike Chichewa, both SV (21a) and VS (21b) order are allowed in RCs marked by tone. We may venture to consider this to involve a particular tonal construction for RCs so that word order in itself is not so important. Meaning an identical underlying tonal structure but a most likely adjusted surface tone due to word length/weight.]

Very tentative thoughts on tonal RCs:

Within tonal relative clauses *relativizing tone* may be part of the verb or manifested on the verb in which case restrictions on word order may apply (Chichewa) if this constituent seeks to be adjacent to the HN (but note Kinyarwanda!), or may be represented by a particular construction in which case word order is unimportant and hence less restricted (Umbundu). Or word order may be static with different RC readings derived by different phonological phrasing (Nsenga).

There is also the possibility of a tonal morpheme for a relative marker. This may be the case in Kinyarwanda. It is at present not clear to me how these tonal data may be insightfully related to each other and to the RCs with segmental RELS.

References

- Ashton, E.O. 1944. Swahili Grammar. London: Longman.
- Demuth, K. 1999. Questions, relatives and minimal projection. *Language Acquisition* 4: 49-71.
- Demuth K. and C. Harford 1999. Verb raising and subject inversion in comparative Bantu. *Journal of African Languages and Linguistics* 20: 41-61.
- Doke, C. 1954. The Southern Bantu Languages. Oxford: Oxford University Press.
- Du Plessis, J.A. and M. Visser, 1992. Xhosa Syntax. Pretoria: Via Afrika.
- Givón, T. 1972a. A note on subject postposing. *Studies in African Linguistics* 3 (1): 289-299.
- Givón, T. 1972b. Studies in chiBemba and Bantu grammar. *Studies in African Linguistics*. Supplement 3.
- Harford, C. and K. Demuth 1999. Prosody outranks syntax: an Optimality approach to subject inversion in Bantu Relatives. *Linguistic Analysis* 29: 47-68.
- Kimenyi, A. 1978. A relational grammar of Kinyarwanda. Berkeley: University of California Press.
- Meeussen, A.E. 1971. Relative clauses in Bantu. *Studies in African Linguistics*. Supplement 2: 3-10.
- Miti, L. 2001. A Linguistic analysis of CiNsenga. Cape Town: Centre for Advanced Studies of African Society.
- Pahl, H.W. 1983. IsiXhosa. Johannesburg: Educum Publishers.
- Poulos, G. and Msimang 1998. A Linguistic analysis of Zulu. Cape Town: Via Afrika.
- Schadeberg, T. 1990. A sketch of Umbundu. Cologne: Rüdiger Köppe Verlag.
- Tyler, A. 1985. Swahili relative clauses. *Studies in African Linguistics*. Supplement 9: 298-303.
- Walusimbi, L. 1996. Relative clauses in Luganda. Cologne: Rüdiger Köppe Verlag.
- Zeller, J. 2002. Relative pronouns and relative concords in Southern Bantu: a historical relationship. Ms. University of Natal.
- Zwart, J.W. 1997. A short note on relative constructions in Lega and Swahili. Ms. University of Groningen.