

# THE SYNTAX OF THE SETSWANA NOUN PHRASE

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## Abstract

This paper describes the structure of the Noun Phrase in Setswana, and specifically addresses the following questions: a) In what ways can the Setswana noun be modified? b) How are constituents within the Noun Phrase (NP) ordered relative to the head noun? c) What is the role of the morphemes that surface after the head noun in NPs modified by possessives, quantifiers and adjectives discussed in this paper? d) What is the structure of the Setswana Noun Phrase? With regards to question (a) we observed that the Setswana NP can be modified by demonstratives, possessives, quantifiers, adjectives and relative clauses and that the morphological form of the modifiers such as the first four is determined by the class of the modified noun. In addition, the formation of modifiers such as possessives, quantifiers, adjectives and relative clauses involves the use of a first positional demonstrative-like morpheme. In answer to questions (b) and (c), we observed that in each of the NPs discussed in this paper, the head noun occurs phrase initially and is immediately followed by the demonstrative-like morpheme which we concluded is a relative marker. This demonstrative-like marker is similar in form to what Cole (1955) refers to as the first positional demonstrative. We further observed that the structure of NPs modified by possessives, quantifiers and adjectives resembles the structure of NPs modified by relative clauses in Setswana with the exception that the predicate in these NPs does not have the relative suffix *-ng* found in pure relative clauses. We thus propose that Setswana NPs modified by possessives, quantifiers and adjectives are relativized NPs, albeit reduced ones. We proposed a structure of the Setswana NP in which the relative marker is the head of the Complementizer Phrase (CP) and the Inflectional head takes a Predicate Phrase instead of Verb Phrase to accommodate what we referred to in this paper as reduced relatives.

**Keywords:** relative clause, modifiers, demonstratives, morphological form, head noun

## 1. Introduction

Setswana is the national language of Botswana. It is however spoken in other southern African countries such as South Africa, Zimbabwe and Namibia. In Botswana, it is accorded official status alongside English although the reality of the situation is that it

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is overshadowed by English with regard to its use as an official language. In terms of contemporary linguistics, this language has received a fair amount of coverage in the literature compared to other local languages spoken in the country. However, aspects of this language remain un-researched, particularly in the area of syntax. For example, although some work has been done on relativization in Setswana, there is no contemporary analysis of the Setswana Noun Phrase. This paper therefore aims to fill this gap in the descriptive literature of Setswana. The aim of this paper is to describe the structure of the Noun Phrase in Setswana. To do this, the paper specifically addresses the following questions: a) In what ways can the Setswana noun be modified? b) How are constituents within the Noun Phrase ordered relative to the head noun? c) What is the role of the morphemes that surface after the head noun in Noun Phrases modified by possessives, quantifiers and adjectives discussed in this paper? d) What is the structure of the Setswana Noun Phrase?

## **2. Background information on Setswana**

### *2.1. The noun class system*

Setswana (S.31a) belongs to the Sotho group of the south-eastern zone of Bantu languages (Guthrie, 1967 -71 Vol. 4:62). Pivotal to the grammar of Setswana as is the case in other Bantu languages (Ikalanga, see Letsholo, 2002; Chichewa, see Mchombo 2004) is the noun class system. A noun in Setswana is made up of the noun prefix plus a stem. For example, the prefix of class 1 is *mo-*. Therefore many nouns that belong to this class are prefixed with *mo-*.

Setswana has 18 noun classes each of which has its own prefix. Some of these classes have singular-marking prefixes while others have plural-marking prefixes. For example, class 1a is the singular form of class 2a while class 3 is the singular form of class 4 as shown in Table 1.

Table 1. Noun class prefixes and their agreement markers

Class	Class prefix	Subject agreement	Object agreement	Example	Gloss
1.	mo-	o-	m-	monna	'man'
1a.	-	o-	m-	malome	'uncle'
2.	ba-	ba-	ba-	ba-nna	'men'
2a.	bo-	ba-	ba-	bo-malome	'uncles'
3.	mo-	o-	o-	mo-sese	'dress'
4.	me-	e-	e-	me-sese	'dresses'
5.	le-	le-	le-	le-gapu	'watermelon'
6.	ma-	a-	a-	ma-gapu	'watermelons'
7.	se-	se-	se-	se-lepe	'axe'
8.	di-	di-	di-	di-lepe	'axes'
9.	N-	e-	e-	ntsa	'dog'
10.	diN	di-	di-	dintsa	'dogs'
11.	lo-	lo-	lo-	lobelo	'speed'
14.	bo-	bo-	bo-	bofofu	'blindness'
15.	go-	go-	-	go ja	'to eat'
16.	fa-	go-	-	fa pele	'in front of'
17.	go-	go-	go-	godimo	'on top of'
18.	mo-	go-	go-	motlhang	'in the event that'

The noun class determines the verbal agreement in this language as well as the agreement on the noun modifiers as we shall see later. Let us first consider verbal agreement in (1)<sup>1</sup>

- (1a). Moóná      ó-      rémá sétlhare.  
 1. man 1.SM- cut    7.tree  
 'A/the man is cutting a tree.'

<sup>1</sup> Abbreviations: 1,2 N = noun class marker, Cop. = copulative, Disj.= disjoint, GEN. = Genitive, SM = subject marker, REL. = relative marker, OM = object marker, PRS = Present Tense, PST = Past Tense, PASS = Passive, PRF. = Perfective, dist.=distal demonstrative, prox.=proximal demonstrative, TAM = time aspect marker

- (1b). Baǎná bá- rémá sétlhare.  
 2. man 2.SM- cut 7.tree  
 '(The) Men are cutting a tree.'
- (1c). \*Moǎná bá- rémá sétlhare.  
 1. man 1.SM- cut 7.tree
- (1d). \*Moǎná rémá sétlhare.  
 1. man cut 7.tree

In (1a), the Noun Phrase *moǎná* 'man' belongs to class 1 and the subject agreement marker for class 1 nouns is *ó-* while in (1b) the noun phrase *baǎná* belongs to class 2 and the subject agreement marker for this class is *bá-*. Example (1c) is ungrammatical because one of the features of the Noun Phrase *moǎná* 'man', namely number, conflicts with the number feature of the verbal agreement, namely *bá-*, which is marked for plurality whereas the noun *moǎná* is marked for singular. Example (1d) is ungrammatical because the subject agreement morpheme has been omitted. This sentence is grammatical only as an imperative, and the resulting meaning would be 'You man, cut the tree!' Thus, subject agreement markers are obligatory in many Bantu languages (Creissels, 2004 for Setswana; Mchombo, 2004 for Chichewa; Letsholo, 2004 for Ikalanga). With this background in mind, we now address modification in the Setswana noun phrase.

### 3. Modification and constituent order in the Setswana noun phrase

#### 3.1 *The definite and indefinite articles in Setswana*

Setswana, like other Bantu languages such as Ikalanga (Letsholo, 2004; Mchombo, 2004), has no definite article 'the', neither does it have the indefinite articles 'a' or 'an'. The kind of definiteness that is expressed by the article 'the' in English is context-dependent in Setswana. Consider example (2).

- (2a). Ke- bónyé mosádí á- págám-é sétlhare.  
 I- see-PST 1.woman 1.SM-climb-PRF tree  
 'I saw a woman climbing a tree'.
- (2bb). (Mosádí) wá teńg ó- ne- á -léla.  
 1. woman 1.SM one 1.SM- PST- 1.SM -cry  
 'The woman was crying.'

In example (2), there is really no equivalent for the English language determiner 'the'. To express definiteness in the second part of the sentence, one can either use the expression '*wá teńg*' 'the one' or simply use the subject agreement *ó-*. For a native speaker, once the antecedent *mosáđi* has been mentioned previously, second mention can be achieved through the use of *ó*.

### 3.2 *The use of demonstratives to express definiteness in Setswana*

Although Setswana does not have the definite and indefinite articles, it nevertheless makes use of demonstratives to express definiteness. The formation of demonstratives in Setswana is determined by the class that the noun belongs to. In fact, as we shall see in the discussion below, noun classes play an important role in the grammar of Setswana in that they determine the morphology of noun modifiers. In Setswana, as well as in other Bantu languages such as Swahili (Mohammed, 2001), Kikuyu (Mugane, 1995), and Ikalanga Letsholo (2006), each modifier associated with the noun, e.g. adjectives, demonstratives, and quantifiers, takes agreement morphology associated with the noun they modify. Example (3) illustrates.

(3a). Setlhakó                      sé                      se-              a-              m-póláya.  
7.shoe                      7.this -prox              7.SM              TAM              1.OM-hurt  
'This shoe hurts me'.

(3b). Magápu              á                      á-                      bód-íle.  
6.watermelon 6.these prox              6.SM                      rot-PRF.  
'These watermelons are rotten.'

(4a). Setlhakó                      sé-lé                      se-              a-              m-póláya.  
7.shoe                      7.that -dist.              7.SM-              TAM-              1.OM-hurt  
'That shoe hurts me'.

(4b). Magápu                      á-lé                      á-                      bód-íle.  
6.watermelon              6 these-dist.              6.SM-                      rot-PRF.  
'Those watermelons are rotten.'

The examples in (3) and (4) above illustrate all four demonstratives 'this', 'that', 'these' and 'those'. As we can see, the morphological shape of each of the demonstratives is determined by the noun class of the noun modified by the demonstrative. In examples (3a) and (4a), the noun *setlhakó* 'shoe' belongs to class 7 (class prefix *Se-*) and the demonstrative takes the form *sé* just as the subject agreement marker which is *se* copying the noun prefix morphology *-s*. In examples (3b) and (4b), the demonstrative copies the shape of the subject agreement marker for class 6. Most of the

demonstratives take the same form as the subject marker with the exception of classes 1, 1a, 8, 10 and 15. Demonstratives by their nature indicate whether something is close to or far from the speaker. Setswana captures the difference between proximal and distal demonstratives through the morpheme – *lé*, that is, a demonstrative that takes the inflection –*le* is distal, while one that is not inflected with –*le* is proximal as seen in the examples in (3). Another point worth noting about Noun Phrases modified by demonstratives is that the demonstrative is followed by an intonation break in Setswana. This intonation break obtains even when there is stylistic inversion as in (5a).

In terms of word order, the canonical constituent order in the Setswana noun phrase is for the head noun to precede its modifiers as in (3) and (4) above. However, stylistic inversion is allowed in the language such that the following are permissible.

- (5a). Sé                    sétlhakó,                    se-                    a-                    mpóláya.  
       7.this                7.shoe                    7.SM-                TAM- hurt  
       'This shoe hurts me'.
- (5b). á                    magápu,                    á-                    bód-íle.  
       6.these              6.watermelon            6.SM                rot-PRF.  
       'These watermelons are rotten.'

The elements that occur before the head noun in these kinds of stylistic inversion are focused. These are *Sé* in (5a) and *á* in (5b) (see Creissels (2003) for a discussion of focalization in Setswana). Table 2 shows Setswana demonstratives for each noun class.



Notice that as observed in the discussion of demonstratives, the form of the possessive determiner is also determined by the class of the head noun as exemplified by *yá-me* (class 9) in (6a) and *sa-gágwé* (class 7) in (6b). Again the modifier follows the head noun just as with demonstratives, with allowance for stylistic inversion. Now let us consider nominal possessives in (7).

- (7a). Tlhóro        y-á                mosádi        é-        phunyég-íle.  
           9.hat         9?.GEN.        1.woman      9.SM. damage-PRF  
           'The woman's hat has a hole'
- (7b). Dikgomó      ts-á                mońna dí-      tim-étse.  
           10.cow         10?.GEN.        1.man            10.SM-lose-PRF  
           'The man's cattle are lost.'

In both the pronominal possessive (6) and the nominal possessive (7), a morpheme *-á* which is different from subject markers can be observed. This morpheme has been analyzed by Cole (1955) as the preposition 'of', inflected with the agreement morpheme of the head noun. While it might be true that this morpheme is a preposition, it is however not true that the 'preposition is inflected with the agreement morpheme of the head noun if agreement refers to subject agreement. In example (7b), for instance, the subject agreement morpheme for class 10—the class to which the noun *dikgomó* belongs—is not *ts-* but *dí-*. If it was agreement that the 'preposition' *-a* attaches to, then the resulting morpheme would be *da-* ( a form which does not exist in Setswana) or *la* since in Setswana if *d-* is followed by [+high] vowels it changes to *l-*. However, Table 2 on Setswana noun class prefixes and demonstratives shows that the morpheme following the possessed noun in (7a&b) takes the form of the demonstrative associated with the head noun. Notice that in the examples in (7), the head noun precedes its modifier as was also observed in examples 3, 4 and 6.

### 3.4 Quantifiers as Noun modifiers

A quantifier is a kind of determiner which denotes quantity. Thus quantifier stems in Setswana include among others *-ntsi* 'many', *-otlhe* 'all', *-ngwe* 'some/every'. Like the noun modifiers discussed above, a quantifier in Setswana is inflected with the prefix of the noun which it modifies. Consider the examples in (8).

- (8a). Dinkú        ts-ótlhé        dí-                bopám-é.  
           10.sheep      10.-all        10.SM-         lean-PRF.  
           'All the sheep are lean'.

- (8b). Bańna bá    ba-ntsí    bá-    nwá    bójalwá  
 2.men 2.?    2.-many    2.SM-    drink    14.alcohol  
 'Many men drink alcohol.'
- (8c). Metse    é    me-ngwe    é-    thúb-ílw-e.  
 4.home    4.?    4.-some    4.SM-    destroy-PASS.-PRF  
 'Some homes have been destroyed.'

It can be observed that each one of the quantifiers above, with the exception of *ts-ótlhé* is inflected with the noun prefix of the noun it modifies. The quantifier in (8a) is inflected with the prefix of the demonstrative of class 10. In addition, the head noun in (8b) and (8c) (except (8a)) is followed by a morpheme which is either a subject marker of the head noun or a demonstrative. The question is, what is the role of this morpheme? We come back to this question later. In terms of word order, as is usual, the head noun precedes the modifier. Again stylistic inversion is allowed as seen in (9).

- (9a). Ts-ótlhé    dínkú, dí-    bopám-é.  
 10.-all    10.sheep    10.SM-lean-PRF.  
 'All the sheep are lean.'
- (9b). Bá    ba-ntsí    bańna ,    bá-    nwá    bójalwá  
 2.?    2.-many    2.men    2.SM-    drink    14.alcohol  
 'Many men drink alcohol.'
- (9c). Bá    ba-ntsí,    bá-    nwá    bójalwá  
 2.?    2.-many    2.SM-    drink    14.alcohol  
 'Many drink alcohol.'
- (9d). é    me-ngwe    metse,    é-    thúb-ílw-e.  
 4.?    4.-some    4.home    4.SM-    destroy-PASS.-PST  
 'Some homes have been destroyed.'

The inversion in (9a) is straightforward since it involves the quantifier *ts-ótlhé* 'all' and the head noun *dínkú* 'sheep' only. (9b) and (9d) involve the morpheme which follows the head noun (*bá* in 9b and *é* in 9d) and this morpheme seems to form a constituent with the modifier (*ba-ntsí* in 9b and *me-ngwe* in 9d) more than it does with the head noun as it cannot be moved with the head noun as attested by the ungrammatical example (10) below. This example is ungrammatical because the morpheme *bá-* has been separated from the quantifier *ba-ntsí*. We discuss this point further in section 5.

- (10). \*Ba-ntsí      bańna      bá      bá-      nwá      bójalwá  
 2.-many      2.men      2.?      2.SM-      drink      14.alcohol  
 'Many men drink alcohol.'

### 3.5 *Adjectives as noun modifiers*

In terms of morphological behaviour, Setswana adjectives can be divided into two: a) adjectives that describe physical attributes and b) adjectives that describe psyche or behavioural attributes. This classification of Setswana adjectives into two groups is also noted in Creissels (2010) who describes the (a) adjectives as traditional adjectives and the (b) adjectives as the new adjectives. Let us first look at adjectives that describe physical attributes in (11).

- (11a). Mosímané      yó      mo-léelé      ó-      rób-etse.  
 1.boy      1.?      1.-tall      1.SM-      sleep-PRF  
 'The tall boy is sleeping.'

- (11b). Mosétsana      yó      mo-kíma      ó-      s-etse.  
 1.girl      1.?      1.-fat      1.SM-      leave-PRF  
 'The fat girl was left'.

In the examples in (11), the head noun is followed by the morpheme *yó*, a morpheme which is morphologically identical with the class 1 demonstrative. Now let us consider NPs modified by behavioural adjectives as in (12).

- (12a). Ngwaná      yó      ó- sétete      ó-      á-      lela.  
 1.child 1.?      1.      ?-brat      1.SM-      TAM.      -cry  
 'The cry-baby child is crying.'

- (12b). Katse      é      e-botlhále      é-      thób-ile  
 9.cat      9.?      9.?-clever      9.SM-      escape-PRF  
 'The clever cat has escaped.'

Just like the head nouns in (11), those in (12) are immediately followed by the morpheme *yó* and *é*. It can be seen that *yó* resembles the morpheme that follows the head noun in example (11). The difference between (11) and (12) is that in (12) there are additional morphemes which take the morphological forms of the subject markers of the classes 1 and 9 respectively. In fact, these morphemes cannot be omitted as doing so would result in ungrammaticality as seen in (13).

(13a). \*Ngwaná yó - sétete ó- á- lela.  
 1.child 1.? -brat 1.SM- TAM.- cry  
 'The cry-baby child is crying.'

(13b). \*Katse é- botlhále é- thób-ile  
 9.cat 9.?- clever 9.SM- escape-PRF  
 'The clever cat has escaped.'

These data raise the question 'What does this morphology tell us about the types of modifiers that these are?' In terms of word order, NPs modified by adjectives are no different from the others discussed above. Before we can attempt to answer the question above, let us first discuss NPs that are modified by relative clauses.

### 3.6 NPs modified by relative clauses

Relative clause formation in Setswana has been discussed in Cole (1955) and in other works that are more recent e.g. Zeller (2004) and Zerbian (2010). This section will therefore not provide an elaborate discussion of relative clauses, also because it is not the main focus of this article. However, the basics of relative clause formation in Setswana will be outlined since that is crucial to the question on the role of the morphemes observed in other noun modifiers in the language. In languages such as English, relative pronouns are question words such as 'who', 'what', 'where', 'which' and the complementiser 'that'. Setswana has question words also, and these include *mang* 'who', *eng* 'what', *-fe* 'which', *kae* 'where', *leng* 'when', and *jang* 'how'. However, these are not used in relativization in the language. Consider the following examples which seek to demonstrate how Setswana forms relative clauses.

(14a). Koko é - é - eláma-ńg ké  
 9.chicken 9.Rel.- 9.SM-REL brood-REL. cop.  
 yá-gá mmé  
 9.SM-GEN 1a.mother  
 'The chicken which is brooding is my mother's.'

(14b). Dikgomó tsé- dí- rékís-ítswé-ng  
 9.cows 9.REL.- 9.SM- sell-PASS-REL.  
 dí tím-étse.  
 9.SM- lose-PST  
 'The cows which were sold are lost.'

- (14c). Mońna yó bo-Néó bá- m-móne-ng  
 1.man 1.REL.- 2a.Neo 2a.SM.- 1.OM- see-REL.  
 ó- a- lwála  
 1.SM-TAM- sick  
 'The man that Neo and others saw is sick'.
- (14d). \*Mońna bo-Néó bá- m-móne-ng  
 1.man 2a.Neo 2a.SM.- 1.OM-see-REL  
 ó- a- lwála.  
 1.SM-TAM- sick  
 'The man that Neo and others saw is sick'.
- (14e). \*Mońna yó bo-Néó bá- m-móne  
 1.man 1.REL.- 2a.Neo 2a.SM.-1.OM -see-  
 ó- a- lwála.  
 1.SM- TAM.-sick  
 'The man that Neo and others saw is sick'.

Examples (14a&b) illustrate subject relatives while example (14c) is an example of an object relative. In all three examples, the head noun of a given noun phrase is immediately followed by a morpheme glossed as 'REL', that is a relative marker. This morpheme is obligatory (Zeller, 2004; Zerbian, 2010), and the omission of this morpheme from a relative clause construction results in ungrammaticality as attested in (14d). The second aspect of relative clause formation in Setswana is that the verb is inflected with the suffix *-ng*, which is also part of the relativization process (Cole, 1955; Zerbian, 2010). The omission of this morpheme results in ungrammaticality as evident from (14e). The third thing to note about relative clause formation is that in subject relatives, the relative marker takes an agreement marker which is morphologically identical to subject markers with the exception of classes (8) and (10). In object relatives, a resumptive pronoun or object marker surfaces following the subject marker of the head noun of the relative clause itself. For example, in (14c) the object marker is *-m-*. In terms of constituent order, the head noun occurs phrase initially and it is followed by the relative clause which is headed by the relative marker. In terms of tone, the relative marker together with the subject marker which follows it carry high tones. The last but quite significant point to note, which is also noted by Cole (1955) and Zerbian (2010), is that Setswana relative markers developed out of demonstratives. Table 3 shows that there is no difference morphologically between demonstratives and relatives. However, although this is the case, there is no intonation break after the relative marker such as in demonstrative modified NPs.

*Table 3. Noun classes, demonstratives and relative markers in Setswana*

Class	Class prefix	DMNSTR	RM
1.	mo-	yo	yo-
1a.	-	yo	yo-
2.	ba-	ba-	ba-
2a.	bo-	ba-	ba-
3.	mo-	o-	o-
4.	me-	e-	e-
5.	le-	le-	le-
6.	ma-	a-	a-
7.	se-	se-	se-
8.	di-	tse-	tse-
9.	N-	e-	e-
10.	diN	tse-	tse-
11.	lo-	lo-	lo-
14.	bo-	jo-/bo-	jo-/bo-
15.	go-	mo-	mo-
16.	fa-	fa-	fa-
17.	go-	mo-	mo-
18.	mo-	-	-

With these facts in mind, we now address the question raised earlier, namely what is the role of the morphemes that surface in the noun modifiers discussed in this paper?

#### **4. The status of the morphemes in noun modifiers**

We have noted that noun modification in Setswana involves the use of the demonstrative in one way or the other; we also noted that what is currently analyzed as relative markers actually evolved from demonstrative pronouns and in fact these two are identical morphologically in Setswana as evident from Table 3. With this background in mind, we now go back to the question that has been coming up in our discussion of NPs modified by possessives, quantifiers and adjectives above, namely what is the role of the demonstrative-like morpheme that follows the head noun in the NPs discussed in this paper? We begin the discussion with NPs modified by adjectives. To do so, we consider example (12), repeated as (15a), which illustrates an NP modified by what we described as behavioural adjectives.

(15a). Ngwaná yó ó - sétete ó- á- lela.  
 1.child 1.? 1.SM- brat 1.SM- TAM.- cry  
 'The cry-baby child is crying.'

*c.f.*

(15b). Mońna yó bo-Néó bá m-móne-ng  
 1.man 1.REL.- 2a.Neo 2a.SM.- 1.OM-see-REL  
 ó- a- lwála.  
 1.SM-TAM. -sick  
 'The man that Neo and others saw is sick'.

Noun Phrases such as the subject noun phrase *Ngwaná yó-ó-sétete* 'the cry-baby child' in Setswana have been referred to by Cole (1955) and Zerbian (2010) as cases of relativization. We endorse this analysis as indeed these do not differ from relative clauses in form and tonology. (15a) type of NPs are different from pure relative clause modified NPs in that in (15a) there is no relative marker *-ng* on what is otherwise functioning as a predicate, namely *setete*. Compare (15a) with 15b where the verb *m-móne-ng* has the relative marker *-ng*. However, the absence of the relative morpheme *-ng* in example (15a) is not an entirely strong point against analyzing it as a relativized NP because Setswana has reduced relatives in which *-ng* is missing as in (15c).

(15c). Re-utlw-ela botlhoko bá-bá kobo  
 1.SM.PL-feel-APPL. pain 2.REL.-2.SM 9.blankets  
 di- khútshwané.  
 10.SM-short  
 'We sympathize with those who are poor.'

Next let us consider type 1 adjective modified NPs which we described as adjectives of physical attributes such as in example (16).

(16). Mosímané yó mo-léelé ó-rób-etse.  
 1.boy 1.? 1.-tall 1.SM-sleep-PRF  
 'The tall boy is sleeping.'

Example (16) differs from (15a) only in that the relative marker *yó* in (16) is not followed by a subject agreement marker. Other than that, this example is similar to (15a) in terms of the presence of the relative marker as well as its tonology. We however analyze the subject NP in (16) as a relativized subject NP just as the one in (15a). The lack of subject marker in (16) is conceivably due to the fact that when the subject marker is a vowel only as we see in (15a), this vowel tends to be concatenated

with the relative marker *yó* + *ó* resulting in *yóó* but that contraction then occurs resulting in only *yó*. This is consistent with Cole's (1955) observation which is that:

When the second element of the direct relative concord consists of a vowel only there is a tendency to contraction e.g. *yôo* > *yô* (Cole, 1955: 172).

It has also been observed for Nguni languages that there is a rule which deletes subject prefixes in certain contexts in Zulu relatives (Zeller, 2004: 86). Thus, we can conclude that the subject marker in (16) is either merged with the relative marker as Cole suggests or is deleted as suggested for Zulu in Zeller (2004). We therefore conclude that the NP in (16) is relativized just like (15a).

Let us now turn to quantified NPs exemplified in (17) which is example (8c), repeated as (17).

- (17a). Metse            *é* -     me-ngwe        *é*-thúb-ílw-e.  
           4.home        4.?     4.-some        4.SM-destroy-PASS.-PRF  
           'Some homes have been destroyed.'

In example (17) we see the morpheme *é*- which is identical to the relative marker used for class 4 in terms of form and tone marking. Structurally, the subject NP in (17) is not different from the subject relative clauses we discussed in examples (14a&b) above; that is, the head noun *metse* occurs phrase initially and it is followed by this morpheme which looks like both the demonstrative and relative marker. The subject NP in (17 (a) like that in (16) also differs from (15a) in that there is no agreement marker following the morpheme *é*-. We again follow Cole (1955) in assuming that the agreement marker which could otherwise surface after *é*- has been contracted or deleted. We also noted earlier on that morphemes such as *é* - in ex. (17a) form a constituent with the modifier rather than with the head noun. Consider (17b) below.

- (17b). \*Me-ngwe    metse            *é*,                    *é*-thúb-ílw-e.  
           4.-some     4.home        4.-?     4.SM-destroy-PASS.-PRF  
           'Some homes have been destroyed.'

(17b) is ungrammatical because a constituent namely *é* -*me-ngwe* has been separated; specifically, the head of this constituent, which is *é* - has been separated from its predicate *me-ngwe*. We propose that *é* - is a relative marker and that it heads a reduced relative clause. We therefore conclude that quantified NPs in Setswana are also cases of reduced relatives. This conclusion is consistent with Collins et.al. (2011) who observe that N!uuki (a Khoesan language) NPs modified by demonstratives, quantifiers

and adjectives are really relativized NPs. Next let us consider possessive NPs exemplified in (7b) repeated as (18) below:

- (18). Dikgomó      ts-á                      mońna              dí-tim-étse.  
       10.cow        10.REL-GEN.        1.man              10.SM-lose-PRF  
       'The man's cattle are lost.'

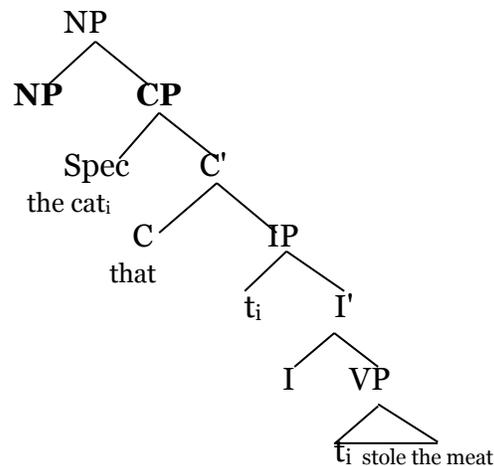
The morpheme which follows the head noun *dikgomó* has two parts: *ts-* and *-a*. The morphological shape of the first part is determined by the possessed NP; in example (18) this is *dikgomó*. We already pointed out in section 3.3 that this part is a demonstrative associated with the particular noun class, in this case, class 10. We assume as we did in the examples analyzed above that the first part of this morpheme is a relativizer. The second part of the morpheme, namely *-á*, has been referred to in the literature as an 'associative' (for example see Mugane (1995) for Kikuyu and Mohammed (2001) for Swahili). Cole (1955) refers to this morpheme as a preposition. We simply analyze it as a genitive marker which combines with a relative marker. Thus possessive NPs are no different from the NPs we discussed above. We see that, consistent with the pattern of the other NPs already discussed above, the head noun comes phrase initially followed by the demonstrative or relative marker. Another point in support of our proposed analysis that these morphemes are relative markers and not demonstratives is that as pointed out above, demonstrative constructions involve an intonation break after the demonstrative while in relative clauses no such intonation break is observed after the relative marker. Similarly, we observe no intonation break after the morpheme analyzed as a relative marker in NPs modified by possessives, quantifiers and adjectives. Rather, the intonation pattern in these NPs resembles that of relative clauses.

Based on the observations above, we conclude that possessive NPs also involve relativization in Setswana. Similar proposals have been made for other languages, for example den Dikken (1997) analyzes English genitives as reduced relatives; Torrence (2005) analyzes Wolof genitives as reduced relative clauses while Letsholo (2006) analyzes Ikalanga possessives as cases of reduced relative clauses as well. We follow these authors in analyzing Setswana NPs modified by adjectives, quantifiers and possessives as cases of reduced relatives. Specifically, we conclude that the NPs discussed in this paper are relativized subject NPs whose agreement morpheme has been contracted resulting in only the relative marker surfacing phonetically. We now turn to the final question in this paper namely, 'What then is the structure of the Setswana NP?' We address this question in the next section.

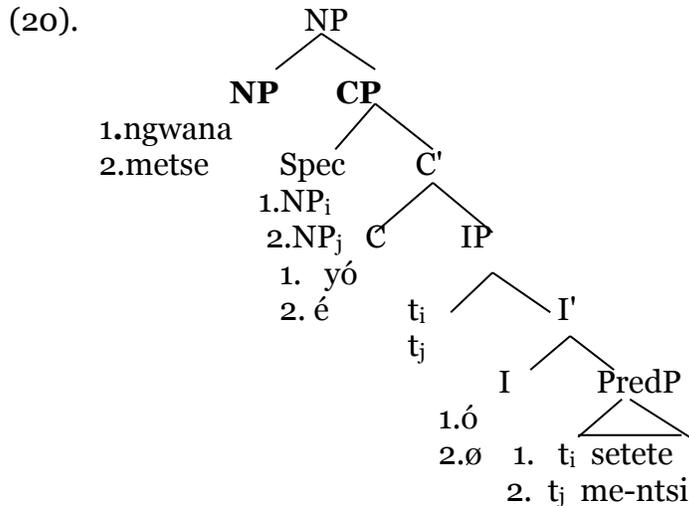
## 5. The structure of the Setswana NP

In the discussion above, we concluded that the Setswana NP which is modified by possessives, quantifiers and adjectives is really a relativized NP. Thus we propose a unified analysis of these NPs following Chomsky (1986; 1995) and subsequent works where the maximal projection of a sentence is regarded to be a C(omplementizer) P(hrase) (CP). The complementizer, that is, the head of CP selects an I(nflectional) P(hrase) as its sister. The head of IP, which is I, hosts inflection features such as tense, nominative case and number. We also assume, following Sportiche (1988), Chomsky (1989) and others, that the subject is base generated in the specifier of the Verb Phrase (VP). The subject of the sentence usually moves to the specifier position of IP in order to check its *phi* features. I, the head of IP, takes VP as its complement. Relative clauses are analyzed in the literature as CPs e.g. Kayne (1994), which are adjoined to the head noun as shown in (19).

(19).



Going back to our Setswana data, the morpheme that we have analyzed as a relative marker could either be analyzed as the head of CP hence a complementizer (see Demuth and Harford, (1999) for this analysis) or we could analyze it as a relative pronoun, in which case an NP which occupies Spec CP. We follow Demuth and Harford (1999) in analyzing the relative marker as a complementizer in Setswana. We therefore propose that the structure of the Setswana NPs discussed in this paper is (20). We have chosen to label the complement of I as 'Predicate Phrase' instead of VP in order to accommodate reduced relative clause structures.



The structure in (20) illustrates how two NPs discussed above namely *ngwaná yó- ó-sétete* ‘the child who is a brat’ and *metse é mentsí* ‘the many homes’ are derived. According to (20) the morphemes *yó* in the NP *ngwaná yó- ó-sétete* and *é-* in the NP *metse é mentsí* are heads of CP; in other words, they are complementizers. Since these NPs are subject relatives, we follow Chomsky (1986) in assuming that an empty operator NP (indicated by  $t_i$  and  $t_j$  in the tree diagram above) is merged in VP/Pred.P instead of the actual head nouns *ngwaná* or *metse* (which are merged in the specifier of the highest NP in the tree diagram in (20)). The operators move from their base position to Spec IP to check nominative case and finally to Spec CP to check the WH feature of C.

## 6. Conclusion

The aim of this paper was to describe the structure of the Noun Phrase in Setswana. To do this, the paper specifically addressed the following questions: a) In what ways can the Setswana noun be modified? b) How are constituents within the noun phrase ordered relative to the head noun? c) What is the role of the morphemes that surface after the head noun in NPs modified by possessive NPs, quantifiers and adjectives discussed in this paper? d) What is the structure of the Setswana Noun Phrase? With regards to question (a) we determined that the Setswana NP can be modified by demonstratives, possessives, quantifiers, adjectives and relative clauses. We noted that the morphological form of the demonstrative is determined by the class of the noun

modified and that the formation of other modifiers, that is possessives, quantifiers, adjectives and relative clauses also involves the use of the demonstrative.

In answer to questions (b) and (c), we noted that in each of the NPs discussed in this paper, the head noun occurs phrase initially and is immediately followed by the demonstrative-like morpheme which we concluded is a relative marker. We came to the conclusion that this morpheme is a relative marker for several reasons: a) It is evident from Table 2 in this paper that relative markers originated from demonstratives. In fact, these two are identical in form as shown in Table 2. Further, the fact that relative markers are formed from demonstratives has been observed in other Bantu languages such as Zulu and Xhosa (Zeller 2004) and Sotho (Demuth & Harford 1999). b) The tone of these morphemes is the same as the tone found on relative markers in Setswana. c) The structure of NPs modified by possessives, quantifiers and adjectives resembles the structure of NPs modified by relative clauses in Setswana with the exception that the predicate in these NPs does not have the relative suffix *-ng* found in pure relative clauses. Lastly, we also observed that while demonstratives in Setswana are followed by an intonation break, no such intonation break is observed in NPs modified by possessives, quantifiers and adjectives just as no such intonation break is found in relatives. From the discussion above, we concluded that Setswana NPs modified by possessives, quantifiers and adjectives are relativized NPs, albeit reduced relatives. We provided a structure of the Setswana NP in which the relative marker is the head of CP and the Inflectional head takes a Predicate Phrase instead of VP to accommodate what we referred to in this paper as reduced relatives.

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