



COMBINATIONAL POSSIBILITIES OF ADJECTIVES IN MUYANG

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Abstract:

The present paper outlines the formation and the distribution of adjectives in Muyang. It shows that in general, the suffix –ani is added to some direct adjectives which, for the majority, come naturally in automatic pairs. It demonstrates that in some cases, this suffixation takes place after compounding and reduplication. The article indicates that there is a one-to-one selection of adjectives which constitute a large syntactic zone in the right-hand position of the NP in PF. Departed from this observation, it proposes a split up of the Adjectival Phrase (AdjP) in a number of distinct maximal projections ranged as follows: NP>Religion>Nationality>Material>Poss>Dem>Gender>Shape>Colour>Age>Quality>Size>Num>Rel. As far as their locality is concerned, this paper proposes in the sense of Hawkins (1983), Carstens (1991), Kayne (1994 and 1995), Nkemnji (1995), Tamanji (1999 and 2006), Brugè (2002), Koopman (2003), Aboh (2006), Letsholo (2006), Cinque (2005, 2010), Nchare (2011) and Bebey (2015) that the noun originates in the DP's right-hand position; so, an upwards leftwards movement obtains the position of both direct and indirect adjectives. Within the DP, it demonstrates that adjectives can appear in adjacency with other materials in the following range: N>Poss>Dem>A>Num>Def>Rel. The present paper also reveals following Letsholo (2006) and as underlined in Bebey (2015) that when motivated by focalization, there are only six possible combinations of the DP contrary to the large range in other languages as proposed by Cinque (2005 and 2010) and Nchare (2011).

Keywords: combinational possibilities, adjectives, Muyang, noun phrase, determiner phrase

Résumé :

Le présent article décrit la formation et la distribution des adjectifs en Muyang. Il montre qu'en général, le suffixe –ani est ajouté à certains adjectifs qui, pour la majorité des cas,

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apparaissent naturellement en paires automatiques. Il démontre que dans certains cas, cette suffixation s'opère après les processus de composition et de reduplication. L'article indique qu'il y a une sélection individualisée des adjectifs qui forme une grande zone syntactique à droite du SN en FP. Partant de cette observation, il propose un éclatement du Syntagme de l'Adjectif (SAdj) en plusieurs projections maximales rangées ainsi qu'il suit :

SN>Religion>Nationalité>Matériel>Poss>Dem>Genre>Forme>Couleur>Age>Qualité>Taille>Num>Rel. En ce qui concerne leur position, le présent article propose dans le sens de Hawkins (1983), Carstens (1991), Kayne (1994 et 1995), Nkemnji (1995), Tamanji (1999 et 2006), Brugè (2002), Koopman (2003), Aboh (2006), Letsholo (2006), Cinque (2005, 2010), Nchare (2011) et Bebey (2015) que le nom prend origine à droite des éléments du SDét ; ainsi, un mouvement ascendant obtient la distribution des adjectifs directs et indirects. Dans le SDét, il démontre que l'adjectif peut apparaître en adjacence avec d'autres éléments linguistiques dans l'ordre ci-après : N>Poss>Dem>A>Num>Def>Rel. Aussi, cet article révèle à la suite de Letsholo (2006) et souligné par Bebey (2015) qu'en cas de focalisation, l'on dénombre six possibilités combinatoires du SDét contrairement aux nombreux constituants dénombrés dans d'autres langues tel que proposé par Cinque (2005 et 2010) et Nchare (2011).

Mots clés : possibilités combinatoires, adjectifs, Muyang, syntagme nominal, syntagme du déterminant.

1. Introduction

This article scrutinizes the formation and the distribution of adjectives in Muyang, a central Chadic language. Section 1 is dedicated to the linguistic processes that obtain the form of the said sentence's constituents. The second section deals with the combination of adjectives in order to determine the natural linear order and possible other ranges attested in the language. In section 3, one describes the cartography of DP in the light of Greenberg (1963), Hawkins (1983), Abney (1987), Brugè (2002) and Cinque (2005) and Cinque and Rizzi (2010).

1.1 Formation

This section scans the formation of adjectives in the language. It reveals that suffixation, compounding and reduplication are among linguistic operations which obtain direct modification adjectives.

1.2 Direct modification adjectives

The present section describes the formation of predicative and attributive adjectives. It reveals that majority of Muyang predicatives come in automatic pairs, one being the opposite of the other (See Smith 1999, Bebey 2010 and 2015).

- (1a). Zebal (tall) - desl (short)
(1b). Gedak (big) - guʒuk (small)
(1c). Medewel (old) - dagwa (young)
(1d). Newnew (sweet) - beblek (bitter)
- (2a). Lawan nó búkudkud
Lawan 3sg be+Present smooth
“Lawan is kind.”
- (2b). *Lawan kudkud á wáy mish
Lawan smooth 3sg love people
“The kind Lawan loves people.”

Apart from reduplication, we see that the bare adjectives above do not use morpheme boundaries in the sentence. In (2a), for instance, *kudkud* (smooth) appears as a predicate; it does not change its form. However, it can be noticed that it is separated from the noun it describes by the copula *bú* (be). Sentence (2b) is unacceptable; the bare adjective *kudkud* (smooth) is directly attached to the noun. This remark indicates that when used within the sentence, predicative adjectives should be preceded by a copula in Muyang.

Contrary to bare adjectives, attributive adjectives directly attach to the noun they modify and, use morpheme boundaries. Bebey (2015) acknowledges that attributive adjective is derived from other parts of speech such as nouns, adverbs and predicative adjectives as illustrated in the following paradigm:

- (3a). Tewər (talks) - tewərani (talkative)
(3b). Mru (naivety) - merani (naïve)

From the above, one realises that the suffix *-ani* is added to nouns to form adjectives. The form of *mru* “naivety” which becomes *merani* “naïve” indicates that some roots are subject to morphophonological processes as observed in Bebey (2015)ⁱⁱ. Let us first notice that *mru+N* spells out “mru’ and *mru+A* also spells out “mru”.

- (4). Mish gedakani gedak
Man big much
“A very big man”

Example (4) indicates that when used in syntactic constructions, attributive adjectives from nouns are affixed on *-ani* which is the attached word finally.

As it is the case with nouns, the suffix *-ani* is added to adverbs to form attributive adjectives. Given that adverbs can modify adjectives cross-linguistically, the derived adjectives from the latter can be modified by roots as follows: while the whole adjectival

ⁱⁱ It is demonstrated in Bebey (2015) that when two vocalic morphemes are adjacent, the first deletes. This accounts for the morphology of (3b) for instance where *-u* deletes when followed by the suffix *-ani*.

phrase modifies the noun *mish* “man” in (4), the adverb *gedak* “much” modifies *gedakani* “big” from which it derives. Let us consider examples that follow for further analyses:

- (5a). Medewel (old) - medeweleni (old)
- (5b). Dagwa (young) - dagwani (young)
- (5c). Newnew (sweet) - newnewani (sweet)

A look at paradigm (5) shows that the suffix *-ani* is also added to predicative adjectives to form other direct modification adjectives. If the discussion above shows that the predicative adjective functions as a main predicate, how does the attributive adjective behave when used in the sentence? To answer this question, let us examine examples that follow:

- | | |
|--|---|
| (6). Ná wáy wal deslani
1sg like woman short
“I love a short woman.” | (7). Galu á dáy zal zebalani
Galú 3sg take man tall
“Galú gets married to a tall man.” |
| (8). Wal heni ó bú desl
Woman this 3sg be short
“This woman is short.” | (9). Zal ge Galu ni nó bú zebal
Man of Galú NI 3sg be tall
The Galú’s husband is tall.” |

In (6) and (7), the derived forms of adjectives are attached to the NP which they modify whereas in (8) and (9), they are separated from the NPs by the copula *mebani* “to be”.

- | | |
|---|--|
| (10). *Ná wáy wal desl
1sg like woman short
“I love a short woman.” | (11). *Galú á dáy zal zebbal
Galú 3sg take man tall
“Galú gets married to a tall man |
| (12). *Wal heni ó bú deslani
Woman this 3sg be short
“This woman is short.” | (13). *Zal ge Galu ni nó bú zebbalani
Man of Galú NI 3sg be tall
“The Galú’s husband is tall.” |

(10) and (11) are ungrammatical because adjectives directly attached to the NPs do not bear the suffix *-ani*. On the contrary, the derived form of the latter, when separated from nouns by the copula *mebani* “to be”, renders the sentence unacceptable in (12) and (13). The ungrammaticality of the above sentences supposes that the derived form of adjectives is used as a complement after the copula while the other follows directly the NP. This conclusion shows that within the sentence, the copula separates predicative adjectives from the nouns while attributive adjectives are directly attached to the latter. We also remark that there is no overt agreement between adjectives and the NPs they modify as it is the case in some Indo-European languages such as French and Spanish.

Unlike bare and attributive adjectives described above, where the suffix *-ani* is affixed on the root, a number of linguistic processes take place to form adjectives of colour as we can see in paradigm (14), (15) and (16):

- (14a). bedbed- bedbedani(white)
 (14b). delingdeling-delingdelingani (black)
- (15) Azayge wir
 Poo of child
The child's poo
- (16). azaywirazaywir - azaywirazaywirani (yellow)

It can be noted that three processes are operational to form adjectives of colour. First, they are bare (see 14a); second, they bear morpheme boundaries which is the suffix –ani and the last process is the compounding of the word (see 15) followed by reduplication and affixation as visible in (16). The position adjectives also include the reduced relative clauses. Below are examples:

- (17). Wal [yati ná wáy ni] á hebáy
 Woman YATI 1sg love NI 3sg dance
 “The woman who I love dances.”
- (18). Wal goru heni **delingdelingani mabelani** [yati ná wáy ni] á hebáy
 Woman my this black beautiful YATI 1sg love NI 3sg dance
 “This black beautiful wife of mine who I lovedances.”

In (17), the relative clause introduced by the relative pronoun *yati* “that” (Bebey 2010 and 2015) is directly attached to the NP *wal* “woman”, the meaning or characteristics of which it completes; whereas, other adjectives occur between the two elements in example (18). This argument allows us to conclude that the reduced relative clause which describes the NP is an attributive adjective as it is the case cross-linguistically (see Greenberg (1963), Koopman (2003) and Cinque (2005)). It is demonstrated by literatures on the DP’s constituents that they include possessives, demonstratives and numerals as illustrated below:

- | | |
|----------------------------|------------------|
| (19). Goru_____ my | Geli_____ our |
| Gayak _____ your | Gukuli_____ your |
| Gayang _____ his/ her/ its | Gatay_____ their |

The above table shows that there are six root forms of possessive adjectives in Muyang: three in the singular and three in the plural, whereas gender is not specified as it is the case in some languages such as Bantusⁱⁱⁱ and Endo-Europeans. When they are used in sentences, clauses or other syntactic constructions such as Noun Phrases, they behave as follows:

- | | | |
|--|---|---|
| (20). Wal goru
Woman my
<i>My wife.</i> | (21). Beza gatay
Children their
<i>Their children.</i> | (22). * gukuli zum
your wine
<i>Your wine.</i> |
|--|---|---|

ⁱⁱⁱ In KiBembe for instance, possessives (adjectives and pronouns) mark gender (Iorio 2011).

A look at the preceding paradigm confirms the statements that possessives in Muyang-type languages do not determine nouns' agreement properties. With regard to their morphology, we notice that they are subject to neither affixation nor reduplication. Unlike KiBembe (see Iorio 2011) where they are adnominal, example (22) reveals that possessives are restricted in post-nominal position in the phonetic form in Muyang like in Swahili and Ha^{iv} (see Rugemalira 2007).

As far as demonstratives are concerned, two are attested in the language. Both are constrained by the number (singular and plural) and the position of the speaker with regard to the person or the object he talks about as summarised in Table 23:

(23).	Position/ number	Singular	Plural
	Near	Hení (this)	Nday hení/ndeni (these)
	Far	Teguni (that)	Nday teugni (those)

From the above, one realizes that the constituent *nday* "they" is not a demonstrative, it rather marks plurality. Let us consider the following data to see how demonstratives behave in the language:

- | | |
|---|---|
| (24). Wir heni kudkud
Child this kind
"This kind child." | (25). Beza nday hení kudkud
Children pl this kind
"These kind children." |
|---|---|

As it is the case with possessives, it is evident that demonstratives are postnominal in the surface structure and don't have an overt agreement.

In Muyang, numerals, both cardinals and ordinals vary between 1 and 99 999 and 1st and 99 999th respectively (Bebey 2015). Examples are given in (26) to show their formation and distribution:

- (26).
- | | | | |
|--|------|--|--|
| beling | 1 | | |
| kru-mahar-adiskla | 17 | | |
| ding | 100 | | |
| ding-ana-beling | 101 | | |
| dobu | 1000 | | |
| dobu-ding-ding-ombulmbu ana ding-ding-ombulmbu mahar ombulmbu ana ding-ding-ombulmbu ana kru-kru-ombulmbu mahar kru-kru-ambulmbu 999 999 | | | |

It is noticed that numbers from 1 to 9 are added to 10 using the word *mahar* which means "plus" in order to count from 21 to 29, from 31 to 39, from 41 to 49, etc. *Kru* "ten" occurs in reduplicate to make 20; the same reduplicate number is multiplied by 3, 4, 5, 6 up to 9 to make 30, 40, 50, 60 up to 90 respectively. We count from 101 to 199, from 201 to 299, from 301 to 399 etc by using coordination between hundreds and the following numbers. Also, *ding* "hundred" appears in reduplicate and multiplied by 2, 3, 4, 5 and 6

^{iv} In Swahili, Ha and many other Bantu languages, possessives occur in postnominal position in PF (Rugemalira 2007: 144)

up to 9 to make 200, 300, 400, 500 and 600 up to 900. As far as order is concerned, it is formed as follows:

(27). Underlying Form	Phonetic Form	Glossary
yati-beling	ya-beling	1 st
yati-kru-mahar-adiskla	ya-kru-mahar-adiskla	17 th
yati-ding	ya-ding	100 th

Here, *yati* is described by Bebey (2010) as a relative pronoun that marks order when it precedes numbers. Let us consider examples that follow for further illustration:

(28). Beza zlam Children five "Five children."	(29). Wir zalani ya-zlam Child male fifth "The fifth boy."
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In Table (27), one realises that *yati* which becomes *ya* relates the NP to the Adjective. Given that relative clauses are headed by relative pronouns, the above reasoning suggests that the numeral ordinal adjective *ya-zlam* (fifth) should be analysed as a reduced Relative Phrase.

2. The DP's materials

Adjectives co-occur in many natural languages and provide researchers with various templates when one moves from one language to another. This template comprises a number of syntactic categories which appear around the NP head. Here, we find some examples:

- (30). The beautiful old Nigerian woman. (English)
- (31). Wal nigeriye medewelani mabelani ni. (Muyang)
Woman Nigerianoldbeautifulthe
"The beautiful old Nigerian woman."
- (32). B́í-níbí-yidá b́í-luNgE bi má-dúgmá mí-má-mímí-Nín mí mí-ntómbá mí-títigí
Dem. heavy harmless link round link old link female link sheep small

mí-nlám mí-nkoybágá mí-nsámal mw-èmmí-mpè
nice red six poss.other (Basaa, Bassong and al. 2014: 5) Lit.
"These harmless round old female sheep small nice red six my"
- (33). Kete pendre wali bodó Baya
Small beautiful woman black Baya
"A black small beautiful Baya woman" (Sango)
- (34). Walplátàmandakwangábaglangáarbaéhenè.
Woman Fulanioldbigbeautifulthis
"This old beautiful Fulani woman." (mada)

In the above paradigm, we remark that if Indo-European languages such as English range adjectives quality>age>nationality>NP in (30), it is not the case of African languages such as Muyang in (31) where they are ranged (NP)>nationality>age>quality. It is Dem>Weight>Quality(moral)>Shape>Age>Gender>(NP)>Size>Quality(physical)>Colour>Numeral>Poss in Basaa, a Bantu language Spoken in the centre and littoral regions of Cameroon; Size>Quality>(NP)>Colour>Nationality/Origin in Sango a language spoken in Central African Republic, where the NP raises above colour and nationality or origin; and Nationality/Origin>Age>Size>Quality>(NP) in Mada, a Chadic language spoken in Northern Cameroon.

The changing order of adjectives, when one goes from one language to another, in the preceding data indicates that the combinational possibilities of adjectives are a challenge in the development of universal theories, more particularly in the development of a universal mapping of the DP. Let us look at the following data:

(35a). Azana nizeriye cekweletcekweleteni medeweleni barbarani ni
Cloth Nigerian blue old solid the
"The old solid blue Nigerian cloth"

(35b). Zal vergi mada delingdelingani medeweleni tsudayani ni
Man islam mada black old wicked the
"The old black wicked muslim mada man"

In (35a) and (35b), it is observed that Muyang regularly ranges adjectives as follows: Religion>Nationality/Origin>Colour>Age>Quality/Subjective. This position can be enlarged as illustrated in the following example:

(36). Wir vergi mada walani gedakani ndizeni medeweleni mabelani zebalani ni
Child islam mada female big red old beautiful tall the
"The old female clear beautiful tall big muslim mada child"

Example (36) indicates that the position AdjP comprises a number of adjectives mapped as follows: (NP)>Religion>Nationality/Origin>Gender>Shape>Colour>Age>Quality>Size. Let us consider the data that follow for further analyses:

(37a). *Azana nigeriye **barbarani** cekweletcekweleteni medeweleni ni
Cloth Nigerian solid blue old the
"The old solid blue Nigerian cloth"

(37b). *Zal mada **vergi** delingdelingani tsudayani medeweleni ni
Man mada islam black wicked old the
"The old black wicked muslim mada man"

(37c). *Wir mada vergi walani zebalani gedakani ndizani **medeweleni** mabelani ni
Child mada islam female tall big red old beautiful the

“The old female clear beautiful tall big muslim mada child”

When the range of adjectives is inversed in (37a-c), the syntactic constructions are ungrammatical. This supposes that there may be a one-to-one selection of adjectives which allows their natural combinational ordering. Adjectives of nationality or origin in example (37a) for instance cannot precede the ones of religion in Muyang.

Let us ignore for the moment their position with regards to the noun and come back to the position Adjectival Phrase. A look at (36) shows that the latter (AdjP) in this language as it is the case of other languages (see examples of English, Basaa, Sango and Mada in the preceding paradigms) is a syntactic zone which comprises a number of constituents. Let us consider the following data for more illustration:

- (38). Wir vergi maḏa walani geḏakani **geḏak** ndiḏeni **asabay** medeweleni mabelani zebalani
Child islam mada female big much red very old beautiful tall
The old female so clear beautiful tall very big muslim mada child.

In (38), there is an exclusive modification of the meaning of the adjective of weight *geḏakani* “big” and one of color *ndiḏeni* “red” respectively. It means that each adjective has a distinct semantic content. The exclusive modification of these syntactic particles and the fact that adjectives in languages such as Basaa (32) and Sango (33), appear on either side of the NP and between the other DP’s elements do not make it possible to describe the position Adjective as one single maximal projection. This means that according to its word order, each language has a particular combination of adjectives.

In fact, after the success of the Split-Inflexional Phrase hypotheses by Jean Yves Pollock (1989), the Split-CP hypotheses by Rizzi (1997), the dislocation of DP (see Greenberg 1963, Hawkins 1983, Nkemnji 1995, Tamanji 1999, Brugè 2002, Koopman 2003 and Cinque (2005, 2010), the split-Adverbial Phrase (see Cinque 2005 and Biloa 2011 and 2013), the cartography of the position adjective as described above indicates that it is an array of distinct syntactic constituents, each of which can be projected as a maximal projection. Let us consider the following example for further illustration:

- (39). Wir vergi maḏa **goru heni** walani geḏakani ndijani medeweleni mabelani **belingani**
Child islam mada Poss. Dem. female big red old beautiful Num

zebbalani [yati ná wáy ni] á sleká
Tall that 1sg like NI 3sg go
“This single old female clear beautiful tall big muslim mada child of mine who I love goes home”

Example in (39) shows that, adjectives (direct, indirect, possessives, numerals, demonstratives, etc.) can occur in adjacency in Muyang. We can also remark that as is the case in Basa’a (see example 32), attributive adjectives including the reduced relative clause, are separated by others such as demonstratives and possessives as visible in the following range: (NP)>Religion>Nationality/Origin>Poss>Dem>Gender>Shape>Colour>Quality>Age>Num>Size>Rel. Knowing that the underlying order is universal (see Cinque 2005, 2010 and Nchare 2011), how does the surface order derives from it?

2.1 Combination of DP's materials

In his discussion of Greenberg's (1963) Universal 20, Cinque (2005) proposes that there are 24 conceivable combinations of the DP's elements out of which 14 are attested in natural languages. He assumed that the fixed merged order of nominal modifiers is Dem>Num>AP>NP and, the NP may move partially or totally with or without pied-ping through the extended nominal projection. Revising these proposals, Nchare (2011) reported that 18 combinations are attested in Shupamem instead of 14. These statements suppose that according to the semantic interpretation, the surface structure varies from one language to another. While the NP is fronted in Muyang for example (see 39), it just raises above some DP's materials (colour and nationality) in Sango. From the above, it is plausible to suggest that word combination obtains the acceptable DP's orders. This reasoning raises the following questions: how many conceivable combinations are there in Muyang? What is the surface structure of DP in the language? Which syntactic process motivates the different inversions of elements within the DP?

2.1.1 Combination of direct modification adjectives

Adjectives concerned in this section are predicative and attributive. Departed from proposals by Koopman and al; (2014), for whom adjectives in English are ranged: subjective-size-age-shape-colour-gender-nationality-material, a two-by-two combination will be done in order to find out the combination of the latter in Muyang. It is important to take a look at the structures that follow:

2.1.1.1 Order of adjectives with subjective in initial position

- | | | |
|--------|--|--------------------------|
| (40a). | Wal mabelani gedakani
Woman beautiful big | (Subjective-Size) |
| (40b). | Wal mabelani medeweleni
Woman beautiful old | (Subjective-Age) |
| (40c). | *Wal mabelani bedbedani
Woman beautiful white | (Subjective-Colour) |
| (40d). | *Ahay mabelani hendegilgileni
House beautiful round | (Subjective-Shape) |
| (40e). | *Wir mabelani takalakani
Child beautiful female | (Subjective-Gender) |
| (40f). | *Wir mabelani nigerie
Child beautiful Nigeria | (Subjective-Nationality) |
| (40g). | *Ahay mabelani ge simo
House beautiful of cement | (Subjective-Material) |

Given that Muyang fronts the NP in PF in general, only the distribution of its modifiers is analysed. When the subjective or comment is following the NP, we realise that it is only tolerated between size and age in (40a) and (40b).

2.1.1.2 Order of adjectives with size in initial position

- (41a). *Wal zebalani mabelani (Size-Subjective)
Woman tall beautiful
- (41b). *Wal zebalani medeweleni (Size-Age)
Woman tall old
- (41c). *Wal zebalani bedbedani (Size-Colour)
Woman tall white
- (41d). *Ahay zebalani hendegilgileni (Size-Shape)
House tall round
- (41e). *Wir zebalani zalani (Size-Gender)
Child tall male
- (41f). *Wir zebalani nizerie (Size-Nationality)
Child tall Nigeria
- (41g). *Ahay zebalani ge simo (Size-Material)
House tall of cement

Data in the above paradigm are ill-formed. This ungrammaticality shows that, contrary to subjective, size is not allowed at all in the phrase beginning position in Muyang.

2.1.1.3 Order of adjectives with age in initial position

- (42a). Wal medewel mabelani (Age-Subjective)
Woman old beautiful
- (42b). Wal medewel zebalani (Age-Size)
Woman old tall
- (42c). Wal medewel dedelingeni (Age-Colour)
Woman old black
- (42d). Wal medewel hendegilgileni (Age-Shape) (the order is correct but not the sentence)
Woman old round
- (42e). *Mish medeweleni zalani (Age-Gender)
Peopleoldmale

- (42f). *Wal medewel mada (Age-Nationalit/Origin)
Womanold mada
- (42g). *Ahay medeweleni ge simo (Age-Material)
House old of cement

Age contrary to size appears before subjective, size, colour and shape. It does not precede gender, nationality and material.

2.1.1.4 Order of adjectives with shape in initial position

- (43a). Ahay hendegilgili solumani (Shape-Subjective)
House round good
- (43b). Ahay hendegilgili zebalani (Shape-Size)
House round tall
- (43c). *Ahay hendegilgili medeweleni (Shape-Age)
House round old
- (43d). Ahay hendegilgili ndizeni (Shape-Colour)
House round red
- (43e). Wir hendegilgili takalakani (Shape-Gender)
Child round female
- (43f). *Wir hendegilgili nizerie (Shape-Nationality)
Child round Nigeria
- (43g). *Ahay hendegilgili ge simo (Shape-Material)
House round of cement

Only nationality, material and age occur before shape. The other adjectives are ranged in the right periphery. This combination supposes that shape may be fifth in the surface ordering of adjectives in this Chadic language.

2.1.1.5 Order of adjectives with colour in initial position

- (44a). Azana ndizeni solumani (Colour-Subjective)
Cloth red good
- (44b). Azana ndizeni gedakani (Colour-Size)
Cloth red large
- (44c). Azana ndizeni medeweleni (Colour-Age)
Cloth red old
- (44d). *Azana ndizeni hendegilgili (Colour-Shape)
Cloth red round

- (44e). *Wir dedelingeni zalani (Colour-Gender)
Child black male
- (44f). *Wir dedelingeni mada (Colour-Nationality)
Child black mada
- (44g). *Ahay dedelingeni ge simo (Colour-Material)
House black of cement

As one sees in the constructions above, colour strands subjective, size and age. It may be ranged after shape.

2.1.1.6 Order of adjectives with gender in initial position

- (45a). Wir dahalay mabelani (Age-Subjective)
Child young beautiful
- (45b). Wir dahalay zebalani (Age-Size)
Child young size
- (45c). Wir dahalay hendegilgili (Age-Shape)
Child young red
- (45d). Wir dahalay ndizeni (Age-Colour)
Child young red
- (45e). *Wir dahalay nizerie (Age-Nationality)
Child young Nigeria
- (45f). *Ahay medeweleni ge simo (Age-Material)
Child old of cement
- (45g). *Mish medeweleni walani (Age-Gender)
People old woman

A look at the above data shows that gender, material and nationality appear before age.

2.1.1.7 Order of adjectives with nationality or origin in initial position

- (46a). Wir mada mabelani (Nationality-Subjective)
Child mada beautiful
- (46b). Wir mada zebalani (Nationality-Size)
Child mada tall
- (46c). Wir mada gedakani (Nationality-Shape)
Child mada big

- (46d). Wir mada ndizeni (Nationality-Colour)
Child mada red
- (46e). Wir mada zalani (Nationality-Gender)
Child mada male
- (46f). Wir mada medeweleni (Nationality-Age)
Child madaold
- (46g). Ahay mada ge simo (Nationality-Material)
House mada of cement

All the constructions above are acceptable. This indicates that nationality is the first adjective in the surface order of adjectives in Muyang.

2.1.1.8 Order of adjectives with material in initial position

- (47a). Mota ge biyem mabelani (Material-Subjective)
Car of wood beautiful
- (47b). Mota ge biyem gedakani (Material-Size)
Car of woodbig
- (47c). Mota ge biyem hendegilileni (Material-Shape)
Car of wood round
- (47d). Mota ge biyem medeweleni (Material-Age)
Car of wood old
- (47e). Mota ge biyem walani (Material-Gender)
Car of wood female
- (47f). *Mota ge biyem nizerie (Material-Nationality)
Car of wood Nigeria
- (47g). Mota ge biyem ndizeni (Material-Colour)
Car of wood red

In paradigm (47), it is noted that only nationality appears before material which is supposed to be second. This remark lends support to the proposals that nationality occupies the initial position on the adjectives' mapping. This makes it possible to write after the preceding conclusions that the one-to-one selection of adjectives in Muyang gives the following order: nationality-material-gender-age-shape-colour-subjective-size.

The above remark evidences proposals by a number of literatures on the structure of DP that the position AdjP should split up into distinct maximal projections in Muyang's type languages. If these proposals are on the right track, the cartography of this syntactic zone comprises the following heads: the Religion Phrase (ReliP), the Nationality Phrase (NatP), the Gender Phrase (GenP), the Size Phrase (SiP), the Shape

Phrase (ShaP), the Colour Phrase (ColP), the Subjective or Quality Phrase (QualP) and the Age Phrase (AgeP).

2.1.2 The position A in the DP

This section describes the possible combinations of numerals, demonstratives and adjectives in Muyang and proposes the surface order of position A(Adjective). In contrast to some Bantu languages such as Sukuma (Rugemalira 2007: 146) where demonstratives, possessives and relative clauses may vary positions freely, their order is restricted in Muyang.

2.1.2.1 Order of DP with Demonstrative in the initial position

- | | | |
|--------|--|---------------|
| (48a). | *Ndeni cu gedākani awák
These two big goats | (Dem-Num-A-N) |
| (48b). | Ndeni cu(ani) awák gedākani
These two goats big | (Dem-Num-N-A) |
| (48c). | *Ndeni awák cu gedākani
These goats two big | (Dem-N-Num-A) |
| (48d). | Ndeni awák gedākani cu
These goats big two | (Dem-N-A-Num) |
| (48e). | *Ndeni gedākani awák cu
These big goats two | (Dem-A-N-Num) |
| (48f). | *Ndeni gedākani cu awák
These big two goats | (Dem-A-Num-N) |

When the demonstrative occurs in the initial position, two possible combinations are conceivable: Dem-Num-N-A and Dem-N-A-Num. In (48b), both the demonstrative and the numeral are focused. The speakers in (48d) means that out of the goats around him, only the ones he indicates are big. In addition to focusing, we can note that demonstratives, numerals and possessives occur on either side of the NP head with no possibility for A, a DP's constituent, to occur in adposition, so asymmetrically c-commanding the NP (Kayne 1994, Tang 2006).

2.1.2.2 Order of DP with Noun in initial position

- | | | |
|--------|--|---------------|
| (49a). | *Awák gedākani cu ndeni
Goats big two these | (N-A-Dem-Num) |
| (49b). | *Awák gedākani ndeni cu
Goats big these two | (N-A-Num-Dem) |

(49c).	Awák ndeni gedákani cu Goats these big two	(N-Dem-A-Num)
(49d).	Awák ndeni cu gedákani Goats these two big	(N-Dem-Num-A)
(49e).	*Awák cu ndeni gedákani Goats two these big	(N-Num-Dem-A)
(49f).	*Awák cu gedákani ndeni Goats two big these	(N-Num-A-Dem)

Unlike Aghem (Hyman 1979 and Heine 1981) and Noni (Hawkins 1983) which attach numerals and adjectives to the initial N respectively, hence, demonstratives must follow the latter in Muyang. In (49c), A rises above Num when the speaker emphasizes on the shape of goats to obtain the N-Dem-A-Num combination. This once more evidences that the movement is motivated by focusing. Contrary to other constructions, no syntactic process obtains the N-Dem-Num-A order in (49d) which seems to be the natural DP's order in Muyang. In fact, the language naturally proposes the NP head in PF. This range would pose an annoyance to Kayne's (1994) antisymmetry conditions if N were supposed to be analyzed as a node C-commanding D's elements. In other words, Muyang places demonstratives, numerals and adjectives in postnominal position, an order which corroborates Greenberg's (1963) proposals according to whom "When any or all of the items- demonstrative, numeral and descriptive adjective- precede the nouns, they are always found in that order. If they follow, the order is either the same or its exact opposite^v." As commented by Nchare (2011), Greenberg's (1963) states that to the left of the N, only one ordering is possible, while to its right, both the same ordering, or its mirror-image are possible. The following are his possible DP ordering:

- a) Dem-Num-A-N
- b) *A-Num-Dem-N
- c) N-Dem-Num-A
- d) N-A-Num-Dem

In Muyang example (49), one notices that demonstratives, numerals and adjectives follow the NP head as Greenberg's (1963) proposal (c) in the paradigm above whereas the order N-A-Num-Dem in (d) is unacceptable in example (49b).

2.1.2.3 Order of DP with Adjective in the initial position

Given the analysis that the DP occurs in the phrase-final position in PF and the inverse order of the N-Dem-Num-A is ungrammatical as demonstrated in the preceding section, the assumption can be that any acceptable fronting of adjectives results from syntactic derivations such as focusing. Consider the examples below:

^vCited by Hawkins (1983)

(50a).	Gedākani awák ndeni cu Big goats two these	(A-N-Dem-Num)
(50b).	*Gedākani awák cu ndeni Big goats these two	(A-N-Num-Dem)
(50c).	*Gedākani ndeni awák cu Big these goats two	(A-Dem-N-Num)
(50d).	*Gedākani ndeni cu awák Big these two goats	(A-Dem-Num-N)
(50e).	*Gedākani cu ndeni awák Big two these goats	(A-Num-Dem-N)
(50f).	*Gedākani cu awák ndeni Big two goats these	(A-Num-N-Dem)

The grammatical A-N-Dem-Num in (50a) is conceivable if and only if the fronted A is focused. On this basis, the contrary range A-Num-Dem-N of the acceptable N-Dem-Num-A in (50e) is ungrammatical as indicated by Greenberg (1963) in (d). This description is once more illustrative that the Muyang-type data accommodate Greenberg's (1963) Universal 20.

2.1.2.4 Order of DP with Numeral in initial position.

In the revision of the Greenberg's (1963) proposals, Hawkins (1983) showed that the order Num>N>A>Dem with numerals in the phrase-initial position is attested in some languages. Consider the Muyang data that follow.

(51a).	Cu gedākani awák ndeni Two big goats these	(Num-A-N-Dem)
(51b).	*Cu gedākani ndeni awák Two big these goats	(Num-A-Dem-N)
(51c).	*Cu ndeni gedākani awák Two these big goats	(Num-Dem-A-N)
(51d).	*Cu ndeni awák gedākani Two these goats big	(Num-Dem-N-A)
(51e).	*Cu awák ndeni gedākani Two goats these big	(Num-N-A-Dem)
(51f).	*Cu awák ndeni gedākani Two goats these big	(Num-N-Dem-A)

Only sentence (51a) is grammatical in the above paradigm. In effect, the speaker in the said sentence means that out of the numerous goats around him, only two are big.

This supposes once more that focusing is the syntactic process that motivates the movement of the numeral to the initial position of the phrase. In short, there is one surface structure of DP, the N-Dem-Num-A and, syntactic processes such as focusing obtains only five other combinations which are the N-Dem-A-Num, Num-A-N-Dem, A-N-Dem-Num, Dem-Num-N-A and Dem-N-A-Num out of the 14 derivable orders proposed by Cinque (2010)^{vi} and the 18 proposed by Schare (2011) in Shupamem.

2.1.3 The position reduced-Relative Phrase

Some current researches in Generative Syntax such as Koopman (2003) and Letsholo (2006)^{vii} have analysed the DP as D CP rather than D NP. This indicates that the relative clauses as described so far should be analysed as noun modifiers. The present section deals with the combination of the different DP's elements notably the reduced Relative Phrase, numeral, demonstrative and noun in order to indicate its position within the phrase in Muyang.

2.1.3.1 Order of DP with the reduced-Relative Clause in the initial

(52a). **yati tá wáy nu ni] wál ndeni cu.* (Rel-N-Dem-Num)
That 3pl love+present me Ni women these two

(52b). **yati tá wáy nu ni] wál cu ndeni.* (Rel-N-Num-Dem)
That 3pl love+present me Ni women two these

-
- vi a. X Dem Num A N (very many languages)
 - b. X Dem Num N A (many languages)
 - c. X Dem N Num A (very few languages)
 - d. X N Dem Num A (few languages)
 - e. * Num Dem A N (\emptyset – Greenberg 1963; Hawkins 1983)
 - f. * Num Dem N A (\emptyset – Greenberg 1963; Hawkins 1983)
 - g. * Num N Dem A (\emptyset – cf. Lu 1998,183)
 - h. * N Num Dem A (\emptyset – cf. Greenberg 1963; Lu 1998,162)
 - i. * A Dem Num N (\emptyset – Greenberg 1963; Hawkins 1983)
 - j. * A Dem N Num (\emptyset – Greenberg 1963; Hawkins 1983)
 - k. X A N Dem Num (very few languages)
 - l. X N A Dem Num (few languages)
 - m. * Dem A Num N (\emptyset ? Greenberg 1963; Hawkins 1983)
 - n. X Dem A N Num (very few languages)
 - o. X Dem N A Num (many languages)
 - p. X N Dem A Num (very few languages – possibly spurious)
 - q. * Num A Dem N (\emptyset ? Greenberg 1963; Hawkins 1983)
 - r. X Num A N Dem (very few languages)
 - s. X Num N A Dem (few languages – but see fn.32)
 - t. X N Num A Dem (few languages)
 - u. * A Num Dem N (\emptyset – Greenberg 1963; Hawkins 1983)
 - v. * A Num N Dem (\emptyset – Greenberg 1963; Hawkins 1983)
 - w. X A N Num Dem (very few languages)
 - x. X N A Num Dem (very few languages)

^{vii} In Maasai and Ikanga, two Bantu languages, described by Koopman (2003) and Letsholo (2006), NPs and relative clauses seem to exhibit the same morphology.

- (52c). **[yati tá wáy nu ni] cu wál ndeni.* (Rel-Num-N-Dem)
That 3pl love+present me Ni two women these
- (52d). **[yati tá wáy nu ni] cu ndeni wál.* (Rel-Num-Dem-N)
That 3pl love+present me Ni two these women
- (52e). **[yati tá wáy un ni] ndeni cu wál.* (Rel-Dem-Num-N)
That 3pl love+present me Ni these two women
- (52f). **[yati tá wáy nu ni] ndeni wálcu.* (Rel-Dem-N-Num)
That 3pl love+present me Ni these women two

The sentences above are all ungrammatical. This indicates that the reduced relative clause is not allowed in the phrase's initial position.

2.1.3.2 Order of DP with the noun in the initial

- (53a). *Wál ndeni [yati tá wáy nu ni] cu* (N-Dem-Rel-Num)
Women these that 3pl love+present me Ni two
- (53b). *Wál ndeni cu(wani) [yati tá wáy nu ni]* (N-Dem-Num-Rel)
Women these two that 3pl love+present me Ni
- (53c). **Wál [yati tá wáy nu ni] ndeni cu* (N-Rel-Dem-Num)
Women that 3pl love+present me Ni these two
- (53d). **Wál [yati tá wáy nu ni] cu ndeni* (N-Rel-Num-Dem)
Women that 3pl love+present me Ni two these
- (53e). **Wál cu [yati tá wáy nu ni] ndeni* (N-Num-Rel-Dem)
Women two that 3pl love+present me Ni these
- (53f). **Wál cu ndeni [yati tá wáy nu ni]* (N-Num-Dem-Rel)
Women two these that 3pl love+present me Ni

Given that the reduced relative clause functions as a descriptive adjective cross-linguistically and the surface order of DP as described in the preceding section is N-Dem-Num-A, the grammaticality of (53b) with N-Dem-Num-Rel is obvious. In (53a), the speaker emphasizes^{viii} on the numeral. He means that they are these two women who love him. This indicates that it is this unmarked emphasis which obtains the Num raising above the RelP giving the order N-Dem-Rel-Num.

2.1.3.3 Order of DP with the demonstrative in the initial

Given the analysis that the demonstrative must attached to the NP in the right-hand boundary in PF, its occurrence in initial position may be ungrammatical.

^{viii} According to Bebey (2010 and 2015) Muyang marks focus by *yati* which occurs after the target constituent and *ni* which is placed clause-finally.

(54a).	*Ndeni wál cu(wani) [yati tá wáy nu ni] These women two that 3pl love+present me Ni	(Dem-N-Num-Rel)
(54b).	Ndeni wál [yati tá wáy nu ni] cu(wani) These women that 3pl love+present me Ni two	(Dem-N-Rel-Num)
(54c).	*Ndeni [yati tá wáy nu ni] wál cu These that 3pl love+present me Ni women two	(Dem-Rel-N-Num)
(54d).	Ndeni [yati tá wáy nu ni] cu wál These that 3pl love+present me Ni two women	(Dem-Rel-Num-N)
(54e).	*Ndeni cu [yati tá wáy nu ni] wál These two that 3pl love+present me Ni women	(Dem-Num-Rel-N)
(54f).	Ndeni cu(wani) [yati tá wáy nu ni] wál These two that 3pl love+present me Ni women	(Dem-Num-N-Rel)

In example (54b), the speaker presents the women who love him out of many women around him. To succeed, he emphasizes on the demonstrative which leaves to the sentence initial position. It is evident that the final Numeral in (54f) moved to the left periphery of the sentence. In fact, the speaker emphasizes on both the Demonstrative and the Numeral not to only show the women who love him, but also to know their number. Focus on these constituents obtains the following order: Dem-Num-N-Rel and Dem-N-Rel-Num.

2.1.3.4 Order of DP with the numeral in the initial

Consider the following data:

(55a).	*Cu ndeni [yati tá wáy nu ni] wál Two these that 3pl love+present me Ni women	(Num-Dem-Rel-N)
(55b).	*Cu ndeni wál [yati tá wáy nu ni] Two these women that 3pl love+present me Ni	(Num-Dem-N-Rel)
(55c).	*Cu wál ndeni [yati tá wáy nu ni] Two women these that 3pl love+present me Ni	(Num-N-Dem-Rel)
(55d).	*Cu wál [yati tá wáy nu ni] ndeni Two women that 3pl love+present me Ni these	(Num-N-Rel-Dem)
(55e).	*Cu [yati tá wáy nu ni] wál ndeni Two that 3pl love+present me Ni women these	(Num-Rel-N-Dem)
(55f).	Cu(wani) [yati tá wáy nu ni] wál ndeni Two that 3pl love+present me Ni women these	(Num-Rel-Dem-N)

Here, the speaker talks about people who love him in particular. To do so, he shifts the Numeral in sentence (55f) above the other constituent to the left periphery of the

phrase. This once more indicates that focusing is a motivation of the various combinations of DP's elements in Muyang. Remarks from the above lines lead to conclude that the following constructions are conceivable with the reduced-RelP within the DP:

- a) Num-Rel-Dem-N,
- b) N-Dem-Num-Rel,
- c) N-Dem-Rel-Num,
- d) Dem-Num-N-Rel
- e) Dem-N-Rel-Num.

From the above conceivable combinations, it is clear that the surface order of the DP with the reduced-RelP is N-Dem-Num-Rel; a range which confirms the assumptions that the merged order of NP in Muyang is N-Dem-Num-A(Rel) in PF. For further analyses, let us have a view on the following structures:

- (56a). Wal goru heni **yati** ná wáy ni
Woman my this YATI 1sg love NI
"This wife of mine who I love."
- (56b). Wal goru heni mabelani **yati** ná wáy ni
Woman my this beautiful YATI 1sg love NI
"This beautiful wife of mine who I love."
- (57a). Awák goru ndeni gedákani **yati** nó sokumoró ni
Goats my these big YATI 1sg sell NI
"These big goats of mine that I sell."
- (57b). Awák goru ndeni gedákani zlama ni **yati** nó sokumoró ni
Goats my these big five NI YATI 1sg sell NI
"These five big goats of mine that I sell."
- (58). Awák **yati** nó sokumoró ni
Goats YATI 1sg sell NI
"These goats that I sell."
- (59). Wal **yati** ná wáy ni
Woman YATI 1sg love NI
"The wife who I love."

Considering the analysis that *yati* is a relative pronoun that introduces relative clauses in Muyang (Bebey 2010 and 2015), this naturally occurs in the postnominal area, so restricted to the head noun. In (56a) and (56b), the relative clause appears after the demonstrative and the adjective respectively. In (57b), it follows *ni*, while in (58) and (59) it is found immediately after the head noun. Given this distribution, it is plausible to analyse relative clauses as DP's materials.

Also, it seems to be the case that when one considers the general pattern of determiners in Muyang, it appears that focus-like determiners (demonstratives,

numerals, adjectives, relative clauses, etc.) are allowed in N-final construction, whereas modifier-like determiners occur in N-initial constructions.

However, in some examples such as (57b), (58) and (59), there is a final *ni* which appears with DP's constituents. The question which arises is what this lexical element is and what its distribution within the clause is.

2.2 *Ni* is a DP's material

Bebey (2015) acknowledged that there is a variation in the use of *ni* in Muyang. He proposed that when used in the final position of moved constituents, *ni* should be analysed, in the lines of Biloa (2014) as the Force marker and, when it appears in the DP, it marks definiteness as pointed by Smith (2003). Consider the following data:

- (60a). Awák goru ndeni zlama **ni** té shí yam
Goats my these five NI 3pl drink water
"These five goats of mine drink water."
- (60b). Awák goru ndeni kayani **ni** té shí yam
Goats my these many NI 3pl drink water
"These many goats of mine drink water."
- (60c). *Awák goru ndeni zlam kayani **ni** té shí yam
Goats my these five many NI 3pl drink water
"These five many goats of mine drink water."
- (60d). [Awák goru ndeni gedákani zlama **ni** yati té shí yam ni] tá zá tsakala
Goats my these big five NI YATI 3pl drink water NI 3pl give price
"These five big goats of mine which drink water are expensive."

While the quantifier and the numeral compete in (60c), each of them occurs within the same structure with *ni* in (60a) and (60b). This distribution indicates that *ni* is neither a numeral nor a quantifier in the sense of Aboh (2006). In (60d), *ni* occurs after the numeral and before the relative clause. This position supposes that *ni* is nota Force marker as analysed by Biloa (2014) and Bebey (2010 and 2015). Furthermore, contrary to determiners in English, French, Spanish, etc., it is obvious that *ni* does not determine genre, person and number raising the question to know the category of DP's element *ni* belongs to.

- (61a). Awák té shí yam
Goats 3pl drink water
"Goats drink water."
- (61b). Awák **ni** té shí yam
Goats NI 3pl drink water
"The goats drink water."

To solve this issue, a sight at preceding sentences shows that the head noun in (61b) is definite. Here, *ni* determines the definiteness interpretation of DP's elements. This

remark in addition to its restrictive distribution within the position-DP is suggesting along the lines of Smith (2003, 2006) and Bebey (2010 and 2015) that the Muyang *ni* in postnominal position should be analysed as a definiteness marker. Given the analysis that the DP position should split up in a number of functional heads, there should be a Definiteness Phrase (DefP) that hosts *ni*.

3. The cartography of DP

Departed from Greenberg (1963), Abney (1987), following Hawkins (1983) who claims that anything goes postnominally, makes a hypothesis of NP which should be analysed as DP. In effect, in order to accommodate the X-bar theory, he suggests that the NP merges with D' to form the DP. Reasoning along the same lines, Kayne (1994) writes that in order to account for the postnominal position (Dem>Num>A or A>Num>Dem), the noun should move from spec to Spec, Agr found above each projection that hosts the demonstrative, Number and Adjective^{ix}. Consider the following data to see the restrictive hierarchy of determiners within the position DP in Muyang:

(62a). Awak Goat "A goat"	(62b). Awak takalakani goat female "The female goat"	(62c). awák goats "The goats"
(62d). awak ni goat NI "The goat"	(62e). awak goru Goat my "My goat"	(62f). awák goru Goats my "My goats"
(62g). awak heni goat this "This goat"	(62h). awák ndeni goat these "These goats"	(62i). awák zlam goat five "Five goats"

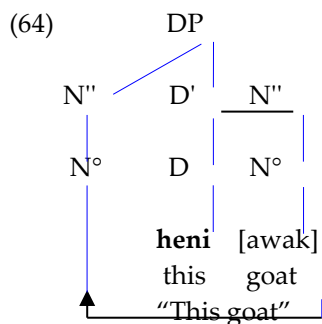
At first glance, we observe that determiners (definite article, demonstratives, possessives, quantifiers, numerals, definiteness, etc.) in the data above are postnominal. In (62a), one sees, as argued so far, that the indefinite article is not phonetically realised. Examples (62b-c) show that articles, for instance, do not bear an overt marker of number and gender. The latter is indicated by a pitch accent on the word's ultimate syllable and a qualifying adjective that indicates female in the language respectively. When the noun changes in number in (62f), the possessive does not. This remark supposes that, as it is the case with the definiteness marker *ni* analysed in the section above, determiners do not have descriptive content in Muyang.

Now, let emphasis on their position. According to Brugè (2002), reasoning along the lines of Carstens (1991) and Kayne (1994), the postnominal demonstratives in Spanish are obtained by movement of the Noun Phrase above the Determiner Phrase. It means that determiners are preminally base-generated. Consider the following examples to see if these proposals account for the Muyang DP constructions as assumed so far:

^{ix} See Kouankem (2012).

- (63a). awak **goru** takalakani **beling**
 goat my female one
 "My one female goat" (lit)
- (63b). [awak **goru heni** gedakani **beling**] é shí yam
 Goat my this big one 1sg drink water
 "This only big goat of mine drinks water."
- (63c). [awák **goru ndeni** gedakani **cuwa** ni] té shí yam
 Goats my these big two NI 3pl drink water
 "This only big goat of mine drinks water."
- (63d). *goru beling awak --- solumani
 My one goat good
 "My only good goat."

As raised in the preceding section, the Kayne's (1994) antisymmetry theory where DP's elements head the projection of DP and NPs including reduced-relative clauses project as its complements, would not account for the Muyang materials where N commands D. To tackle this problem, it is better to move away from the assumptions that demonstratives, numerals, adjectives, possessives, definiteness markers, reduced-relative clauses, etc., constitute the position-DP and N is base-generated in the phrase right boundary as proposed by Abney (1989). Given the proposals that determiners are weak^x, we can maintain that it cannot prevent a strong head such as the NP to be preposed in (63d). Thus, the higher distribution of the head noun suggests following Carstens (1991) and Kayne's (1994) that a movement of the NP's head to the left periphery accounts for the language word order as sketched in the following structural projection:



Considering examples (63a-b), it is noted that the DP position includes many lexical categories: possessives, adjectives, numerals and demonstratives. Given the X-bar principles that lexical constituents are heads of maximal projections (Chomsky 1970), it means that possessives, adjectives, numerals and demonstratives which occur in DP position, are heads of distinct structural projections. Thus, as argued in the sense of Kayne (1994) in the preceding paragraphs, the noun originates in the right periphery, then

^x It is argued in the preceding paragraphs that determiners (articles, possessives, demonstratives, numerals, etc.) do not have descriptive content in Muyang.

(67a).* Solumani awák goru ndeni ----- cu
Good goats my these two
↑
“These two good goats of mine” (lit)

(67b).*Awák selumani goru ndeni ----- cu
Goats good my these two
↑
“These two good goats of mine” (lit)

The sentences above are ill-formed because the adjective has moved. It means that like determiners, the descriptive adjective is not strong enough to move across other sentence constituents (see also 67b). From the above, when UG principles are not violated, a number of noun modifiers including the adjective, appear in the DP position, above the NP. Consider the following data for further illustrations:

(68a). Awák goru ndeni **solumani** kay
Goats my these good many
“These many good goats of mine”

(68b). Awák goru ndeni **solumani** zlam
Goats my these good five
“My five these good goats” (lit)

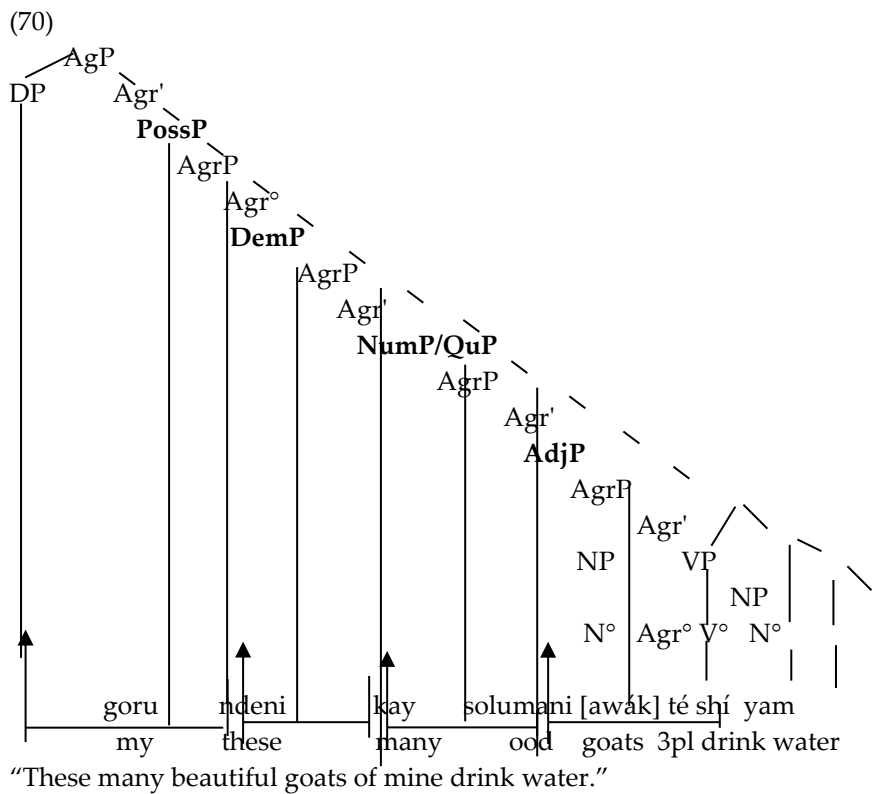
(68c). *Awák goru ndeni solumani **kay zlam**
Goats my these good many five
“These five many good goats of mine”

The co-occurrence of the numeral *zlam* “five” and the quantifier *kay* “many” in (68c) renders the structure unacceptable. This phenomenon indicates the two linguistic categories may occupy the same projection. Consider the following example:

(69a). Awák goru ndeni kay solumani té shí yam
Goats my these many good 3pl drink water
“My many these good goats drink water.” (lit)

(69b). *Awák goru ndeni zlam kay solumani té shí yam
Goats my these five many good 3pl drink water
“My five many these good goats drink water.” (lit)

(69b) is ungrammatical because *zlam* “five” and *kay* “many” compete. This observation leads us to the proposal following Li (1999) that numerals may be analysed as quantifier phrase (QP) and need to be projected as numeral phrase (NumP) as illustrated in the structural projection that follow:



From the investigations above, and following Chung (1998) and Tang (2006), we can say that at PF, the DP is a complex and large structure that follows the NP in Muyang. In LF, as illustrated in (70), the NP is obtained by pied-piping showing in the sense of Cinque (2005 and 2010) that the merged order of DP is Dem>Num>A>N. Thus, constructions such as the one in (60d) show that the architecture of the DP at spell out is the following: N>Poss>Dem>Adj>Num>Def>Rel. Now, consider the following data that contain a variety of DP's categories:

70). Sla mokono ge biyem goru heni takalakani dedelingani medeweleni maɓlani
Cow Zulgo of wood my this female black old beautiful

belingeni zebalani ni yati é shí yam
one tall Def Rel 3sg drink water
"This one tall old black female Zulgo woody cow of mine."

71). Wir vergi Mada gayak heni takalakani ndigeni medeweleni maɓlani
Child muslim Mada your this female red old beautiful

belingeni zebalani ni yati é shí yam
one tall Def Rel 3sg drink water
"This one tall old red female muslim Mada child of yours."

A view of examples (70) and (71) indicates that when one the entire position-DP is considered, it can lead to a large and complex relative mapping: NP>Religion>Nationality>Material>Poss>Dem>Gender>Shape>Colour>Age>Num>Quality/Subjective>Size>Def>Rel. Following the X-bar theory which advocates a maximal

projection for each lexical category, an observation of the above structure shows that the position-DP is an array of distinct functional projections.

After an examination of such an architecture, we remark that A(Adjective)'s elements such as Religion, Nationality and Material occur in a position higher than Possessives and Demonstratives; while Gender, Shape, Colour, Quality and Age which are also A(Adjective)'s elements precede Numerals. In effect, mapping of DP in examples (70) and (71) seems to indicate that the only A(djective) constituent's distribution which corresponds to the position-Adjective in the order N>Dem>Num>A in PF as described in the preceding section is the Subjective. In (71) for instance, one realizes that the reduced-Relative Clause which is another A's constituent is separated from the others by the Definiteness Marker giving a scatted A's order. If we are to consider the assumption that in Muyang, Demonstratives are always restricted to NPs and Adjectives should appear in the phrase-final position as shown in the order N>Dem>Num>A, the large cartography of DP will raise questions that follow in this language: does the position-A dislocate once it is split up in distinct constituents within the DP? Are Religion, Nationality, Material, Gender, Shape, Colour, Quality, Age and the reduce-Relative clause A(djective)'s constituent? Is there any difference between predicative and attributive adjectives?

The above questions lead to the following results: (i) examples (70) and (71) point out that A(djective)'s elements (Religion, Nationality, Material, Gender, Shape, Colour, Quality, Age and the reduce-Relative clause) do not constitute the position-A but, should be analyzed as distinct DP's categories whose distribution depends on the syntactic cartography of each natural language; (ii) if (i) is correct, then the rules which account for the distribution of N>Dem>Num>A account for the entire complex DP. It means that the Noun which originates in the right periphery moves from Spec to Spec of each category that comprises the complex DP including Religion, Nationality, Material, Gender, Shape, Colour, Quality, Age and the reduce-Relative clause to land in the phrase left periphery. Unlike Nchare (2011), I propose following Tamanji (1999 and 2006) a projection of each functional category instead of a projection of Agreement Phrase since the latter is not overt as far as DP's constituents are concerned.

4. Conclusion

The present paper dealt with the formation and the combinational possibilities of adjectives in Muyang. It demonstrated that the suffix *-ani* is added to some direct adjectives while in some cases, this suffixation takes place after compounding and reduplication. It indicated that there is a one-to-one selection of adjectives which constitute a large syntactic zone in the right-hand position of the NP in PF. Departed from this observation; the present article proposed a split up of the Adjectival Phrase (AdjP) in a number of distinct maximal projections. It also revealed that Muyang exhibits a marked definiteness which occupies the maximal projection of the Definiteness Phrase (DefP) within the position-DP. It has been indicated following Abney (1987), Carstein (1991) and Kayne (1994) that the N is base-generated in D's right-hand position in LF and to account for the language word order, it would have moved to the phrase left periphery. Also, it

has been shown that focusing motivates movement of D's elements, a movement which obtains 6 possible combinations of DP's materials. Here, it was noticed that the focus-like determiners occur in N-final constructions while modifier-like determiners occur in N-initial constructions.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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