CONSTITUENT STRUCTURE OF THE ASSOCIATIVE CONSTRUCTION IN GRASSFIELDS BANTU[&]

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This article examines the internal constituent structure of the associative construction (N1 of N2/N1´s N2) in Grassfields Bantu languages focusing on the semantic, pragmatic and syntactic relations between the two nouns. The paper demonstrates that N2 is related to N1 in a variety of ways, namely: a possessor, an agent, an object, a right (hand) member of a compound, etc. These interpretations are reflected in different phrase structure (PS) representations in a bid to preserve some form of isomorphism between form and meaning. A direct advantage of this approach is that the PS representations account directly for different patterns of agreement observed and also provide a base for resolving the issue of genitive case assignment inside the associative construction.

Cet article traite la structure interne des constituants de la construction associative (N1 de N2) dans les langues Bantoues de Grassfield en s'articulant sur les relations sémantiques, pragmatiques et syntaxiques entre les deux noms. L`article démontre que le N2 est lié en plusieurs manières, comme suit: un possesseur, un agent, un objet, un membre d'un mot composé, etc. Ces interprétations se reflètent en représentations différentes structurels syntagmatiques (PS) pour préserver une sorte d'isomorphisme entre la forme et le sens. Un avantage direct de cette approche est que les représentations PS expliquent les formes d'accord observé et constituent une base pour résoudre le problème d'affectation du cas génitif dans la construction associative.

0. INTRODUCTION

The associative construction (N of N structure) is a characteristic feature of Grassfields Bantu languages which offers interesting research possibilities. Its treatment in the literature has however been limited since researchers do not explore, in depth, the various semantic interpretations and structural relations attested in this rather peculiar construction. Many research endeavours focus only on the possessive relation to which they invariably attribute the structure of a genitive construction. Many other semantic and pragmatic relations such as theme, agent, source, material make-up, etc. are neglected and consequently, the related interesting phrase structure representations are not often highlighted.

This paper attempts an in-depth examination of the constituent structure and related pragmatic/semantic interpretations of the associative construction in Grassfields Bantu using Bafut and Limbum for illustration. We analyse the different semantic interpretations attested and propose that in a framework which seeks to preserve some form of isomorphic relationship between form and meaning, the various semantic relations should be captured differently in the phrase structure (PS) representations. The PS representations posited explain the intriguing patterns of agreement observed in the associative construction. Especially, we are able to account for why despite the intrinsic relationship between the head noun and the associative

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noun, there is no agreement between the two. The proposals regarding agreement also shed some light on genitive Case assignment.

In the first section of the paper, we present a broad outline of the structure of the associative construction.We demonstrate that an associative construction with a segmentally realised associative morpheme (AM) has the same structure as one in which the associative relationship is marked by a tonal element only. Section 2 focuses on the status and function of the AM arguing that this morpheme is the surface realisation of a number plus class agreement morpheme and an associative vowel. In section 3, we present the different semantic and pragmatic interpretations attested in the associative construction. Specifically, the section demonstrates that genitive nouns are related to the head noun as possessive modifiers, as agents, as objects and at times as right members of a compound. Each of these semantic/pragmatic relationships corresponds to a separate PS representation. In section 4, we discuss agreement inside the associative construction and also touch on the related issue of *case* assignment. We propose that the absence of agreement between the head noun and the associative noun follows from the *Feature Uniqueness Condition* (Tamanji 2001) and requirements of *Merge* (Carstens 2000).With regard to case, we suggest that genitive case assignment inside the associative construction is mediated via the head of a functional projection (NumP) located between DP and NP in a manner akin to nominative case assignment in clauses. Section 5 concludes the paper with the observation that the analysis which focused on Grassfields Bantu can easily extend to other Bantu languages spoken in Cameroon.

1. STRUCTURE OF THE ASSOCIATIVE CONSTRUCTION

The associative construction in Grassfields Bantu, on the surface, subdivides into two classes. In one, the genitive relation between the head noun and the dependent (associative) noun is marked by a segmentally realized associative morpheme (AM), while in the other, the AM is not segmentally realized. In the (b) examples, the letter L positioned between the two nouns represents the tonal associative morpheme. See section 2 for a more elaborate discussion of the form of the associative morpheme.

(1) *Bafut*

a. **nɨ̀-bɔ̀ʔɔ̀ n.ɨ́ tsítsà**	b. **ǹ-dá** L **tsítsà**
pumpkin AM teacher	house AM teacher
A teacher's pumpkin.	A teacher's house.

(2) *Limbum*

a. **r-bɔ̀ʔɔ̀ y.ɨ́ tícà**	b. **ǹ-dáp** L **tícà**
pumpkin AM teacher	house AM teacher
A teacher's pumpkin.	A teacher's house.

The structural difference between (1a/2a) and (1b/2b) leaves one with the false impression that we are dealing here with two different constructions similar to Free State and Construct State Nominals in Semitic (Ritter 1987). This structural difference is only illusory: In both examples the head noun is linked to the second noun by an AM but, whereas the AM in (1a/2a) is comprised of a consonant plus vowel plus tone,

in (1b and 2b), it is marked by a floating tone only. Changes to the tone patterns on N1, such as these discussed below, lend support to this claim.

It has been established for most Bantu languages that the AM which links nouns of various classes to the associative noun is simply tonal (see Hyman 1979b, Mfonyam 1989, Nkemnji 1995, Boum 1980). The following is a representative sample of genitive morphemes from four Bantu languages including Bafut and Limbum. The letters L and H represent low and high tonal AMs respectively. The Nweh examples are adapted from Nkemnji (1995) while the Befang examples are from Boum (1980).

Noun Class	*Bafut*	*Limbum*	*Nweh*	*Befang*
1	L	L	L	L
2	**bɨ́**			**bɔ́**
3	H			**ú**
4				**ké**
5	**nɨ́**	**yi**	H	**é**
6	**mɨ́**		H	**á**
7	H		**á**	**á**
8	H			**ó**
9	L	L	L	L
10	H			**é**
19	**fɨ**			**fó**

Table 1. Genitive Morphemes in four Bantu Languages

Notice that in all four languages the AM for classes 1 and 9 is a L tone. In Bafut, classes 3, 7, 8 and 10 are marked by a H floating tone. In the surface forms, the floating tone associates to the final syllable of the first noun in the associative construction. The L tonal genitive morpheme, on the other hand, remains floating provoking downstep on following H tones[1]. In the following examples, we illustrate the association of a H associative tone in Bafut. Example (3) contains nouns in their citation forms with each syllable bearing its underlying tone. The examples in (4a-6a) show the nouns in association with the H associative tone occupying the normal position of an ordinary associative marker. The (b) examples (4b - 6b) are the derived forms where the H associative tone has docked onto the final syllable of N1.

(3) **à-bùʔù** slave **ɨ̌-bàŋ** retaining walls **ɨ̌-bɔ̀ʔɔ** mushroom

(4) a. **à-bùʔù** H **tsítsà** (5) a. **ɨ̌-bàŋ** H **tsítsà** (6) a. **ɨ̌-bɔ̀ʔɔ** H **tsítsà**
slave AM teacher retain. walls AM teacher mushroom AM teacher
A teacher's slave A teacher's retaining walls A teacher's mushroom

(4) b. **à-bùʔú tsítsà** (5) b. **ɨ̌-báŋ tsítsà** (6) b. **ɨ̌-bɔ̀ʔɔ́ tsítsà**
slave teacher retaining walls teacher mushroom teacher
A teacher's slave A teacher's retaining walls A teacher's mushroom

Whereas in (3) and (4a) the final syllables of the nouns bear a L tone, in (4b-6b) they bear a H tone. The change from a L to H tone can be accounted for if we assume

[1] See Tamanji (1999) for a detailed description of the patterns of floating tone association in Bafut.

that in the underlying form there was a H tonal morpheme. In the surface realisation, this H tonal morpheme associates to the final syllable of N1 delinking the underlying L tone. As we argue in section 3, the associative H and L tones result from a deleted vowel. Assuming this to be correct, it is plausible to suggest, in line with the Stray Tone Principle, that the associative H tone docks leftward onto the final vowel of N1 since it is this vowel that caused the deletion of the associative vowel in the first place. Why the L associative tone remains floating can be explained by a constraint in the grammar of the language which militates against changing input tone configurations in output forms. This constraint must however be ranked below a prosodic word constraint which allows the H to associate to N1 with which it forms a prosodic word. For a more detailed discussion of these patterns of floating tone association in Bafut, see Tamanji (1999).

This leads to the conclusion that the two types of associative construction in (1 and 2) are structurally identical. In both types the head noun is linked to the associative noun by an AM which in some cases is simply a floating tonal morpheme. Since tones cannot be realised independently of a segment, the tonal AM associates to the first noun and as such the construction appears to be missing an AM.[2] At this stage in the discussion, one could temporarily propose the following underlying structure for the associative construction where the AM could be a CV segment or simply a tone.

(7) [N1 [AM N2]] (N1 = head noun, AM = associative morpheme, N2 = genitive noun)

We will provide a detailed representation of this structure in section 2 after analysing the syntactic status and role of what we have referred to as the associative morpheme (AM). In the rest of the discussion, the expression "head noun" will be used to refer to N1 and N2 will be referred to as the "genitive noun".

2. ROLE AND SYNTACTIC STATUS OF THE ASSOCIATIVE MORPHEME

The associative morpheme (AM) has been referred to variously in the literature as a relational element (Carstens 1991), an associative morpheme (following Bantuist tradition) (Mfonyam 1989, Ambe 1989, Nkemnji 1995), a genitival connective (Vitale 1981), etc. Most often, it is referred to simply as an agreement/concord element (see Hyman 1979b, 1981). The fact that the segmental content of the AM in, for example, some Bafut associative constructions is identical to the prefix of the head noun makes it tempting to analyze it simply as an agreement marker. We argue that the AM is not simply an agreement marker but the surface realization of a complex unit comprising an AM and a concord consonant.

An empirical fact which argues against treating the AM simply as an agreement marker comes from comparing its form to that of the adjective prefix. Compare the

[2] This conclusion regarding the syntax of the associative construction incidentally bears on the question of whether the examples in (1b and 2b) are similar to a construct state NP in Semitic. In the Construct state NP for some nominals in Hebrew for instance, the head noun is immediately followed by an associative noun with no relational element to indicate the assocaitive relation between the two nouns. Compare the Hebrew example in (I) to Bafut in (II).

I. **beyt ha-'is** [Hebrew]	II. **ǹ-dá tsítsà** [Bafut]
house the-man	house teacher
The man's house. (Siloni 1997:21)	A teacher's house.

On the surface, the Bafut example is very similar to the Semitic Construct State NP in that there is no visible relational element indicating the genitival relation between the two nouns. However, as the discussion above has shown, there is no such similarity between the two languages. In Bafut, the head noun is always linked to the associative noun by an AM which happens to be tonal in (II).

form of the adjective prefix in (8) to that of the AM in (9). In these examples, the figures in the translations indicate noun classes.

Bafut

(8) a. **bɨ̌-lūʔū bɨ́.sígɨ̀nɨ̀**
2-spoons 2-nice
Nice spoons

b. **nɨ̌-bɔ̀ʔɔ́ nɨ́.sígɨ̀nɨ̀**
5-pumpkin 5-nice
A nice pumpkin

(9) a. **bɨ̌-lūʔū bɨ́ ø-tsítsà**
2-spoons 2-AM 1-teacher
A teacher's spoons

b. **nɨ̌-bɔ̀ʔɔ́ nɨ́ ø-tsítsà**
5-pumpkin 5-AM 1-teacher
A teacher's pumpkin

As mentioned above, the claim that the AM is an agreement morpheme stems from the observation that its segmental form is identical to that of the nominal prefix of the head noun. This suggests that the agreement marker is simply a copy of the nominal prefix of the head noun. If agreement is a copy of the nominal prefix of the head noun, the minimal expectation is that, in the examples in (8), the morpheme preceding the adjective should be identical to the prefix of the head noun. We however notice that the adjective prefix takes the vowel **i** while the nominal prefix takes the vowel **ɨ.** Also, observe that a change in the class of the head noun entails a change in the consonant of the adjective prefix. We propose that the adjective prefix is the surface realisation of two morphemes: a class plus number agreement element - **Cɨ̌** - (conceivably a copy of the nominal prefix) and a morpheme (i) that links the adjective to the head noun. Let us call the latter an adjective vowel. The number plus class agreement morpheme combines with the adjective vowel as sketched below to yield the surface adjective prefix.

(10) **Cɨ̌ + í ⟶ Cí-**
Num + Class Adj. Vowel Adj. Prefix

In the process, the vowel of the number/class agreement morpheme is deleted, and the adjective prefix which surfaces is a combination of the number/class agreement consonant C and the adjective vowel **í**.

One might wonder at this point why the number/class agreement vowel and not the adjective vowel is targeted for deletion and why the tone of the deleted vowel is not preserved in the form of a floating tone like the H and L associative tones[3] discussed earlier. Presumably, the reason for the failure of the adjective vowel to delete is a functional one: If the adjective vowel is deleted, there is no remaining segmental trace of this grammatical morpheme. Understandably, a non-segmental cue like tone (the phenomenon of tone stability) is possible. However, we can imagine that the loss of the only segmental feature places an undesirable burden on the listener faced with the challenge of recovering the morphemic content of an utterance. The number/class agreement vowel on the other hand can delete since there is a segmental cue (the consonant) which can aid in recovering the content of this grammatical

[3] A major underlying assumption here, as discussions in various parts of the paper indicate, is that the H and L floating associative tones derive from the diachronic loss of associative vowels which were probably copies of the nominal prefix.

morpheme. This need to preserve at least some feature of a grammatical morpheme also explains why the tone of the deleted agreement vowel does not surface as a floating tone akin to the H and L associative tones. The concord consonant remains as a cue from which to recover the content of the agreement morpheme and so there is actually no need to preserve the tone of the deleted vowel. In the associative construction on the other hand, the tonal element is the lone segment of the associative morpheme and so must surface (albeit in the form of a floating tone) in order to aid the listener in his/her efforts to recover the content of the grammatical morpheme.

To return to the AM, and pursuing the line of argument developed above for the adjective prefix, it makes sense to claim that the AM in the examples in (9) is the surface realisation of a number plus class agreement morpheme - **Cɨ̀** - and an associative vowel - **ɨ́**, which establishes the associative relation between the head noun and the associative noun. The combination of the morphemes is sketched out below.

(11) **Cɨ̀ ɨ́ ⟶ Cɨ́**
Num + Ass. Vowel AM

The vowel and tone of the number/class agreement element is deleted and the AM surfaces as a combination of the number/class agreement consonant plus the associative vowel. The form of the agreement consonant depends on the class of the head noun.

This process of deriving the associative morpheme by combining a concord consonant and an associative vowel is quite transparent in a genetically related language - Kiswahili. In Kiswahili, the AM is marked by the vowel **-a** which takes a concord consonant determined by the class of the head noun as in the following:

(12) a. **mtoto w-a Hamisi**
child AM Hamisis
H amisi's child

b. **vitu vy-a watu**
things AM people
People's things

c. **kikapu ch-a Ali**
basket AM Ali
Ali's basket.

d. **nyuso z-a watoto**
faces AM children
The children's faces (Ogwana John (pc))

Having determined the parts of the associative morpheme, we can now examine its syntactic status and function. At first sight, at least from the translation of an associative construction, it seems reasonable to claim that the AM is a preposition similar to 'of' in English or 'de/di' in Romance. A closer look however reveals that the associative morpheme is not a preposition. First of all, prepositions in Bafut do not bear agreement morphology. Thus, in a construction like (13), for instance, the preposition **nɨ̀** 'with' relates a head noun to a following noun just like the associative morpheme **nɨ́** but it does not agree with the head noun as witnessed by the fact that its form does not change as we move from the **nɨ** class in (13a) to the **bɨ** class in (13b).

(13) *Bafut*

a. **nɨ̀-màŋ nɨ́ mɨ̀-tʃɛ̀**
fox with wisdom
A wise fox

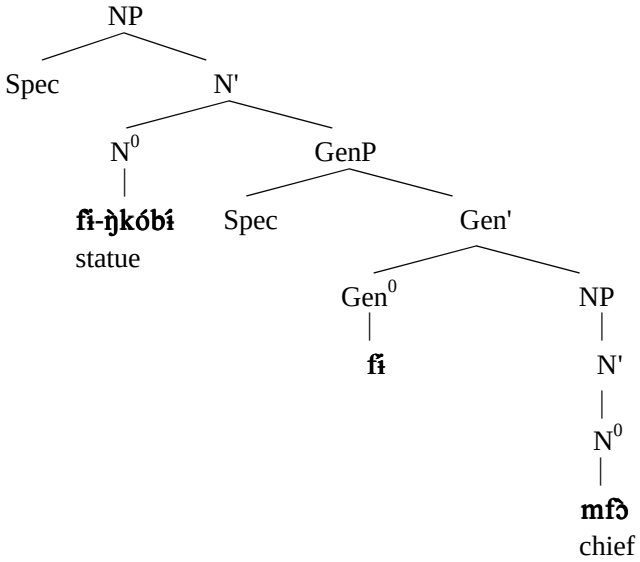
b. **bɨ̀-fɔ́ nɨ́ mɨ̀-tʃɛ̀**
chiefs with wisdom
Wise chiefs (village sages)

Agreement on prepositions is, however, not altogether unprecedented since something like it is attested in Celtic and Berber languages. There is, however, a significant difference in that in these languages, the agreement-like property holds with respect to the object of the preposition. In the Bafut examples in (12), agreement is with the head noun and not with the object of the associative morpheme. Treating the associative morpheme in Bafut as a preposition therefore seems untenable first because ordinary prepositions in Bafut do not bear agreement and second because where Bafut appears to pattern with Celtic and Berber languages, the associative morpheme agrees with the head noun and not with its object.

We will follow Vitale (1981) and treat the associative morpheme as a genitival connective, which connects the associative noun to the head noun. In the syntax, this genitival connective projects a functional projection which we refer to as a genitive phrase (GenP). Based on the foregoing, we propose the following simplified structure for the associative construction in Grassfields Bantu. This simplified structure will be modified in section 3 after a discussion of the various genitive constructions attested. What is important here is to note that the genitival connective which is often treated in Bantu morphology as a simple agreement marker is actually a functional head category which projects an XP (GenP). To ease the presentation, we choose an associative construction like the one in (14a) in which the genitive phrase functions as a theme (and therefore a complement) of the head noun.

(14) a. **fɨ́-ŋ̀kóbɨ́ fɨ́ mfɔ́**
19-statue AM chief
A statue of a chief (i.e. the person represented in the statue is a chief)

(14) b.



As the structure shows, the head of the associative construction (the noun) takes GenP as complement. GenP agrees with the head noun and the agreement is marked on the genitival connective (cum associative morpheme). The head of GenP takes another NP (which contains the genitive noun) as complement.

To recapitulate, we have argued in this section that the AM is not an agreement marker as is at times assumed in the literature on Bantu morphology. Rather, it is a functional element, akin to determiners, demonstratives and quantifiers, which is underlyingly comprised of a vowel segment only. In the surface form, this vowel segment takes on a number/class concord consonant determined by the morphological class of the head noun. Analysing the AM as a functional category on a par with determiners led us to project a GenP headed by the AM. In the sections that follow, we focus on the relation of GenP to the head noun with a view to determining the structural positions of genitive phrases.

3. GENITIVE RELATIONS

Genitive phrases stand in different relations to the head noun. Some simply modify the head noun as possessors, some are frozen with the head noun into some sort of compound, others are arguments of the head noun and yet others are related to the head noun in ways that are difficult to describe. We discuss these different relations below proposing that, in a framework which seeks to preserve some kind of isomorphism between form and meaning, the different genitive phrases should occupy distinct positions in the phrase structure (PS) representation. This allows the PS system to capture the intuitive contrast between associative phrases and also provides a stepping stone on which to build an analysis of nominalizations.

3.1 GENITIVES OF POSSESSION

The most common type of relation that holds between two members of an associative construction is a possessive type of relation, where possessor must be understood in a very broad sense. This is the kind of relationship that holds between the two members of the following:

(15) *Bafut*

a. **mɨ̌-lùʔù m.í máŋgyè**	b. **bɨ̌-lūʔū b.í m-fɔ́**
wine AM woman	spoons AM chief
A woman's wine	A chief's spoons

(16) *Limbum*

a. **nta' muu**	b. **mta' boo**
chair child	chairs children
child´s chair	children's chairs

In these examples, the genitive phrase can be interpreted in one of two ways:

a) as a pure possessor i.e. the entity to which the first noun belongs
b) as indicating a quality or distinguishing mark by which a person or a thing is characterised. In this case, it is adjectival in nature (genitive of description or quality).

Thus for instance, (15a) means 'palm wine belonging to a woman or a brand of wine that women like drinking (sweet wine)` while (16a) means `a chair belonging to a child or a chair specially designed for children'. What is however common between

the two interpretations is that the genitive phrase answers the question 'which' and its meaning determines the reference of the entire associative construction.

Included in this group of genitives of possession is what we call *genitives of source/origin* (following the Oxford English Dictionary) and *Classifying Genitives*. The genitive of source/origin indicates the person, thing or place from which N_1 comes, is acquired or sought. It also expresses racial, local or native origin, descent etc. or the notion of belonging to a place as deriving a title from it as its ruler. The classifying genitive on the other hand is adjectival in nature as it expresses a kind of quality. These relations are exemplified below:

3.1.1 Genitive of Source/Origin

(17) *Bafut*

a.. **ŋ-ù (à)mēlíkà**	b. **fɨ-bwè f.ɨ́ sɔ̄rɨ̄wàtá**	c. **m-fɔ̀ bɔ̌-fʉ̄ɨ**
person America	fish AM ocean	1-chief Bafut
An American	Fish from the ocean	The chief of Bafut

(18) *Limbum*

a. **muu ta`**	b. **nyaa ri`**
child tang	animal forest
Child from Tabenken	Animal from the forest

3.1.2 Classifying Genitives

(19) *Bafut*

ø-lúʔú m-fɔ̄
spoon chief
A spoon typical of chiefs

(20) *Limbum*

a. **shaa bye`ge**	b. **laba' mboro`**
cornbeer women	shoe Bororo
cornbeer of women	shoe of Bororo people

The question we want to answer at this point is what the structural position of genitives of possession and genitives of source/origin is. The syntactic characteristics of these genitives give us a clue.

One common characteristic of genitives of source/origin and the genitives of possession in (15 - 20) is that the relation between the genitive phrase and the head noun is not intrinsic in the sense that the choice of one noun does not depend on that of the other. The head noun and the genitive noun in both cases are like two distinct terms in a relation; two separate entities that are loosely related to each other.

Another interesting property of the class is that, syntactically, genitives of possession and source are treated as denoting separate entities from the head noun. For instance, the possessor/source genitive noun can be pluralized independently of the head noun, can be post or pre-modified, and can be pronominalized. We illustrate this in (21-23). The examples in (21 - 22) illustrate pluralisation while those in (23) illustrate post-modification.

(21) *Bafut*

a. **ø-lúʔú m-fɔ̄**
sg-spoon sg-chief
A chief's spoon

b. **bɨ̄-lūʔū b.á m-fɔ̄**
pl-spoon AM sg-chief
A chief's spoons

c. **ø-lúʔú bɨ̄-fɔ̄**
sg-spoon pl-chief
A spoon for chiefs

d. **bɨ̄-lūʔū b.á bɨ̄-fɔ̄**
pl-spoon AM sg-chief
Chiefs' spoons

(22) *Limbum*

a. **mba` ku**
staff chief
chief's staff

b. **mmba` ku**
staffs chief
chief's staffs

c. **mba` bku**
staff chiefs
chiefs' staff

d. **mmba` bku**
staffs chiefs
chiefs' staffs

The (a) examples show the head noun and the genitive noun in the singular form. In (b) and (c) one of the two is pluralized and in (d) both are pluralized.

The Limbum examples in (23) illustrate post-modification. Each of the nouns can be post-modified independently of the other.

(23) *Limbum*

a. **muu tang**
child Tabenken
child from Tabenken

b. **muu ber ta`**
child tender Tabenken
Tender child of Tabenken

c. **muu tang mbo**
child Tabenken valley
child from Tabenken valley

d. **muu ber ta` mbo**
child tender Tabenken plain
Tender child of Tabenken valley

In (23 a), both nouns are not modified. In (b) and (c), one of them is post modified and in (d) both are post modified.

These illustrations demonstrate that, although the head noun and the genitive noun are in a relation, they are, in a way, independent of each other. The genitive phrase is not intrinsically linked to the head noun in the same way that [of John], for instance, is related to [father] in [father of John]. The genitive phrase is simply an adjunct modifier which serves to describe/specify the type of the head noun in the same way that adjectives would attribute a quality to the head noun. Notice also that when used with another genitive phrase in the same construction, the genitive of possession/source is always further away from the head noun than the other genitive phrase. The examples in (24a and 25a) show a genitive of source in the same construction with another type of genitive. In (24b and 25b) the two genitives have switched positions and the construction is ungrammatical. The genitive of source is italicized.

(24) *Bafut*

a. **bɨ̌-tà b.í John *b.í yàmndè***
fathers AM John *AM Yaounde*
John's fathers from Yaounde

b. ***bɨ̌-tà *b.í yàmndè* b.í John**
fathers AM Yaounde AM John

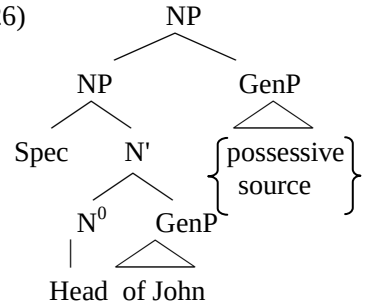
(25) *Limbum*

a. **muu Nfo *taŋ***
child Nfor *Tabenken*
Nfor's child from Tabenken

b.* **muu *taŋ* Nfo**
child *Tabenken* Nfor

Considering this linear order and the fact that possessor/source genitives are modificational adjuncts, we propose that, in the PS representation, a possessor/source genitive phrase is right-adjoined to NP in a manner akin to the structural placement of adjectives[4]. The PS representation is given in (26) below. In the structure, we indicate the position of the other genitive phrase [of John] just for clarity. We return to a more detailed discussion of it later.

(26)



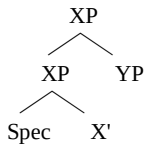
3.2 COMPOUND GENITIVES

This class of genitives includes genitive phrases which are intrinsically linked to the head noun, where *intrinsically linked* means that they are treated along with the head noun as a unit, in fact a compound. The genitive phrases that constitute the class of compound genitives are presented below.

3.2.1 Genitives of Purpose/Place/Time

As the name indicates, these genitives indicate the purpose for which the referent of the head noun is used as well as the time and/or place generally associated with its use. Some examples are:

[4] It is worth emphasising here that adjunction, by its nature, is iterative thus producing a second instance of the XP to which the new constituent is adjoined. Consider for instance the structure below in which YP is right-adjoined to XP



Because of the nature of adjunction, this structure creates the false visual impression that two maximal projections (XP and YP) are immediate daughters of XP which is unexpected within the theory. The immediate daughters of XP are actually Spec and X'.

(27) *Bafut*
fɨ-kùù f.ɨ́ n-dānwɨ̌ [place of use]
bench AM church
A church bench

(28) *Limbum*
a. **mcɛp tu** [purpose] b. **cɛ' mbɛp** [time]
medicine head dress cold
Medicine for headache dress used when it is cold

3.2.1 Genitives of Substance

These indicate the material of which something is made or consists of or holds/contains as a kind of extension of sense.

(29) *Bafut*
a. **ɨ̌-kùú (ɨ̃)-khɨ̌** [material make-up] b. **ǹ-tsíŋ ŋ-kɨ̀** [content]
bed cane bottle water
A cane bed A water bottle

In the interpretation of the foregoing examples of compound genitives, the genitive phrase serves to restrict the reference of the head noun. In contrast to the identificatory relation in genitives of possession/source, the genitive noun in this case specifies the kind of the reference of the head noun; it provides an answer to a question relating to *the kind of*. The semantic relation between the two nouns is such that the denotation of the construction as a whole is a subset of the denotation of the head noun alone.

Other forms included in this class are kinship terms and some body parts such as:

(30) *Bafut*
a. **ǹ-tɨ́ɨ́ (à)-bō** [body parts] b. **m-ú n-tɔ̄ʔɔ̄** c. **ǹ-dzààntɨ́ ø-tāà**
heart hand child palace sister father
Palm of hand Prince/princess Aunt [kinship terms]

A syntactic property that characterises compound genitive constructions and which helps in determining their structural position, is that the genitive phrase is bound to the head noun. 'Bound' is used here in a morphological sense to mean that the genitive phrase is inseparable from the head noun. In the case of the genitives of possession and source/origin treated earlier, we observed a number of properties which indicated that the head noun and the genitive phrase are two separate entities loosely linked together. Thus, for instance, each of the nouns could be freely pluralized, pre- or post-modified or pronominalized. Compound genitives do not exhibit this freedom. In the compound genitive construction, the genitive noun cannot be treated as a separate entity from the head noun. The two nouns are treated compositionally such that the overall meaning of the construction is the combined meanings of the head noun and the genitive noun. Inflections such as the plural morpheme as well as any modifiers in the construction are associated with the head noun only. As the examples below show, only the head noun can be pluralized in the compound genitive construction.

(31) *Bafut*

a. **ǐ-kùú (ǐ)-khǐ**	b. **mǐ-kùù m.í (ǐ)-khǐ**	c. ***ǐ-kùú mǐ-khǐ**
sg-bed sg-cane	pl-bed AM sg-cane	g-bed pl-cane
A cane bed	Cane beds	

Also, only the head noun, but not the genitive noun, can be pre- or post-modified. In (32) 'small' can modify the head noun 'bed' but not the genitive noun 'cane'. In (33) the demonstrative can only modify the head noun (witness the agreement on the demonstrative), but not the genitive noun.

(32) *Bafut*

a. **múnchīrǐ ǐ-kùú (ǐ)-khǐ**	b. ***ǐ-kùú múnchīrǐ (ǐ)-khǐ**
small sg-bed sg-cane	bed small cane
A small cane bed	

(33) *Limbum*

a. **cɛ' mbɛp yana**	b. **bcɛ' mbɛp bwana**	c. ***bcɛ' mbɛp mwana**
dress cold that	dresses cold those	dresses cold those
That pullover'	Those pullovers	

It is obvious that the genitive phrase in the compound genitive construction cannot be treated like the one in the possessive genitive construction. Specifically, the compound genitive phrase cannot be analysed as an adjunct/modifier like a possessive genitive. The compound genitive phrase rather appears to form a constituent with the head noun such that the plural morpheme in (31b) and the pre- and post-modifiers in (32 - 33) are actually associated with the entire construction and not just the head. If they appear to be associated with the head noun, it is simply because it is the head of the construction (see Hudson (1987) for a discussion along these lines in which inflections are generally located on the head of a constituent). Based on these observations, we propose that the genitive phrase is frozen with the head noun into a single constituent. This is in fact a lexicalisation process in which the two nouns fuse into a compound. This proposal receives independent confirmation from pronominalization facts. In (34) below, it is possible to replace the entire genitive construction in (a) with an interrogative pronoun but not the head noun alone (c) or the genitive alone (d).

(34) *Limbum*

a. **mɛ fyeni cɛ' mbɛp**	b. **mɛ fyeni kɛɛ?**
I sell dress cold	I sell what
I have sold the pullover	what have I sold?

c. ***mɛ fyeni cɛ' kɛɛ?**	d. ***mɛ fyeni kɛɛ cɛ?**
I sell dress what	I sell what dress

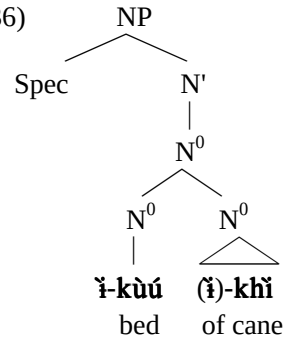
If we have to ask a question relating to the kind of material, then we will have to add another morpheme as in (35) below:

(35) **mɛ fyeni njer cɛ' kɛɛ?**

I sell kind dress what
What kind of dress have I sold?

The sentences in (34c-d) are ungrammatical perhaps because the head noun and the genitive noun form an inseparable constituent, a compound. This constituent, as a whole, is the head of the NP as represented in the structure below.

(36)



3.3 DEPENDENT GENITIVES

Dependent genitives comprise genitive phrases which stand in a close relationship to the head noun akin to the one between the verb and its object. Dependent genitives are interpreted as denoting separate entities from what the head noun denotes. However, the relation between the two entities is not as loose as that between the head noun and the possessor genitives in the sense that, in their distribution, the dependent genitive is always in a position adjacent to the head noun. At the same time, the relation between the two is not as close as that between the head noun and a compound genitive. Unlike the compound genitive, the dependent genitive is not frozen with the head noun. These properties will be exemplified and clarified as the discussion progresses. Let us first review relevant examples.

The most common type of dependent genitives are genitive phrases which mark inalienable possession. Some examples are given below.

(37) *Bafut*

a. **nǐ-lĭʔi n.í Suh**	b. **mǐbè m.í Suh**
eye AM Suh	chest AM Suh
Suh's eye	Suh's chest

(38) *Limbum*

a. **rkoo Nfo**	b. **mer Nju'**
arm Nfor	eyes Njuh
Nfor's arm'	Njuh's eyes

Also included in this group are genitives which are interpreted as themes. In the example below, 'chiefs' is interpreted as a theme, in the sense that the statue represents chiefs.

(39) **fɨ-ŋkōbɨ̄ f.ɨ́ bɨ́-fɔ̄**
statue AM chiefs
A statue of chiefs

An outstanding characteristic of the dependent genitive is that, when it occurs in the same genitive construction with a possessive genitive phrase, it (i.e. the dependent genitive phrase) is always in a position immediately adjacent to the head noun. Consider the examples below which contain a dependent genitive and a possessor genitive. The dependent genitive is italicised.

(40) *Bafut*
a. **nɨ̀-lɪ̄ʔi** ***n.ɨ́ Suh*** **n.ɨ́ nɨ́-kwābɨ̄**
eye *AM Suh* AM fortune-telling
Suh's eye of fortune-telling (Suh's eye which he uses for fortune-telling)

b. **fɨ-ŋkōbɨ̄** ***f.ɨ́ bɨ́-fɔ̄*** **f.ɨ́ Bih**
statue *AM chiefs* AM Bih
Bih's statue of chiefs

(41) *Limbum*
ku ***na'*** **Nju**
tail *cow* Njuh
Njuh's cow tail

In each of these examples, the two genitive phrases modify the head noun (witness the form of the AM in (40)). The dependent genitive is immediately adjacent to the head noun. Were we to reverse the positions of the two genitive phrases, either the meaning of the construction will change completely or the utterance will be ungrammatical.

(42) *Bafut*
a. **nɨ̀-lɪ̄ʔi n.ɨ́ nɨ́-kwābɨ̄** ***n.ɨ́ Suh***
eye AM fortune-telling *AM Suh*
Suh's fortune-telling eye(an eye (not Suh's) which Suh uses for fortune-telling)

b. **fɨ-ŋkōbɨ̄ f.ɨ́ Bih** ***f.ɨ́ bɨ́-fɔ̄***
statue AM Bih *AM chiefs*
Chiefs's statue of Bih

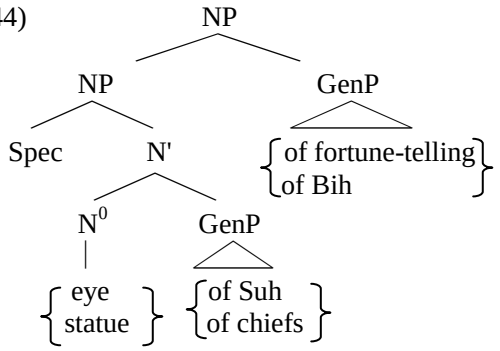
(43) *Limbum*
*** ku Nju na'**
tail Njuh Cow

The example in (40a), with [of Suh] adjacent to the head noun, refers to Suh's own eye (as part of his body). In its counterpart in (42a) where [of Suh] is no longer adjacent to the head noun, we are no longer referring to Suh's eye. Rather, we are referring to an object which has the shape of an eye and which Suh uses for fortune-telling. Both DPs, in this case, act as adjunct modifiers. Similarly, in (40b), where [of chiefs] is adjacent to the head noun, the statue represents chiefs but in (42b), where [of chiefs] is further away, the statue represents Bih. In (43), once the linear order of the two genetives is reversed, the construction becomes ungrammatical. We observe

therefore that the dependent genitive is always adjacent to the head noun while the possessor genitive could be further away. One may wonder at this point how the PS system would represent this contrast.

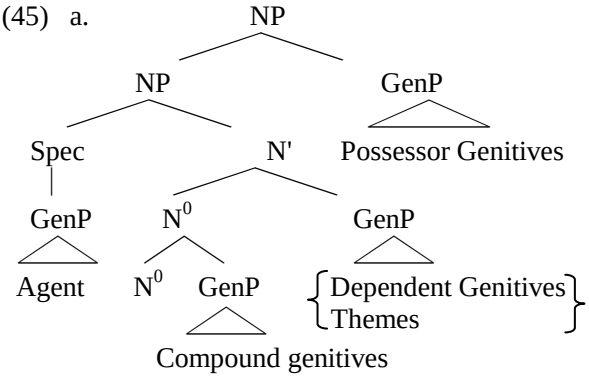
Earlier on, based on linear order and the interpretation of possessor genitives as adjuncts/modifiers, we proposed that possessor genitives are adjoined to NP. In a phrase structure compatible with the examples in (40 - 43), the possessor genitive would be in NP adjoined position. We are now left with the position of the dependent genitive. Considering the similarities in the distribution of the 'chiefs' and 'Suh' in (40 and 42) we propose that the dependent genitive [of Suh] is an internal argument of the head noun; that is, we propose that all dependent genitives (which include themes) are in complement of N^0 position. The examples in (40) would therefore have the structure in (44).

(44)



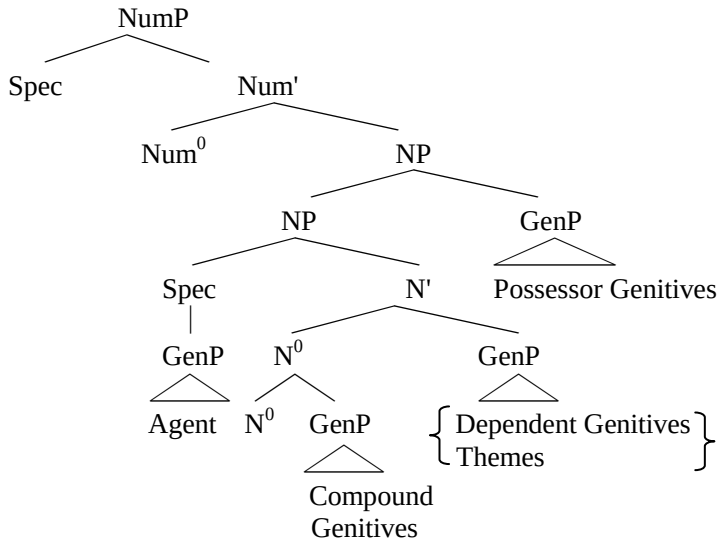
If we now incorporate the proposal in Giorgi and Longobardi (1991) that agents are generated in Spec-NP position, we end up with the following generalised structure for the NP in Grassfields Bantu.

(45) a.



In the derivation of an associative construction containing an agent in Spec-NP, movement of the head noun to a higher position above NP produces the correct word order in which the head noun precedes the genitive phrase. This higher position, according to proposals in Abney (1987) and Carstens (1991) is the head position (Num^0) of a *number phrase* (NumP). Carstens`s proposed structure containing NumP above NP is sketched below.

(45) b.



Movement of the head noun to Num^0 is motivated by the need to check the number agreement features of the noun. We return to the nature of this movement in section 4 where we also suggest that genitive nouns acquire *case* via a separate instance of this same movement within GenP. In the structures in (45a and b) movement of the head noun to Num^0 in constructions containing the possessor genitives, themes or dependent genitives is not visible since these phrases are base generated in a position to the right of the head noun. In compound genitives, the entire construction comprising the two members of the compound, that is the head noun and genitive phrase, raises to Num^0.

4. AGREEMENT RELATIONS IN THE ASSOCIATIVE CONSTRUCTION

In the course of the discussion, we noticed manifestations of interesting patterns of agreement that need to be accounted for. In the genitives of possession for instance, we observed that the head noun or the genitive noun can take a determiner which agrees with it in number and class. The examples below illustrate agreement between the definite determiner and the two nouns in the associative construction.

(46) *Bafut*

a. **nǐ-bɔ̀ʔɔ̀ n.ɨ́ bɨ́-fɔ ny.â**
5-pumpkin 5-AM 2-chiefs 5-the
The pumpkin of the chiefs (the one already mentioned)

b. **nǐ-bɔ̀ʔɔ n.ɨ́ bɨ́-fɔ by.â**
5-pumpkin 5-AM 2-chiefs 2-the
The pumpkin of the chiefs (the chiefs already mentioned)

In the example in (a), the definite determiner agrees with the head noun while in the (b) example, agreement is between the definite determiner and the genitive noun. This pattern of agreement extends to adjectives and other such modifiers which can agree either with the head noun or the genitive noun.

(47) *Bafut*

a. **nǐ-bɔ̀ʔɔ̀ n.í bí-fɔ̀ ni.síǵíǹǐ ny.â**
5-pumpkin 5-AM 2-chiefs 5-nice 5-the
The nice pumpkin of the chiefs (the one already mentioned)

b. **nǐ-bɔ̀ʔɔ̀ n.í bí-fɔ̀ bi.síǵíǹǐ by.â**
5-pumpkin 5-AM 2-chiefs 2-nice 2-the
The pumpkin of the nice chiefs (the nice chiefs already mentioned)

Interestingly, in spite of this manifestation of rich agreement and despite the intrinsic relation between the head noun and the genitive noun, there is no direct agreement between the two. In all the examples that we have examined, the genitive noun does not agree with the head noun. Rather, agreement is between the head noun and the associative morpheme. We account for these facts in the subsections that follow.

4.1 AGREEMENT BETWEEN NOUN AND DETERMINER/ADJECTIVE

As pointed out immediately above, the head noun or the genitive noun can take a determiner which agrees with it in number and class. The Bafut examples are repeated below for convenience.

(46) *Bafut*

a. **nǐ-bɔ̀ʔɔ̀ n.í bí-fɔ̀ ny.â**
5-pumpkin 5-AM 2-chiefs 5-the
The pumpkin of the chiefs (the one already mentioned)

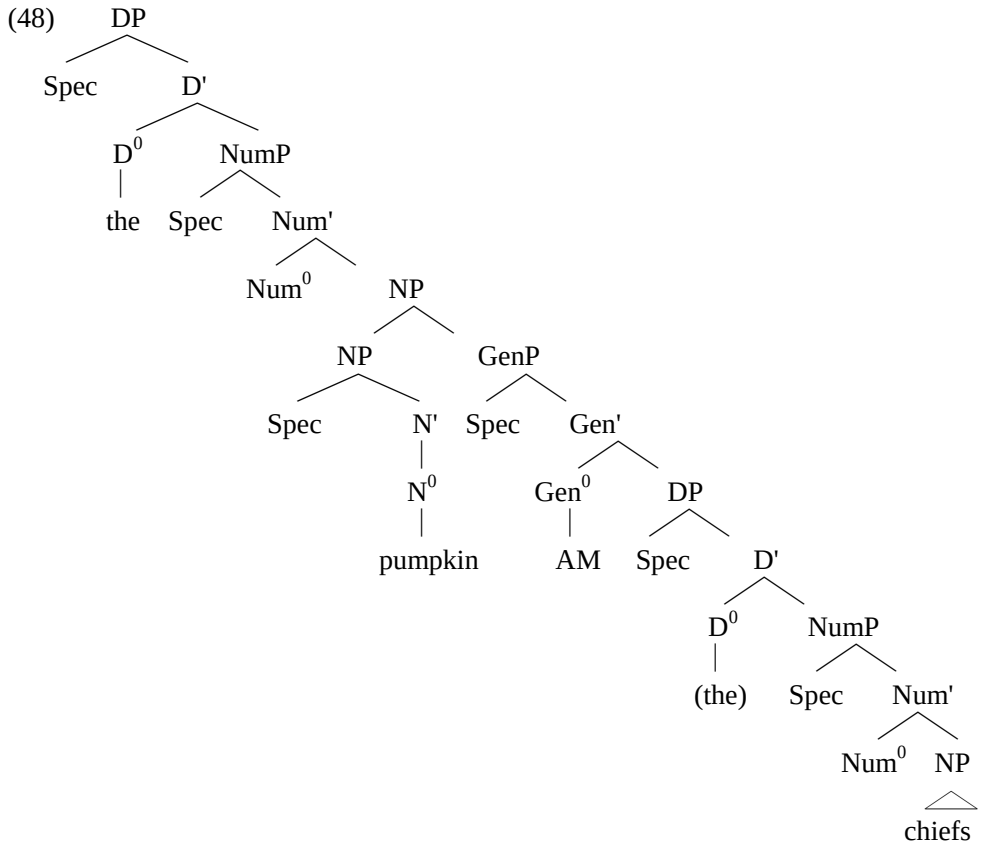
b. **nǐ-bɔ̀ʔɔ̀ n.í bí-fɔ̀ by.â**
5-pumpkin 5-AM 2-chiefs 2-the
The pumpkin of the chiefs (the chiefs already mentioned)

In these examples, the determiner agrees either with the head noun or the genitive noun. Two questions arise:

1. How does the determiner and head noun for instance, which are linearly far from apart, come to agree?
2. How does feature checking operate to reflect the fact that the determiner/adjective agrees either with the head noun or the genitive noun?

To answer the first question, we propose that the constituent structure ensures that the head noun agrees with the determiner which is linearly far away. Concretely, in (46a) for instance, where the determiner agrees with the head noun, both constitute a constituent and in (46b) where agreement is between the genitive noun and the determiner, both determiner and genitive are also in the same constituent. Let us illustrate this. Following Abney's (1987) DP hypothesis and modifications contained in Carstens (1991, 2000), we assume that each noun projects a DP headed by a determiner. Thus in the associative construction, the head noun projects the core DP while the genitive noun projects a modifying DP. In (46a) where agreement is between head noun and determiner, the determiner is in the head position of the core DP and in (46b) where the determiner agrees with the genitive noun, the determiner is in the head position of the modifying DP. The PS representation is sketched below.

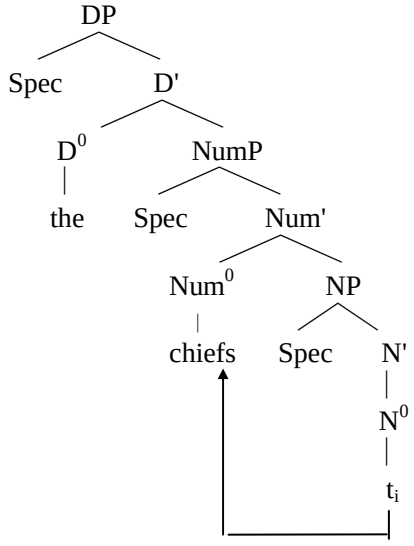
(48)



In this structure, the higher DP is what we have called the core DP while the lower is the modifying DP. In (46a), the determiner is in the head position of the core DP which also contains the head noun. Therefore, although the two are linearly far apart, they are structurally in the same constituent; the same core DP. In the example in (46b), the determiner is in the head position of the lower DP and so both are in the same constituent structure.

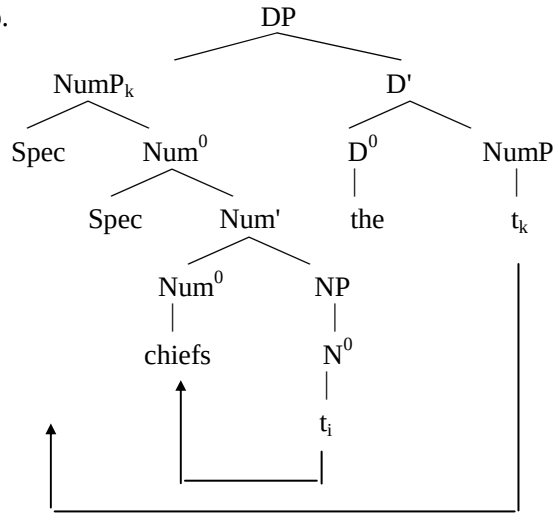
Now to answer the second question regarding the manner in which the checking process operates in order to ensure that each noun checks features on the relevant determiner, we propose the following: In (46b) where the determiner agrees with the genitive noun "chief", the genitive noun will have to check the number plus class features on the determiner. In order to do this, the genitive noun will first raise to the lower Num^0 position. The process is sketched below using only the relevant section of the tree (i.e the lower/embedded DP).

(49) a.



Subsequently, all of the NumP will move to the Spec position of DP and so the noun can check the features of the determiner in the regular Spec-Head configuration of Chomsky (1995). This second movement is sketched out in (49b).

(49) b.



As the arrows indicate, the genitive noun first raised to Num^0 as sketched in (49a). Then all of NumP moves to Spec-DP as in (49b) giving rise to the surface word order in which the noun precedes the determiner. In Spec-DP position, the noun then checks the agreement features on the determiner.

In the case in (46a), the same process occurs in the core DP; that is the head noun "pumpkin" raises to Num^0 and subsequently, all of core NumP moves to Spec of core DP. Here again, the number plus class features on the determiner are checked by the head noun in the usual Spec-Head configuration. We notice then that the system ensures that an agreement relation holds between two items by placing them in the same constituent structure. Thus the head noun agrees with a determiner as in (46a) if they are both in the core DP and it agrees with the genitive noun as in (46b) if they are

both in the modifying DP. In the same manner, an adjective will agree with the head noun if it is adjoined to core NP and will agree with the genitive noun if it is adjoined to the modifying NP.

4.2 ABSENCE OF AGREEMENT ON GENITIVE NOUN

We observed in the introduction to this section that in spite of the manifestation of rich agreement in the associative construction and despite the intrinsic relation between the head noun and the genitive noun, there is no direct agreement between the two. Rather, agreement is between the head noun and the associative morpheme. There are actually two problems here; first why the genitive noun does not exhibit overt agreement with the head noun and second why the AM agrees with the head noun and not with its object. The facts of Grassfields Bantu are very similar to those of Swahili. Thus, in both language groups, we can have (50a) but not (50b) and (50c).

	Bafut	*Swahili*
(50)	a. **nɨ̃kà'à ní fɨ́njɔ́ɔ̀**	a. **Kiti cha mtoto**
	5leg 5AM 19toad	7chair 7of 1child
	A toad's leg	The child's chair [AM/of agree with head N]
	b. ***nɨ̃kà'à fɨ́ fɨ́njɔ́ɔ̀**	b. **** Kiti wa mtoto**
	5leg 19AM 19toad	7chair 1of 1child [*AM/of and object agree]
	c. ***nɨ̃kà'à í nɨfɨ́njɔ́ɔ̀**	c. ***Kiti a wmtoto**
	5leg AM 5/19toad	7chair of 7/1child [*Head N and object agree]

Considering the second problem first, the fact that the genitive noun does not exhibit overt agreement with the head noun supports an analysis whereby the genitive noun should not be in a relevant (head-head or Spec-head) relation with the head noun. In Carstens' (2000) proposal for Swahili, and the one we have outlined in this paper for Grassfields Bantu, the genitive noun is quite low down in the structure. Raising it into a head-head or Spec-head relation with the head noun (so that it can check the relevant features) will violate a number of locality conditions on movement. Observe also that each noun has intrinsic number and class features and the agreement morphology is also specified for the number and class features of the head noun. Were the genitive noun to exhibit overt agreement with the head, it would end up with two class features and two number features. One can imagine what this will entail for the checking theory assumed in this paper. The number + class features borne by the associative morpheme require the genitive noun to raise to matrix Num^0 (through Num^0 embedded inside GenP) in violation of locality conditions on movement as pointed out immediately above.

Since the genitive noun does not exhibit overt agreement with the head noun, one could imagine a condition like the one in (51) which militates against a single noun bearing two distinct class or number features.

(51) Feature Uniqueness Condition

*$X^{f1,f2}$ where f_1, f_2 are two instantiations of the same feature, F.

(Tamanji 2001)

Under (51), the genitive noun cannot bear concord morphology and so the concord morphology controlled by the head noun is obliged to associate to the AM/of[5].

Turning now to the other problem why the AM does not agree with the genitive noun, Carstens (2000) exploits Chomsky's (1995, 1998) ideas about *Merge* to account for the failure of agreement between "of" and its object in Swahili. According to her proposal, checking between "of" and its object fails because the two items are co-terms of merge, i.e. the two items are adjacent to each other as a result of merging and not movement. I adopt her proposal and add to it the fact that in addition to being co-terms of merge, the syntactic relation between "of" and its object is not like the one between other heads (e.g. verbs) and their objects. According to Chomsky (1998), Case is a manifestation of agreement. Assuming this to be true, we expect the AM to agree with the genitive noun which it case-marks. An explanation as to why the AM does not agree with the genitive noun concerns the status of Am as a Case assignor. Recall that the issue of genitive Case had been debated upon for long and one of the conclusions arrived at was that genitive Case is inherent. If we return to this assumption, we can provide an explanation for why the AM does not agree with the genitive noun. The inherent nature of Genitive Case excludes the AM from the list of possible categories that could act as case assigners in this context. Assuming this to be correct, and holding on to the idea that Case is a manifestation of agreement, we do not therefore expect the AM to agree with the genitive noun (since the AM does not case mark the genitive noun).

The foregoing conclusion about the failure of the AM to agree with the genitive noun and therefore its inability to assign case to the noun raises yet another question: How then does the genitive NP get case in the associative construction? The same question could be asked in another way given more recent tendencies in the minimalist programme regarding case and agreement: How does the genitive NP check its case feature in the associative construction? The answer we propose to this question is based on Chomsky's (1995) checking theory. In this theory, items enter the syntax already inflected for Case, and phi features and relevant functional heads bear features corresponding to this morphology. Let us assume then that the genitive noun enters the syntax already inflected for number, class and case. In this perspective we have to assume that case morphology on nouns in Grassfields Bantu (and other langauges like English) is a null category. The morphology on the noun provoke the projection of functional categories whose heads bear corresponding features. We have already seen that number and class features are borne by NumP. What remains to be sorted out is which of the two functional projections above NP (DP and NumP) bears the case feature. Chomsky´s (1998), idea that Case is a manifestation of agreement leads us to propose that NumP which bears the number plus class agreement features of the noun also bears the case feature. When the noun raises to Num^0 in the manner outlined in (49a and b), it checkes its number, class and case features against those in Num^0 in a head-head configuration. This process is reminiscent of the well-known case in the clause where the functional head $AgrS^0$ hosts subject-verb agreement features and in the course of checking the agreement features, the subject NP also checks its nominative case feature. The only difference between the clause and the genitive NP discussed here is that whereas the features are checked in the clause in a Spec-Head configuration, checking in the NP is in a Head-Head configuration. Both checking

[5] The *Feature Uniqueness Condition* is reminiscent of other modules of grammar (e.g. *Theta Criterion, Case theory, etc.*) which require that an item be specified for a unique syntactic role.

configurations are however recognised in the checking theory and it is not uncommon for a feature to be checked in one context in a Spec-Head configuration and in another context in a Head-Head configuration.

5. CONCLUSION

This article set out to describe the internal constituent structure of the associative construction in Grassfields Bantu languages. First we examined the role and syntactic status of the associative morpheme pointing out that it is a relational element that bears agreement morphology and not simply a concord element as has generally been assumed in the literature. The next part of the discussion focused on the different semantic/pragmatic interpretations of the associative construction and the relevant PS representations. We proposed that while some genitives simply modify the head nouns as possessors, some are frozen with it (the head noun) into a compound, and others are arguments (theme, agent) of the head noun. In order to preserve some form of isomorphism between form and meaning, we proposed different PS representations for these different relations.

Finally, we examined prominent agreement relations inside the associative construction such as noun-determiner, noun-adjective and noun-AM. Modifiers of the head noun such as adjectives and determiners are either in the core DP in which case they agree with the head noun, or they are in the modifying DP in which case they agree with the genitive noun. On the other hand, the genitive noun does not agree with the head noun because of the *Feature Uniqueness Condition*. Similarly, the genitive noun fails to agree with the AM because they are co-terms of merge and because the AM does not case-mark the genitive noun. Finally, Chomsky´s (1998) idea that Case is a manifestation of agreement led us to propose that genitive case is assigned by Num^0 inside the genitive phrase.

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