Makhuwa non-subject relatives as participial modifiers[1]

JENNEKE VAN DER WAL

Abstract

Unlike relative constructions in other familiar Bantu languages, Makhuwa does not have any special relative morphology; neither does it have a regular subject marker in the non-subject relative. Rather, the pronominal subject is expressed by a possessive pronoun. Because of the partly verbal and partly nominal properties of the relative, I propose to analyse it as a participial modifier. The prefix on the relative participle is analysed as a pronoun, which makes the participial modifier function like an independent adjunct. The possessive form of the pronominal subject is the result of the genitive case on the subject assigned by PTCPP, in the absence of a subject agreement projection. The paper furthermore shows that three alternative analyses ("normal" relative, connective strategy and DP relative) fall short in accounting for the data of the non-subject relative in Makhuwa.

1. Introduction

Makhuwa is a Bantu language (Guthrie's P.30) spoken in the north of Mozambique by approximately 5 million people (Sebastian Floor, p.c. March 2007). The variant used in this research is Makhuwa-Enahara, which is spoken on Ilha de Moçambique and the surrounding coastal area. The language is tonal, and the canonical word order is SVO.

This paper is concerned with one particular construction in the language: the non-subject relative. First, however, I briefly describe some basic Makhuwa data which will facilitate the discussion of the relative clauses in this language. As in other Bantu languages, the nouns in Makhuwa are divided into noun classes. These classes are visible most easily in the prefix on the noun and in the agreement with the subject prefix on the verb. The noun class to which a noun belongs is indicated by a number in the gloss, and so is the agreement on the verb, as in (1a): the subject noun **nthíyáná** 'woman' is in class 1, and so is the subject prefix **o-** on the verb. A noun in class 6 has a different prefix **ma-**, and triggers a different agreement: the subject prefix **a-** (1b).

(1) a. **n-thíyáná o-n-thípá   nlittí**[2]
         1-woman   1-PRES.CJ-dig 5.hole
         'The woman digs a hole.'
     b. **ma-khúle a-ńní-khúúra ephaáu**
         6-mice   6-HAB.DJ-eat   9.bread
         'Mice eat bread.'

Another characteristic of Makhuwa are the conjoint and disjoint verb forms. The inflection of Makhuwa verbs has pairs of conjugational categories that are equivalent in terms of their TAM semantics, but differ in their "linkage" with what follows the verb. These verb forms are referred to as conjoint (CJ) and disjoint (DJ). The CJ/DJ distinction is only present in the four basic non-relative conjugations. In the examples, the form of the non-relative verb is always indicated in the gloss. The CJ and DJ verb forms are segmentally marked by different TAM markers and have a different sentence-final distribution: the CJ verb form must always be followed by some element (2a, c), whereas the DJ verb form may also appear in sentence-final position (2b), but does not need to. The two forms indicate a difference in information structure. The element following the CJ form is interpreted as exclusive focus; the DJ form is used elsewhere (3).

(2) a. **o-n-thípá   nlittí**   CJ
         1-PRES.CJ-dig   5.hole
         'She digs a hole.'

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2. Abbreviations and symbols used in this paper: 1/2/3 etc. (noun classes), CJ (conjoint), COMP (complement), CONN (connective), COP (copula), DEM (demonstrative), DJ (disjoint), DUR (durative), H (high tone), IMPF (imperfective tense), L (low tone), OM (object marker), OPT (optative), PASS (passive), PERS (persistive), POSS (possessive), PRO (personal pronoun), SM (subject marker), |tt| (retroflex voiceless stop). Liaison is indicated by an apostrophe, high tones are indicated by an acute accent (on or before the element), low tones are unmarked.

b.   **o-náá-thípá**   DJ
1-PRES.DJ-dig
'She is digging.'

c.   *o-n-thípa**   CJ
1-PRES.CJ-dig

(3)   a.   **o-low-alé**   **ehopa**   **paáhi**   CJ
1-fish-PERF.CJ   9.fish   only
'He caught only fish.'

b.   **oo-lówá**   **hatá**   **ehópa**   DJ
1.PERF.DJ-fish   even   9.fish
'He caught even fish.'

The forms are also marked tonally in Makhuwa: a different tonal pattern is applied to the element directly following the CJ verb form (cf. Stucky 1979). The same process is also used to make a noun predicative, hence it is referred to as Predicative Lowering (PL; Schadeberg and Mucanheia 2000, van der Wal 2006). This process consists of the loss of the first underlying H tone of the noun stem, and the possible addition of a boundary tone to indicate the right boundary of some prosodic phrase. For example, the tonal pattern of **meele** 'maize' is LHL in citation form (4a), but LLH immediately after a CJ verb form (4b). The tonal pattern on the element following a DJ verb form is as in citation form: LHL (4c). For more information on the CJ/DJ distinction in Makhuwa, see Katupha (1983) and Van der Wal (2009).

(4)   a.   **meéle** 'maize'   (citation, LHL)
b.   **ki-n-thítá**   **meelé**   CJ (LLH)
1SG-PRES.CJ-pound   6.fine.maize
'I pound maize.'
c.   **ki-náá-thítá**   **meéle**   DJ (LHL)
1SG-PRES.DJ-pound   6.fine.maize
'I pound maize.'

As mentioned, this paper is concerned with the non-subject relative. I use this term to indicate relative clauses that modify an object or an adjunct, also called opaque relatives. There are two interesting characteristics of this construction in Makhuwa. First, the non-subject relative differs structurally from the subject relative. Second, in the non-subject relative there is no regular prefixed subject marker. Instead, the subject of this type of relative clause is expressed by a possessive morpheme. Section 2 provides a description of the relative constructions, subject and non-subject, where properties of agreement, pronominalisation and word order in the relative clause are given. Section 3 proposes an analysis of the construction in these data as a participial modifier

and provides arguments for this analysis. In Section 4 three alternative analyses are discussed and it is concluded that they face more difficulties than the analysis proposed in Section 3. Section 5 summarises the paper and addresses some questions for further research.

2.   Relative constructions

2.1.   *Subject relative*

The subject relative in Makhuwa is not segmentally marked as a relative, meaning that there is neither a relative complementiser, nor a relative marker on the verb, nor a special subject agreement prefix. For *intransitive* verbs the difference between relative and non-relative verbs looks just like the difference between the CJ and DJ verb form. However, the CJ/DJ distinction is absent in the relative: there is only one form, which happens to be identical to the non-relative CJ form, as can be seen in (5) and (6). The CJ verb form in (5b) is formally similar to the relative verb form in (5c): **onthíkíla**. Since the CJ verb form (i.e., non-relative) cannot occur in sentence-final position, but the relative verb can, there is never ambiguity between the relative and non-relative sentence-finally. For ease of recognition, the gloss of the relative verb forms is also marked by "REL".

(5)   a.   **nlópwáná   o-náá-thíkíla**   DJ
              1.man   1-PRES.DJ-cut
              'The man is cutting.'

       b.   **nlópwáná   o-n-thíkíla   nthalí**   CJ
              1.man   1-PRES.CJ-cut 3.tree
              'The man cuts a tree.'

       c.   **nlópwáná   o-n-thíkíla**   REL
              1.man   1-PRES-cut.REL
              'the man who is cutting'

(6)   a.   **ekokhólá   tsoo-vél-íya**   DJ
              10.rubbish   10.PERF.DJ-sweep-PASS
              'The rubbish was swept up.'

       b.   **ekokhólá   tsi-vel-iy-é   tsi-rí   vayi?**   REL
              10.rubbish   10-sweep-PASS-PERF.REL   10-be   where
              'Where is the rubbish that was swept up?'

The relative and non-relative form of a *transitive* verb can be distinguished by the tonal pattern of the object following the verb. After a CJ non-relative form the object undergoes Predicative Lowering, as illustrated in (7b). After

a relative verb the object appears as in citation form (compare 7a and c). Example (8a) shows that a clause in which the direct object does *not* undergo PL (**ecanéla**) is interpreted as a relative and hence needs a predicate to form a complete sentence. The object in the non-relative example (8b) does undergo PL (**ecanelá**); the combination is already a full sentence and would become ungrammatical with another predicate. Again, the only noticeable difference is in the tonal pattern of the object.

(7) a. **ntháli** 'tree'   (citation: LHL)
     b. **nlópwáná o-n-thíkílá   nthalí**   (PL: LLH)
         1.man   1-PRES.CJ-cut   3.tree
         'The man cuts the tree.'
     c. **nlópwáná o-n-thíkílá   ntháli**   (no PL: LHL)
         1.man   1-PRES-cut.REL   3.tree
         'the man who cuts the tree'

(8) a. **nthíyáná o-n-thúkúlá   ecanéla   (t'   oóréera)**
         1.woman   1-PRES-open.REL   9.window (COP 1.be.good)
         'The woman who opens the window (is beautiful).'
     b. **nthíyáná o-n-thúkúlá   ecanelá   (*t'   oóréera)**
         1.woman   1-PRES.CJ-open   9.window (COP 1.be.good)
         'The woman opens the window.'

As can be seen in the examples in this section, the first prefix on the verb agrees with the head noun in a subject relative, apparently just as in the non-relative sentences. For example, in (8a) the prefix **o-** is in class 1, just as the head noun **nthíyána** 'woman'.

2.2.   *Non-subject relative: Objects and adverbial expressions*

Object relatives have no special relative morphology either (9a), and on the surface they resemble the subject relative (9b), at least when the subject/agent is a full noun. Example (9c) shows the non-relative counterpart.

(9) a. **e-núpá e-tek-ale   Hasáání (yuulupále)**
         9-house 9-build-PERF.REL   1.Hasan (9.big.PL)
         'The house that Hasan has built (is big).'
     b. **Hasáání o-tek-ale   enúpa   (t'   oóréera)**
         1.Hasan   1-build-PERF.REL   9.house (COP 1.be.good)
         'Hasan who built a house (is well).'
     c. **Hasáání o-tek-alé   e-nupá**
         1.Hasan   1-build-PERF.CJ   9-house
         'Hasan has built a house.'

One important property of the object relative is that the first prefix on the relative verb is in the same noun class as the head noun, like in the subject relative: in (10) the head noun **nipúró** 'place' as well as the prefix on the verb **ni**- is in class 5, and in (11) the head noun **ekanetá** 'pen' and the prefix **e**- are both in class 9.

(10) **ólé   kha-tsuweˊl-lé   nipúró ni-ra-alé   naphúlu**
      1.DEM NEG.1-know-PERF.DJ 5.place 5-go-PERF.REL 1.frog
      'He didn't know the place where the frog went.'

(11) **ki-m-phééla   ekanetá e-ki-vah-alé   ápáápa**
      1SG-PRES.CJ-want 9.pen   9-1SG.OM-give-PERF.REL 2.father
      'I want the pen that my father gave me'.

Another property is the position of the logical subject (**naphúlu**, **ápáápa**), which is placed after the relative verb in these object relatives. Furthermore, the subject is not marked on the verb here.

When the subject in a non-subject relative is a pronoun, the construction looks different. The subject is now expressed by a suffix on the verb, which is formally identical to the possessive pronoun, as is clear from the paradigm and examples in (12) and (13).[3] The possessive pronoun in (13) is cliticised to the end of the verb and is interpreted as the logical subject of the sentence. Whereas the possessive pronoun used as a modifier always agrees in noun class with the noun it modifies (**ts**- in (12)), the suffix on the relative verb does not agree with the head noun (13c).

(12) **ehópá   ts-áka**   'my fish'
      ekaáró   ts-áu   'your cars'
      ekofíyó   ts-áwe   'his hats'
      eraáshtáká ts-íhu   'our sandals'
      enúpá   ts-ínyu 'your houses'
      ekaláwá   ts-áya   'their boats'

(13) a. **ki-m-phéélá   ekamisá e-pasar-aly-áaka**
          1SG-PRES-want   9.shirt 9-iron-PERF.REL-POSS.1SG
          'I want the shirt that I ironed.'
      b. **ki-m-phéélá   ekanetá tsi-ki-vah-aly-ááwé**
          1SG-PRES-want   10.pens 10-1SG.OM-give-PERF.REL-POSS.1
          'I want the pens that he gave me.'

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3. The nouns in (12) have all been chosen from noun class 10 in order to avoid a vowel-initial possessive form (e.g., **aka** in class 9), which would result in liaison between the noun and the possessive. The possessive forms with class 10 agreement **ts(i)-** illustrate more clearly the comparison between the morphology used in the possessive and relative.

Table 1. *Overview personal pronouns*

SG	1	**mi**	**miyaano**
	2	**we**	**weyaano**
	2resp	**nyu**	**nyuwaano**
	3	**yena**	
PL	1	**hí**	**hiyaano**
	2	**nyu(tse)**	**nyuwaano(tse)**
	3	**ayena(tse)**	

    c. *****ekaneta tsi-ki-vah-ale-ts-awe**
           10.pens 10-1SG.OM-give-PERF.REL-10-POSS.1

As this will become relevant later on, it is important to point out that the subject pronoun in the non-subject relative is not formally identical to the independent personal pronoun. The personal pronoun is used, for example, after prepositions (14). There is a shorter and a longer form of the personal pronoun in Makhuwa (Table 1), of which the preferences for use are still unclear.

(14)   **o-náá-tsivel-íyá**   **ni** **míyááno**
        2SG-PRES.DJ-please-PASS by 1SG.PRO
        'You like me.' (lit: 'You are pleased by me.')

The possessive subject pronoun on the verb may optionally be accompanied by a full noun. This full noun functions as a topic, and its position in the relative clause is flexible: it often follows the relative verb, but it may also come between the relativised noun and the verb (15).[4] In (16) the pronominal suffix is helpful in distinguishing the object relative from the subject relative. (16c) is preferably interpreted as a subject relative, although logically speaking it should also be able to have the interpretation of an object relative ('the man who Joaquim hit'; compare to (9a)). A full nominal subject can also occur in a relative clause without the possessive marking, see (11) above.

(15)   a. **Maríá** **oo-wúryá**   **eleétí** **e-mwarish-aly-ááwe**
           1.Maria 1.PERF.DJ-drink 9.milk 9-pour-PERF.REL-POSS.1
           Alí
           1.Ali

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4. The exact difference in interpretation or use between (15a) and (15b) is still unclear.

b. **Maríá   oowúryá   eleétí   Alí**
1.Maria   1.ᴘᴇʀꜰ.ᴅᴊ-drink   1.Ali   9.milk
emwarishalyáawe
9-pour-ᴘᴇʀꜰ.ʀᴇʟ-ᴘᴏss.1
'Maria drank the milk that Ali poured.'

(16)   a. **ko-ḿ-phwányá   nlópwáná**
1sɢ.ᴘᴇʀꜰ.ᴅᴊ-1.ᴏᴍ-meet   1.man
o-m-man-aly-ááwe   Coakí
1-1.ᴏᴍ-beat-ᴘᴇʀꜰ.ʀᴇʟ-ᴘᴏss.1   1.Joaquim
'I met the man who Joaquim hit.'

b. **koḿphwányá nlópwáná Coakí   ommanalyáawe**
I met   the man   Joaquim   hit
'I met the man who Joaquim hit.'

c. **ko-ḿ-phwányá   nlópwáná o-m-man-alé**
1sɢ.ᴘᴇʀꜰ.ᴅᴊ-1.ᴏᴍ-meet   1.man   1-1.ᴏᴍ-beat-ᴘᴇʀꜰ.ʀᴇʟ
Coakí
1.Joaquim
'I met the man who hit Joaquim.' / 'I met the man who Joaquim
hit.'

As already mentioned, the non-subject relative verb has a prefix in the same noun class as the head noun. Although this agreeing prefix looks similar to the subject agreement marker on a "normal" verb, there is evidence that it must be another type of agreement. A first argument is found in the object marking on the verb. In Makhuwa, all and only object nouns of noun class 1 and 2 (including 1st and 2nd person) are obligatorily marked on the verb. For the other noun classes no object marker exists, and for an object in class 1 or 2 it is ungrammatical to leave out the object marker. Example (17) shows that the object marker -**m**- must appear when the object is in class 1 (whether human, animate or inanimate).

(17)   **ki-*(m)-weh-alé   Hamísi   /   poneká   /   nancoólo**
1sɢ-1.ᴏᴍ-see-ᴘᴇʀꜰ.ᴄᴊ   1.Hamisi   /   1.doll   /   1.fish.hook
'I saw Hamisi/a doll/a fish hook.'

In an object relative the head noun of the relative clause is also object-marked on the verb. In (18) the object marker -**n**- refers to the head noun **poneka** 'doll' (class 1). I take this to indicate that the verb has already established a (Agree) relation with the object and hence that the relation between the verb and the object/head noun cannot *also* be one of subject agreement.[5]

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5. Passivised objects in Bantu languages (hence also Makhuwa) never trigger object marking on the verb.

(18)   **ki-ni-ḿ-phéélá**   **poneká**   **o-n-thum-aly-ááya**   **athíyána**
        1SG-PRES.CJ-1-want   1.doll   1-1.OM-buy-PERF-POSS.2   2.women
        'I want the doll that the women bought.'

Second, the prefix in the relative is different from the regular subject prefix when the head noun is a first or second person. In (19a) the (subject) prefix on the (non-relative) verb is **ni-**, whereas in the relative clause in (19b) it is **o-**.[6] This prefix is presumably a class 1 prefix, but it is not dependent on the noun class of the subject in (19b).

(19)   a.   **híyáánó**   **ni-m-várá**   **ntekó**
            1PL.PRO   1PL-PRES.CJ-grab   3.work
            'We are working.'
       b.   **híyáánó**   **o-ni-thall-aly-ááwe**   **Coáná**
            1PL.PRO   1-1PL.OM-choose-PERF.REL-POSS.1   1.Joanna
            ni-m-várá   **ntekó**   **ni**   **yéna**
            1PL-PRES-do   3.work   with   1.PRO
            'We, who Joanna has chosen, are working with her.'

Of course, a relative can also be formed of a ditransitive verb, as in (20). The first element following the relative is interpreted as the agent in this sentence (Joanna), and the second as the recipient (Ali). It seems that this indirect object can also be the head noun of the relative, but more data and judgements are necessary to form a conclusion.

(20)   **ekhatérá**   **e-m-vah-aly-ááwé**   **Coáná**   **Alí**   **ti**
        9.chair   9-1.OM-give-PERF.REL-POSS.1   1.Joanna   1.Ali   COP
        yoóréera
        9.good
        'The chair that Joanna gave Ali is beautiful.'

The same construction is used in clauses expressing location, time, and manner. In these cases the head noun is an adjunct, which is often omitted, leaving the relative headless. The agreement on the relative is in a locative class (usually class 16 **wa**-) with locative and temporal modifiers, as in (21) and (22), and in class 10 (**tsi**-) for manner expressions (23).

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6. Although the object marker -**ni**- might be mistaken for the subject marker for 1st person plural, we know that -**ni**- in the relative clause in (19b) must be the object marker since the clause is similar to example (19) where the referring prefix is distinct from the subject marker. Furthermore, in other tenses this object marker follows the tense prefix, which also indicates that it must be an object marker.

(21)　**(wa-tsulú)　wa-m-vár-íya　　　ntékó**
　　　(16-up)　　16-PRES-touch-PASS.REL　3.work
　　　woo-nyákúlihan-íya
　　　16.PERF.DJ-discuss-PASS
　　　'(Upstairs) where work is done, there is discussion.'

(22)　**válé　wa-phanr-y-ááwé　　　　mwalápw'　ááwé**
　　　then　16-get.stuck-PERF.REL-POSS.1　1.dog　　　1.POSS.1
　　　n-karáfá-ni　mwé . . .
　　　18-jar-LOC　　18.DEM
　　　'And when his dog got stuck in that jar . . .'

(23)　**(tsiítsó)　tsi-ní-ḿ-wéh-áu**
　　　(that.way)　10-PRES-1-look.REL-POSS.2SG
　　　'exactly the way that/how you see him'

2.3.　Conjugations

The relative exists in four conjugations in Makhuwa in both affirmative and negative: present, present perfective, past imperfective and past perfective. These are exactly the basic conjugations in which a CJ/DJ distinction is found, and the morphology for tense and negation is the same as in the CJ non-relative verb form; compare the relative in (24a) to the non-relative in (24b). The negative relative uses the negative morpheme -**hi**- which follows the agreement prefix **tsi**- (25a), just like the negative CJ form (25b), and unlike the DJ negative, which has a prefix **kha**- preceding the subject prefix (-**ni**- in (25c)).

(24)　a.　**eparáthú　y-aa-ráp-íh-ááwé　　　　Eliísa**
　　　　　9.plate　　9-IMPF-wash-CAUS.REL-POSS.1　1.Lisa
　　　　　'the plate that Lisa washed'
　　　b.　**Eliísá　aa-ráp-íh'　　　　eparathú**
　　　　　1.Lisa　1.IMPF.CJ-wash-CAUS　9.plate
　　　　　'Lisa washed a plate.'

(25)　a.　**ekhómpé　tsi-hi-ttótt-ály-aáyá　　　　anámwáne**
　　　　　10.shells　10-NEG-collect-PERF.REL-POSS.2　2.children
　　　　　'the shells that the children didn't find'
　　　b.　**o-hi-thum-álé　　esheení?**
　　　　　1-NEG-buy-PERF.CJ　9.what
　　　　　'What didn't she buy?'
　　　c.　**kha-ni-thum-ále**
　　　　　NEG-1PL-buy-PERF.DJ
　　　　　'We didn't buy (it).'

In summary, Makhuwa does not have special morphology to mark subject and non-subject relative clauses. The prefix on the relative verb agrees with the head noun in both types of relatives, and it was shown that this prefix cannot be the same as the normal subject prefix in the non-subject relative. Furthermore, a pronominal subject in a non-subject relative appears as a suffix on the verb, which is identical to the possessive pronoun. The next section proposes an analysis for these remarkable facts.

3.   Analysis

3.1.   Comparison with other Bantu languages

In order to understand the exceptionality of the properties of the non-subject relative construction in Makhuwa, a comparison should be made with other Bantu languages. Simango (2006) gives a brief description of the various relativisation strategies in Bantu languages. Sotho, for example, uses a relative suffix on the verb (-**ng**) and a relative complementiser which agrees with the head noun (**seo**, in (26)).

(26)   Sotho (Demuth and Harford 1999)
  setulo <u>seo</u> basadi ba-se-rek-ile-<u>ng</u> kajeno
  7.chair <u>7.REL</u> 2.women 2.SM-7.OM-buy-PAST-REL today
  'the chair that the women bought today'

In Shona and Swahili an agreeing relative marker appears on the verb, although it can occur in different positions relative to the subject marker and the verb stem. In Shona the relative marker precedes the subject marker, as exemplified in (27), where the relative prefix **dza**- occurs before the subject prefix -**v**-. Example (28) shows that in Swahili the relative marker (-**cho-**) may either precede (28a) or follow the verb stem (28b).[7]

(27)   Shona (Demuth and Harford 1999)
  mbatya <u>dza-v-aka-son-era</u> vakadzi mwenga
  10.clothes 10.REL-2.SM-T-sew-APPL 2.women 1.bride
  'the clothes that the women sewed for the bride'

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7. Swahili has a third strategy which involves the use of a relative complementiser, as in (i).

(i) **chakula amba-cho Juma a-li-pika**
  7.food COMP-7.REL 1.Juma 1-PAST-cook
  'the food that Juma cooked'

(28)   Swahili

    a.   **chakula a-li-cho-pika**   **Juma**
        7.food   1.SM-PAST-7.REL-cook   1.Juma
    b.   **chakula a-pika-cho**   **Juma**
        7.food   1.SM-cook-7.REL   1.Juma
        'the food that Juma cooked'

In all these strategies there is still a subject agreement prefix on the verb, even if the relative marker is also expressed as a prefix. In the Swahili example in (28) the relative marker -**cho**- is present on the verb, but also the subject marker **a**-. The relative strategy used in Makhuwa, on the other hand, does not show any subject agreement prefix and is special in this respect. In example (9), partly modified and represented below as (29), it is clear that the prefix on the verb can only be in the same class as the head noun, and it cannot agree with the subject. Thus, the prefix on the relative -**tekale** in (29) is in class 9, like the head noun. It cannot be in class 1, like the subject. A combination of a relative and a subject prefix as in Shona is also ungrammatical (29b), and no separate relative marker or complementiser has been observed in the language. It can thus be concluded that Makhuwa does not have a proper subject agreement prefix in the non-subject relative.

(29)   a.   **e-núpá e-tek-ale**   **Hasáání (yuulupále)**
        9-house   9-build-PERF.REL   1.Hasan   (9.big.PL)
        'The house that Hasan has built (is big).'
    b.   ***enúpá (y)-o-tek-ale**   **Hasáani**
        9.house   (9)-1-build-PERF.REL   1.Hasan
        int: 'the house that Hasan has built'
    c.   **Hasáání o-tek-alé**   **e-nupá**
        1.Hasan   1-build-PERF.CJ   9-house
        'Hasan has built a house.'

The absence of a regular subject agreement and the fact that the subject pronoun in relatives is identical to the possessive pronoun suggest that the relative clause in Makhuwa is not a completely verbal structure. It is verbal enough to have objects, an object marker on the verb, negation and tense, but the expression of its subject must be as in a nominal phrase. Katupha (1983:121) also notes in his description of Makhuwa-Esaaka "that both the infinitive and the relative are nomino-verbals (i.e. they are nouns which may undergo verbal processes)".
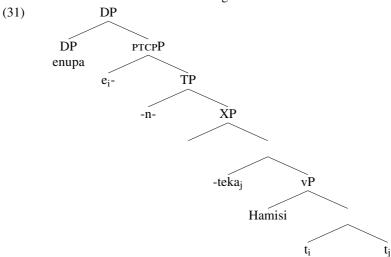
3.2. *Participial modifier*

The basic hypothesis considered in this paper is that non-subject relative clauses in Makhuwa-Enahara are (to some extent) nominalised. Analogous to analyses of tensed non-subject relative clauses in Turkish (Underhill 1972, Kornfilt 2000) and Arabic (Haidou 2001), which also express the subject as a possessive, I propose to analyse Makhuwa relative clauses as participial modifiers. In this section some basic assumptions of generative syntax are given first. Then the analysis of participial modifiers of Reintges and Doron (2008) is presented and applied to the Makhuwa data, after which the nature of the agreement with the head noun and the agreement with the subject are examined.

In generative grammar a syntactic derivation takes lexical units and merges them to form a constituent (for example, verb and object can form a predicate). This constituent is again merged with a new lexical unit to form a new constituent, etc. In this way a binary tree is built up, which contains several (lexical or functional) nodes. The derivation is similar in the verbal and nominal domains: first is the lexical part and then follows the functional part. One starts out with a verb phrase (VP) containing the verb and its arguments, which is extended by inflection in a tense phrase (TP); or alternatively with a noun phrase (NP) which develops to a determiner phrase (DP), including a numeral or possessive projection, for example. For specific purposes, specific nodes may be merged in the functional domain of the sentence, such as a node for subject agreement (AgrSP), or a participial node. A lexical unit that is already merged in the derivation can be copied to the specifier of a projection higher in the tree if it is attracted there. In a tree structure, this movement is indicated by a trace (t) in the original position and indices in the original and the new position of the element.

Reintges and Doron (2008) argue that a participial modifier consists of a nominalising participial node (PTCP) under which a verbal structure is embedded. This accounts for the nominal properties and distribution of participials. They subdivide participial modifiers into three types on the basis of their complexity: lexical, phrasal and clausal modifiers. Lexical modifiers do not have more verbal structure than a VP. Since Makhuwa relative modifiers do have inflection, they could only be of the phrasal or clausal type. What distinguishes clausal modifiers from phrasal participial modifiers, they explain, "is therefore the presence of a subject within this VP" (Reintges and Doron 2008: 5). The clausal modifier allows for subject agreement, but the phrasal modifier does not. It has been demonstrated in the previous section that Makhuwa non-subject relative clauses do not have the regular subject agreement, and hence I conclude that they can only be analysed as phrasal participial modifiers in this theory.

   The syntactic configuration of the phrasal participial modifier is shown in
(31). The head noun is in a DP, to which a PTCPP is adjoined. A pronoun in the
same noun class is moved from inside the verb phrase to PTCPP (**e-**). Under this
PTCP node the verb with its TAM-marking is embedded (-**nteka**), with the verb
moving to a position just above vP (but not to T; see among others Julien 2002,
Buell 2006), and the subject residing in the specifier of vP (**Hamisi**).

(30) **enúpá   e-n-téká   Hamísi**
      9.house   9-PRES-build.REL   1.Hamisi
      'the house that Hamisi is building'

(31)

3.3.   The "agreement" with the head noun as a pronoun

Reintges and Doron (2008: 22) observe that "the participle enters into two
kinds of feature-matching relations, viz. *concord* with the modifier and *agree-
ment* with its own subject". Only those languages that have a way of resolving
agreement mismatches allow relativisation of positions other than the subject
of participial modifiers. Given the present proposal that Makhuwa is such a
language, how does Makhuwa solve this agreement "mismatch"? My sugges-
tion is that the agreement between the head noun and the participle is not ac-
tual grammatical agreement. Rather, the prefix on the participle is a pronoun,[8]
which refers to the same referent as the head noun and hence is in the same
noun class as the head noun.

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8. Whether the prefix itself is the pronoun, or the prefix agrees with a silent pro is unimportant
   for the current analysis.

As such, the participial modifier is a more or less independent entity, which resembles a headless relative, comparable to 'the house – what Hamisi built'. This is indeed what one would expect given the proposed adjunction structure. Three further predictions can be made, which are all borne out. First, the difference between (what is translated as) a headless and a headed relative should be only the presence of the head; there should not be any extra marking in the headless relative. Indeed, in the pseudocleft in (32b) the participle is identical to the participle in the headed relative in (32a), with a pronominal prefix in the class of the referent of the (implied) head noun (class 1 in this example). For (33) one could argue either that the pronoun on the participle takes a default class 9, or that the head noun **étthu** 'thing' (class 9) is omitted.

(32) a. **mwalákhú o-ni-ḿ-phéel-áawe**   **Hacíra**
        1.chicken   1-PRES-1.OM-want.REL-POSS.1 1.Azira
        'the chicken that Azira wants'

    b. **o-ni-ḿ-phéel-áawe**   **Hacíra (mwalakhú)**
        1-PRES-1.OM-want.REL-POSS.1 1.Azira 1.chicken.PL
        'What Azira wants (is a chicken).'

(33) **(o-kí-váh-é)**   **e-n-tthún-áú**   **ophwánya**
     (2SG-1SG-give-OPT) 9-PRES-want.REL-POSS.2SG 15.find
     '(Give me) what you will find.'

Second, I have not found any morphological and/or prosodic marking of the distinction between a restrictive and non-restrictive/appositive relative clause in Makhuwa, which makes sense if the relative is indeed a participial modifier.

Third, the participial relative can be used as a non-verbal predicate. This construction at first sight looks like a type of cleft (as in the first translation in (34)). In fact, it is more insightful to analyse it as a copular clause, in which the post-copular part consists of the participial relative (as in the second translation). Thus, in (34) **eshapéú** 'hat' is the referential expression and the participle **enthumakaawe** 'what he bought' is the predicative part of the copular clause. The two are combined by the copula **ti**. A similar analysis holds for (35).

(34) **eshapéú t' í-ń-thum-ak-ááwé**
     9.hat   COP 9-PRES-buy-DUR.REL-POSS.1
     'It is a/the hat that he bought.' OR 'A/the hat is what he bought.'

(35) **íy' éhópá tthaarú tí tsí-low-aly-áaka**[9]
     10.DEM 10.fish 10.three COP 10-fish-PERF.REL-POSS.1SG
     'These three fish are what I caught.'

---

9. It seems to be possible to leave out/reduce or change the class prefix, as in (i). This might be

If the prefix on the relative verb is indeed a pronoun, it cannot be the case that the object marker (OM), which refers to the same object as the prefix, is also pronominal. I propose to analyse the OM as a grammatical agreement marker in Makhuwa, and the prefix on the participle as a pronoun. In fact, there are strong arguments to claim that the OM in Makhuwa is a grammatical agreement marker. As mentioned above in Section 2.3, object markers only exist for classes 1 and 2 (including 1st and 2nd person), and the presence of an OM is obligatory when the object is in one of these classes. If the OM and the object are in the same phrase, the OM must be analysed as agreement, since a pronoun and its antecedent cannot be in the same domain (according to principle B in Binding Theory). That the OM and the object are allowed in the same phrase in Makhuwa can be seen in sentences with a CJ verb form (36), where the object is never dislocated (Buell 2006), such as (36).

(36)   **ki-ni-ḿ-phéélá   mwalakhú**
         1SG-PRES.CJ-1.OM-want   1.chicken
         'I want chicken.'

In summary, an analysis of the prefix "agreeing" with the head noun as a pronoun explains the relative independence of the participial relative in (what are translated as) headless relatives, pseudoclefts and copular constructions, as well as the absence of a visible difference between restrictive and appositive relatives in Makhuwa.

3.4.   *The "agreement" with the subject as genitive case checking*

In the verbal structure under the participle there is no AgrS node for the familiar (preverbal) subject agreement. This implies that the subject does not Agree or Move or have its case checked, and that it consequently remains in situ. The grammatical case can now only be checked by the participle. Since the participle is in essence nominal, these nominal features can only check genitive case on the subject. This is why the pronominal subject is spelled out as the possessive pronoun. In the same way, the subject of an infinitive (which is essentially also nominal) is the possessor, as illustrated in (37).

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due to a change in the pronoun to have default reference in class 9. In that case the underlying form could be **ti elowalyaaka** 'is what-I-caught'.

(i)   **íy'   éhópá   tthaarú   tí-lów-aly-áaka**
       10.DEM   10.fish   10.three   COP?-fish-PERF.REL-POSS.1SG
       'These three fish are what I caught'

(37) a. **ocáwá w-a   Folóra**
          15.run   15-CONN   1.Flora
          'the running of Flora'

      b. **Folórá ocáwá w-awe**
          1.Flora 15.run 15-POSS.1
          'Flora's running / Flora her running'

An important point in this analysis is that the possessive suffix is not agreement, but an XP, occupying the same position as the full noun when no possessive suffix is present (as in (9a), presumably specvP). Just as the possessor in a simple possessive construction does not precede the possessee, the genitive subject does not precede the participle. There is another indication that the possessive suffix in a sentence with a pronominal subject occupies the same position as the lexical subject when the subject is not pronominal: the full nominal subject (without a possessive subject suffix on the verb) cannot precede the participle, since there is no landing site for it: the specifier of PTCPP is already occupied by the pronominal prefix agreeing with the head noun. This is illustrated in (38): in (38a) the subject **Hasáání** occurs after the participle, but in (38b) it precedes the participle and the example is ungrammatical.

(38) a. **e-núpá e-tek-ale   Hasáání (yuulupále)**
          9-house 9-build-PERF.REL   1.Hasan (9.big.PL)
          'The house that Hasan has built (is big).'

      b. * **e-núpá Hasáání e-tek-ale   (yuulupále)**
             9-house 1.Hasan 9-build-PERF.REL   (9.big.PL)
             int: 'The house that Hasan has built (is big).'

As was shown above in (15), a lexical subject can in fact precede the participle, but only when it is an adjoined topic, and the syntactic function of (possessive) subject is fulfilled by a pronoun. This adjoined "subject" has more freedom in position than the syntactic (possessive) subject, which must always follow the relative participle. That the lexical subject is probably a topic and adjunct is also supported by the impossibility of an indefinite and non-specific reading of this subject, as shown in (39). The lexical subject **ńtthu** 'person' can in other environments have the interpretation 'someone', 'anyone', or negative 'no-one'. This reading is unavailable here; instead, the interpretation is generic, as illustrated by the remark of an informant: "maybe it was eaten by the cat".

(39) **eshímá e-hi-ca-ály-ááwé   ńtthu**
       9.shima 9-NEG-eat-PERF.REL-POSS.1 1.person
       'the shima that a person didn't eat'

3.5.   *No passive participle*

In order to provide a more complete picture of the language and the use of a participle, and to avoid misunderstandings, it must be noted that Makhuwa does not have a passive participle. A passive sentence in Makhuwa is formed by adding a passive extension to the verb. The derived passive verb functions as any other verb (with its own argument structure) and can also occur as a relative participle in exactly the same way. In (40) the recipient (the possessive -**ááwé** of **Coáná**) is the subject of the passive verb, and the theme (**ekhatérá** 'chair') is the head noun.

(40)   **ekhatérá   e-vah-iy-ááwé   Coáná   n'   aAlí   (ti**
       9.chair   9-give.perf-pass.rel-poss.1   1.Joanna   by   1.Ali   (cop
       yoóréera)
       9.good)
       'The chair that Joanna was given by Ali (is good).'

3.6.   *Long distance*

An analysis of the non-subject relative as a participial modifier makes the correct predictions with respect to long distance relativisation. Only the highest clause should be affected by the participle, which is indeed the case: only the subject of the higher verb appears as a possessive pronoun. In (41) the 2nd person singular subject occurs as the possessive suffix -**áó** only on the higher verb (**ehimyale**), not on the lower verb (**omvahalé**). Since the lower clause is essentially not affected by the formation of the relative participle, it has all the possibilities a normal clause has, and the verb is not restricted to the conjugations of the relative. The lower clause can, for example, be a copular clause (43), or contain a verb in the habitual conjugation (marked by the prefix -**ńní**- in (44)). The last example also shows that subject and object long distance relatives are formed in the same way.

(41)   **eshiíkírá   e-himy-aly-áó   wiírá   o-m-vah-alé**
       9.cup   9-say-perf.rel-poss.2sg   comp   2sg-1-give-perf.cj
       Atííca
       1.Hadija
       'the cup that you said you gave to Hadija'

(42)   **anélá   o-himy-aly-áawe   Alí   wiírá   ashínámwané**
       1.ring   1-say-perf.rel-poss.1   1.Ali   comp   2.children
       y-aahí-ḿ-weha
       2-past.perf.-1-see
       'the ring of which Ali said that the children had seen it'

(43) **emeétsá e-n-uúpúwel-áawe   Shorshíná wiírá Alí   t'**
9.table   9-PRES-think.REL-POSS.1 1.Georgina COMP 2.Ali COP
á-pák-ale
2-make-PERF.REL
'the table of which Georgina thought that it is Ali who made it'

(44) **ki-náá-wéhá   ekanétá e-himy-aly-ááwé   Luísá   wiírá**
1SG-PRES.DJ-see 9.pen   9-say-PERF.REL-POSS.1 1.Luisa COMP
e-ńní-lépá   saána
9-HAB-write   well
'I see the pen that Luisa says writes well.'

In this section I have shown that the non-subject relative clause in Makhuwa can be analysed as a phrasal participial modifier. Since there is no canonical subject agreement on the verb, it cannot be a clausal participial modifier. Instead, the subject in this verbo-nominal structure is assigned genitive case by the phrasal participle, and hence it occurs as a possessive when it is pronominal. The prefix on the participle, which is in the same class as the head noun, is analysed as a pronoun, making the participial modifier an independent element. This analysis accounts for the form and use of the headless relative, and the long distance relative construction as well. In the next section three alternatives to this analysis are examined.

4.   Alternative analyses

There are three other possible analyses of the non-subject relative in Makhuwa, all of which encounter some major problems in explaining the appearance of the subject as a possessive pronoun and the absence of regular subject agreement or a relative complementiser. The structures that are assumed for the relative clause in these analyses trigger predictions that do not hold.

4.1.   Standard relative clause

First, and most obviously, the Makhuwa non-subject relative could alternatively be analysed as an ordinary relative clause in which a DP takes a CP complement or adjunct. The various analyses on this track (see de Vries (2002) and Salzmann's (2006) discussion of the Head External Analysis (HEA), the Head Raising Analysis (HRA) and the Matching Analysis) could view the agreement with the head noun as a relative marker/pronoun, and the postverbal possessive subject clitic as a strong pronoun.

Regardless of the position and origin of the head noun (internal, as in the HRA, or external as in the HEA), these analyses all have a complete inflected

sentence in the relative clause. What is of relevance to us here is that this includes having an AgrS node, which makes two predictions: first, the subject should move to specAgrS and second, there should be normal subject agreement, expressed by means of a prefix. Yet, Makhuwa expresses its subject *after* the verb in relative clauses,[10] and there is no regular subject agreement on the verb. With respect to the first prediction: subject inversion is also observed in other Bantu languages and has been explained in various ways, for which see Demuth and Harford (1999), Henderson (2006) and Simango (2006). This objection could thus be overcome. With respect to the second prediction, though: the presence of an AgrS-node in these analyses is incompatible with the absence of subject agreement in Makhuwa. All the languages treated in the previously mentioned literature on Bantu relatives indeed have subject inversion, but they still have a subject prefix on the verb.

Furthermore, the pronominal subject in a relative clause is not expressed as a normal strong (personal) pronoun, but as a possessive. As shown in Section 2.2 (ex. (14)), these pronouns are unmistakably different. In an analysis where the subject is still licensed by T, the possessive appearance of the subject is unpredicted and remains unexplained.

4.2. Connective strategy

Another possibility is to analyse the non-subject relative as a connective construction (alternatively called a linker or associative), as in Cheng (2006). Cheng examines two relativising strategies in Bantu languages, which she calls the D(emonstrative)-strategy and the P(ossessive)-strategy. The P-strategy makes use of the connective construction, which is a basic construction to express a possessive relation, as in (45). There is agreement with the possessed on the connective morpheme -**a**, and the possessor follows the connective.

(45)   Makhuwa
       mivéló   ts-a   namárókolo
       4.brooms   4-CONN   1.hare
       '(the) brooms of Hare'

Non-subject relativisation by means of the P-strategy in other Bantu languages is in the same way marked by agreement/concord and the connective -**a**, which is then followed by the relative clause, as illustrated in (27), repeated here as (46).
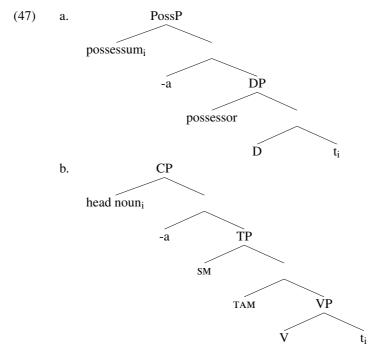
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10. The preverbal lexical subject in examples like (15) is analysed as a topical adjunct; the syntactic subject is the possessive pronoun in these cases.

(46)   Shona (Demuth and Harford 1999)
       mbatya   dz-a-v-aka-son-era   vakadzi   mwenga
       10.clothes   10-CONN-2SM-T-sew-APPL   2.women   1.bride
       'the clothes that the women sewed for the bride'

The tree structure of the P-strategy is as in (47b); (47a) represents the pos-
sessive counterpart of the relative. The connective -**a** is in C°, agreeing with the
head noun in its specifier and taking a TP as its complement. This TP consists
of the subject marker, TAM markers and the verb stem.

(47)   a.   PossP

              possessum$_i$

                               -a   DP

                                  possessor

                                                  D   t$_i$

       b.   CP

              head noun$_i$

                               -a   TP

                                  SM

                                       TAM   VP

                                                V   t$_i$

Again, there is a TP node (including a subject marker) in this analysis, and
there is indeed subject agreement in the languages Cheng describes. However,
in Makhuwa there is no subject prefix on the relative verb. In this form the
analysis would face the same problems as the analysis discussed in 4.1.

   However, in a slightly adapted form, it might still work. Suppose that the
complement of the connective is not a TP, but a nominal(ised) element, such
as a participle. Then there would not necessarily be a problem with the subject
agreement, and the relatives in (48) and (49) might be analysed as structure
with an agreeing connective taking a participle as its complement (the partici-
ples being -**lowalyaaka**, and -**pankalyaawe** in these examples). The relative
modifier would then actually pattern like other modifiers in the language that

use the connective, such as the possessive in (45) above, ordinal numerals (50), and adjectival concepts, as in (51) and (52). In all these uses the connective takes a nominal complement: the possessor in (45); the cardinal numeral (nominalised by the derivational morpheme **na**-) in (50b); the property-indicating noun **khálái** 'old times' in (51); and the infinitive **orekama** 'to be tall' in (52).

(48)   **ehópá   tsi-low-aly-áaka**
      10.fish   10-fish-PERF.REL-POSS.1SG
      'the fish that I caught'

(49)   **o-nú-mwííyá   niíkhó   ni-pank-aly-áawe**
      1-PERF.PERS-steal   5.spoon   5-make-PERF.REL-POSS.1
      'She stole the spoon that he made.'

(50)   a.   **nikhúlé   ni-rarú**
          5.mouse   5-three
          'three mice'
      b.   **nikhúlé   n-a   neéráru**
          5.mouse   5-CONN   *na*.three
          'third mouse'

(51)   **ehantísí   ts-a   khálái**
      10.stories   10-CONN   past.times
      'old stories'

(52)   **nthálí   w'   oórékama**
      3.tree   3.CONN   15.be.tall
      'a tall tree'

Crucially though, and unlike the languages Cheng applies her analysis to, there is no connective -**a** visible in Makhuwa relatives. We would expect examples such as (48) and (49) to use the -**a-**, and look like (48′) and (49′) in order to pattern with the modifiers in (45)–(52), and with the example of the relative in (46), which is not the case.

(48′)   **ehópá   ts-<u>a</u>-low-aly-áaka*
        10.fish   10-CONN-fish-PERF.REL-POSS.1SG

(49′)   **o-nú-mwííyá   niíkhó   n-<u>a</u>-pank-aly-áawe*
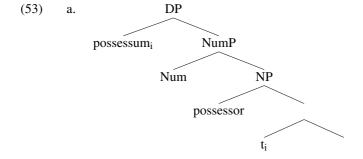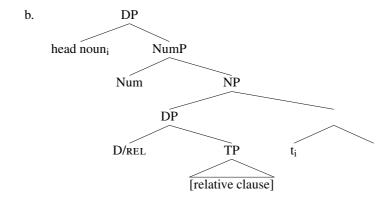   1-PERF.PERS-steal   5.spoon   5-CONN-make-PERF.REL-POSS.1

Thus, the connective strategy would have to use a nominal(ised) structure anyway, and there is no morphological evidence that the relative has a connective construction in addition to it.

4.3. DP relative clause

The third alternative analysis discussed here also assumes a nominalised structure. Ouhalla (2004), in his analysis of Semitic relatives, states that the relative clause in some languages is not a CP, but a DP. There are two parameters on which these languages differ: first, the relative DP can occupy specNumP or specNP within a higher DP, and second, the relative clause can be nominalised internally or externally (or maybe even both). Internal nominalisation involves the replacement of T/AgrS (which assigns nominative case) with Num (which is specified for genitive case only). This correctly predicts the absence of subject agreement in Makhuwa and furthermore accounts for the possessive/genitive form of the subject; much like the participial analysis.

With respect to the first parameter, the position of the relative DP inside the DP of the head noun, there are two alternatives: specNumP and specNP, as mentioned above. The position depends on the structural analysis of the possessive and relative clauses. Ouhalla (2004) concludes that the relative DPs must have the same structural analysis as their possessive counterparts, which can be either construct state or free state. The structure of the possessive (be it construct or free) is extended to relative NPs by insertion of the relative DP in the position of the possessor. Since Makhuwa uses a possessive or connective morpheme in the possessive, this NP can only be analysed as a free state construction. Consequently, the possessor or the relative DP is assumed to occupy the lower position, specNP. Both constructions, possessive and relative, are shown in (53).

(53)   a.

b.

```
                        DP
              ┌─────────┴─────────┐
          head noun_i           NumP
                          ┌───────┴───────┐
                        Num               NP
                                  ┌────────┴────────┐
                                 DP                 t_i
                          ┌──────┴──────┐
                       D/REL           TP
                                ┌───────┴───────┐
                                [relative clause]
```

However, as shown for Cheng's analysis, the Num or Poss is not spelled out in the Makhuwa relative clause, a fact that does not support this alternative. Another crucial fact in Ouhalla's analysis is that the Semitic relative DPs use a determiner as the relative complementiser. There is no indication for the presence of a determiner in Makhuwa at all, which makes Ouhalla's analysis unnecessarily complicated for Makhuwa. Other questions concern the agreement with the head noun in Makhuwa and the form of the headless relative, for which the analysis does not make clear predictions. On the basis of these complications, I conclude that this third alternative, although promising, is still less attractive than the analysis as a participial modifier.

In summary, the three alternative analyses of the Makhuwa non-subject relative are all less explanatory and less economical than the analysis proposed in this paper, which claims that it is a participial modifier.

5.   Summary and conclusion

In the first part of this paper I described the formal properties of subject and non-subject relatives in Makhuwa. Special characteristics are the prefix on the relative verb, which is in the same class as the head noun, the absence of regular subject agreement, and the expression of the subject as a possessive pronoun in the non-subject relative. These properties are accounted for in an analysis of the Makhuwa non-subject relative as a participial modifier in the way Reintges and Doron (2008) propose for other languages. Additional evidence for this analysis comes from the formation of (what is translated as) the headless relative clause, the copular construction and the long-distance relative.

Three alternative analyses, whether they assume a verbal (Head External, Head Raising or Matching analysis) or nominal structure (Cheng 2006, Ouhalla 2004), incorrectly predict the presence of regular subject agreement, a connective morpheme or a complementiser. In addition, the structure proposed is often

more complicated than that of a participial modifier. These alternatives are less appropriate for the Makhuwa data than an analysis as a participial modifier.

Although this analysis offers an attractive account of the non-subject relative in Makhuwa, I would like to mention two remaining issues here. One is the structural analysis of the subject relative. Should the subject relative receive the same structural analysis as the non-subject relative, i.e., as a participial modifier? The subject agreement on the relative verb in the subject relative suggest that it is not a participle, since it is the same as the agreement on a non-relative verb: the prefix in the subject relative in (54) is **ni**-, just as in the non-relative form **ni-mvara** in (19b), repeated here as (55). The prefix in the object-relative (**o**-) is presumably the pronominal prefix, whereas the subject marker on the subject relative is the verbal prefix (Meeussen 1967).

(54) **hí̵**   **<u>ni</u>-thipel-ale**   **ntsúrúkhú** **noo-thaácíri**
      1PL.PRO 1PL-bury-PERF.REL 3.money   1PL.PERF.DJ-become.rich
      'We who have buried the money are rich.'

(55) **híyáánó** **o-ni-thall-aly-ááwe**   **Coáná**
      1PL.PRO   1-1PL.OM-choose-PERF.REL-POSS.1   1.Joanna

      <u>ni</u>-m-várá   **ntekó** **ni**   **yéna**
      1PL-PRES.CJ-do   3.work   with 1.PRO
      'We, who Joanna has chosen, are working with her.'

In favour of an analysis as a participle is the relative independence of the subject relative. There is no extra morphology in the headless relative, as can be seen in (56): the subject relative headed by **ńtthú** 'person' in (56a) is formally identical to the headless relative in (56b). The headless subject relative can also be used in the copular construction mentioned in Section 3.2.1: the referential expression is **nlópwáná** 'man' in (57), and the headless relative **(o)-mwáana evaáso** 'who carries the vase' is the predicative part of the copular construction.

(56) a. **ki-nú-ń-rúmá**   **ńtthú**   **o-n-thíkílá**   **mitháli**
          1SG-PRES.PERS-1-send 1.person 1-PRES-cut.REL 4.trees
          'I have sent for a person to cut trees.'

      b. **o-n-thíkíla**   **mithálí** **o-n-khúm-ák'**   **onakhála**
          1-PRES-cut.REL 4.trees   1-PRES.CJ-come.out-DUR 17.Nacala
          'The one cutting trees comes from Nacala.'

(57) **nlópwáná** **t'**   **ímwáa-n'**   **evaáso**
      1.man   COP 1.PRES-come-with 9.vase
      'The man is the one carrying the vase.'

The other issue concerns the typology. Apparently there is more variation in the structure of Bantu relative clauses than has been assumed so far. The

questions for further research extend in two directions. First: are there other Bantu languages that have a relative that can be analysed as a participial modifier? Second: are there other similarities between Makhuwa and the languages Reintges and Doron analyse? Answers to these questions will help us get a more complete picture of the Bantu language family and of the cross-linguistic possibilities for the formation of relative clauses.

Leiden University Centre for Linguistics
jennekevanderwal@gmail.com

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