The Distribution of ϕ-features in Bantu DPs and vPs: The Case of Concord and Agree in Kiswahili and Kinyakyusa

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Abstract

It is established that ϕ-features, ordered in specific hierarchies, are not projections of a single head. However, actual hierarchies of ϕ-features in various phrases are not well established across Bantu languages. Where postulates exist, differences subsist. For instance, some scholars argue that Bantu DPs value the feature gender which is fused in lexical-nouns while others posit that the feature number is imbedded in noun-stems. I articulate in this paper that the paramount valuation of DP concord is number. Subsequently, putting the results into the order number>gender>person, I, too, propose that vP Agree patterns disqualify genders as a feature, thus, allowing the hierarchy number>case>person.

Keywords: *agree, concord, ϕ-features, Bantu, Kinyakyusa, Kiswahili*

Introduction[1]

There exist prolific researches which utilise the theoretical apparatus provided in generative syntax for the analysis of the syntactic properties of various languages. Such researches, however, have paid, in more recent years, much attention to the analysis of manifestations of ϕ-features, namely *number*, *gender*, *case* and *person* (Chomsky, 2001:16; Corbett, 2004:4; Baker, 2008:33) within determiner phrases (henceforth DPs)[2] and inflectional phrases such as auxiliary phrase (shorthand vPs) (Legate,

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[1] Some of the examples used in this paper were borrowed from Kiswahili texts while other linguistic materials used were provided by the author who commands the two Bantu languages, Kiswahili and Kinyakyusa, as a native speaker. More data was borrowed from previously published sources. I am grateful to Happiness Oswald and Julius John Taji for looking through Kiswahili data, and again Julius J. Taji for commenting on the entire manuscript in its earlier version. The reviewers and editorial team of this journal highlighted some of my statements, examples and ideas which needed rectification, a process which contributed significantly to the improvement of the paper to the current form. I am equally grateful to Edith Bwana for editing the paper. Nonetheless, any remaining shortfalls are my full responsibility.

[2] **Abbreviations**: ADJ: adjective, APPL: applicative(s), ACC: accusative case, AU: augment(s), COND: conditional marker, DEM: demonstratives, FV: (default) final vowel, GenP: gender phrase, nP: numeral phrase, NCP: noun class prefix, NOM: nominative case, NUM: number, OBJ: objective case, PFV: perfective, POSS: possessive(s), PST: past tense, QUANT: quantifier(s), SBJ: subjective case, 1SG: first person singular, 1PL: first person plural, 2SG: second person singular, 2PL: second person plural, 3SG: third person singular, 3PL: third person plural, and 1, 2, 3 etc.: Bantu nominal classes, ø: zero morpheme.

2005; Carstens, 2008; Chomsky, 2008; Danon, 2011). In current literature, the former is called Concord or DP-internal agreement in the sense that it provides the distribution of the ϕ-features within a DP, while the latter is referred to as Agree(ment) or VP-external agreement because it valuates ϕ-features between VPs and its arguments[3] (Letsholo, 2004; Lusekelo, 2013a).

In the African continent, recent studies deal with, under the influence of the current Chomskyan minimalist framework (Chomsky, 2001, 2008), the syntactic properties of Bantu languages (Letsholo, 2004; Carstens, 2008; Meso, 2012; Jerro, 2013; Lusekelo, 2013a; Basweti et al., 2014). Despite these prolific studies, the present contribution addresses questions given in (1) below, which were captured in claims elevated in previous studies about the ϕ-features in languages of the world.

(1) (i) What is the proper hierarchy of the ϕ-features in the Bantu DP and vP?
(ii) What is the Spec of the Bantu DP containing a preposed demonstrative?
(iii) What is the Spec of the Bantu DP containing quantifiers and numerals?

The first question emanates from previous studies which assume that the feature *gender* is specified within the lexical-noun (Carstens, 1993, 2008; Baker, 2008). Other works postulate that the feature *number* is found within lexical-head (Lusekelo, 2013a; Shirtz & Payne, 2013). Thus, this paper attempts to answer the question: when two or more ϕ-features (*number, gender, case* and *person*) occur in one DP, what is the plausible hierarchy of these features in the Bantu languages Kiswahili and Kinyakyusa? Likewise, Carstens (2008) and Baker (2008) describe the prominence of valuation of the features *number*, *gender* and *person* in Bantu vPs. Given these different research results, this paper attempts to provide a proper hierarchical pattern of ϕ-features in Bantu languages. Thus, an attempt is made to answer the question: when ϕ-features (*number, gender, case* and *person*) occur in a vP, what is their plausible hierarchy in Kiswahili and Kinyakyusa?

In the analysis of ϕ-features within DP, it is stipulated that (in)definite article and DEM cannot co-occur because they appear to be occupying the same syntactic constituent (Alexiadou, 2004). In Bantu languages, whose

[3] In previous works such as Guthrie (1948), three of these four elements (*gender*, *number* and *person*) were treated as part of classes in Bantu languages. These elements were associated with concord. Contrary to the current definition, concord was treated as a matter of nominal and verbal agreement patterns which are highly tied up to the prefixes across the Bantu family.

grammars do not contain overt (in)definite articles, the DEM and POSS are treated as DP-heads (Rugemalira, 2007; Lusekelo, 2013b). This being the case, then a theoretical problem exists. Previous works posit that some Bantu languages permit the demonstratives (hereafter DEM) to adjoin to the left and right of the head-noun (Carstens, 1993; Lusekelo, 2013b). If this is the syntactic behaviour of Bantu languages, then is it the DEM (with its ϕ-features) which moves to the Spec position of the whole DP or *number* (realised in the morphology of noun class prefixes (henceforth NCP)) together with the noun-stem which moves to the Spec position of the whole DP? Put in other words, in instances that the DEM precedes the head-noun, does the feature *number* precede DEM?

The last question surrounds movement within Bantu DPs. It is argued that NPs move from the lower rank to the highest rank (Danon, 2011). Such movements of the NPs to the Spec position of the Bantu DP are attested across Bantu family (Carstens, 1993, 2008; Letsholo, 2004). Apart from the noun-classes which are nominal prefixes, the other dependents in Bantu DPs include, among others, numerals and quantifiers, which are manifested as independent lexical-entries in Bantu DPs (Zerbian & Krifka, 2008). Thus, the question arises: in the movement of the NPs, since ϕ-features are available in the highest Spec position of the Bantu DP, what warrants the QuantP (which embraces quantifiers, numerals and ordinals in the Bantu family (Zerbian & Krifka, 2008)) to appear beneath the POSSP and DEMP in the architecture of Bantu DPs?

These three questions guide this paper to address the realisation of ϕ-features in the architecture of the Bantu DPs and vPs. To that effect, after this introduction, I proceed to advance arguments in this paper as follows. Section 2 provides the basic information about ϕ-features not only in Kiswahili and Kinyakyusa but also in other language families. Section 3 discusses the manifestation of ϕ-features (*number*, *gender*, *case* and *person*) in Bantu DPs and vPs respectively. The main intention of this section is to expose the manifestations and the hierarchy of ϕ-features within Bantu DPs. Sections 4 presents arguments in favour of the manifestation *number*, *case* and *person* in Bantu vPs. The conclusion is provided in Section 5.

The ϕ-features in Kiswahili and Kinyakyusa

There seem to be various differences in realisations of the ϕ-features in several categories across languages. This is because some languages underscore indication of some features, e.g. Russian underlines the feature *gender* (Corbett, 2008) while Maasai primarily indicates features *gender* and *number* (Koopman, 2003; Shirtz & Payne, 2013). Also, there are instances where scholars arrive at different opinions on the same matter.

For instance, Contini-Morava (1994), Schadeberg (1992, 2001), and Carstens (1993, 2008) appear to differ only slightly in the way they analyse the ϕ-features *gender* and *number* in Kiswahili. To offer the best discussion, this section, therefore, is envisaged to provide guiding descriptions of the ϕ-features examined herein

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Basic Information

Bantu languages demonstrate both *Concord* (agreement within DPs) and *Agree* (agreement between DPs and vPs) through prefixal elements and pronominal enclitics, which seem to have commonly similar morphology of about 18 noun classes.[4] For the purpose of clarity, in the following examples, I show *Concord* and *Agree* patterns in Kiswahili (2-3) and Kinyakyusa (4-5)[5]. [All morphological elements related to ϕ-features are bolded].

(2) ***Mu**-uguzi* ***w**-ake* ***a**-me-**m**-let-e-a* [Kiswahili]
1-nurse 1-POSS **3SG.SBJ**-PST-**3SG.OBJ**-bring-APPL-FV

***m**-toto* ***m**-pole* ***ki**-atu* ***ki**-zuri*
1-child 1-ADJ 7-shoe 7-ADJ
'His nurse has brought the kind child a nice pair of shoes.'

(3) ***Wa**-uguzi* ***w**-ao* ***wa**-me-**wa**-let-e-a*
2-nurse 2-POSS **3PL.SBJ**-PST-**3PL.OBJ**-bring-APPL-FV

***wa**-toto* ***wa**-pole* ***vi**-atu* *vi-zuri*
2-child 2-ADJ 8-shoe 8-ADJ
'Their nurses have brought kind children nice pairs of shoes.'

(4) *U-mama* ***a**-li-**m**-p-el-ile* *i-**fi**-ndu* [Kinyakyusa]
AU-1.mother **3SG.SBJ**-PST-**3SG.OBJ**-give-APPL-PFV AU-8-food

u-Lugano *u-**mw**-ana*
AU-1.Lugano AU-**1**-child
'The mother gave the child the food for Ms. Lugano.'

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[4] Basically Bantu languages demonstrate different numbers of nominal classes, ranging from reduced nominal classes, e.g. Kiswahili with 14 classes (Contini-Morava, 1994), through 18 noun classes in several Bantu languages, e.g. Kinyakyusa (Maho, 1999; Lusekelo, 2009a), to a few Bantu languages with 22-23 noun classes, e.g. Luganda with up to 20-22-23 classes (Katamba, 2003:109).

[5] This is apparently presented explicitly in numerous existing studies. Some scholars (e.g. Massamba, 1995; Maho, 1999) presents how nominal prefixes demonstrate Concord while other studies (e.g. Riedel, 2009) offer detailed descriptions of the licensing of the arguments of verbs, through pronominal enclitics, in the Bantu family.

(5) *A-**ba**-mama* *ba-Ø-ba-p-el-ile* *i-fi-ndu*
AU-**2**-mother 3PL-SBJ-PST-3PL.OBJ-give-APPL-PFV AU-8-food

a-ba-Lugano *a-ba-ana*
AU-**2**.Lugano AU-**2**-child
'Mothers gave the children the food for the Luganos.'

The *concord* is demonstrated by the nature of nominal classes in Kiswahili and Kinyakyusa (see examples above) as available in the Bantu family as well (Maho, 1999; Katamba, 2003). Kiswahili examples (2-3) show that the *number* in singular – plural pattern is indicated by nouns such as *muuguzi/wauguzi* 'nurse(s)' with classes *mu – wa* and *kiatu*/*viatu* 'shoe(s)' with nominal classes *ki – vi*. In addition, *concord* is signaled by the feature *number* that is manifested in noun-adjective patterns such as *kiatu kizuri* 'a good pair of shoes' vs. *viatu vizuri* 'good pairs of shoes'. Kinyakyusa examples (4-5) indicate singular–plural distinctions within nouns *umwana/aβaana* 'child(ren)' with the singular class 1 *umw-* and plural class 2 *aβa-*.

In fact, *Agree*, which is displayed by the same examples, needs detailed explanation. The simplest clarification can be provided through the utilization of the guidelines available in the Split VP hypothesis (Lasnik, 2003; Alexiadou, 2004). Under split VP hypothesis, the verb shell divides, at least for this purpose, into two parts, namely vP (or IP) and VP. The former controls agreement with DPs outside the verb shell, i.e. with the subjective case, while the latter dictates agreement with DPs within the verb shell, i.e. the objective case. In examples (2-5) above, the agreement to the subjective case is made possible through the use of affixes *mu-a* and *wa-wa* for Kiswahili and *umw-a* and *aβa-βa* for Kinyakyusa. Likewise, the agreement to the objective case is through the forms such as *wa-wa* in Kiswahili (3) and *βa-aβa* in Kinyakyusa (5).

The *Agree* patterns in examples above indicate the ϕ-features *number*, *case*, *gender* and *person* in the vP agreement structure. In this case, the shape of the agreement affixes marks *number*, *case* and *person* and because *a-* and *wa-* indicate third person singular in nominative and accusative cases (2-3) while *βa* marks third person plural in nominative and accusative cases (4-5).

As indicated in the foregoing discussion, it appears that the morphologies of Kiswahili and Kinyakyusa vividly allow marking of three of the ϕ-features, i.e. *number* (indication of singular and plural in both the DPs and vPs), *case* (the marking by agreement with DPs in nominative and

accusative cases), and *person* (marking of first, second and third persons).[6] Thus, in order to have a better understanding of *Concord* and *Agree* in Kiswahili and Kinyakyusa, perhaps the essence of each ϕ-feature should be provided first before we dwell into intricate theoretical issues in syntax of these languages.

Number

The ϕ-feature *number* referred to in this paper is inflectional in nature which at least shows singular and plural distinctions in a grammar of a given language. Corbett (2004) offers a detailed description of the diverse and complex *number* system across world languages[7]. Two important points are worth highlighting here: (i) inflection features which are carried by dependent affixes are more prominence than those embedded in lexical words (see Giusti, 2002); (ii) an obvious fact about Bantu nominal system is the availability of the singular–plural distinction by means of nominal prefixes (see Contini-Morava, 2007).

Various studies on the syntactic structure of Bantu DPs and clauses support the postulations by Corbett (2004) mainly in regard to singular–plural distinction which is attested across Bantu languages (see Guthrie, 1948; Massamba, 1995; Katamba, 2003; Letsholo, 2004; Lusekelo, 2013b). Based on examples (2-5) above, it becomes obvious that nouns such as *muuguzi/wauguzi* 'nurse(s)', *kiatu/viatu* 'shoe(s)' and *umwana/aβaana* 'child(ren)' show singular–plural distinctions by means of nominal prefixes *m-/wa-*, *ki-/vi-* and *umw-/aβa-*[8]. Therefore, nouns with paired singular and plural prefixes are placed in one class, as exemplified for Kiswahili (6) and Kinyakyusa (7).

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[6] As will be discussed in detail below, one of the ϕ-features, namely *gender*, is not given prominence in these languages.

[7] There are about five assumptions about feature *number* across world languages (Corbet, 1991:1–2): 1. *Number is just an opposition of singular versus plural:* There are indeed languages with this basic opposition, there are also many languages with richer systems, with a dual for two real world entities, some with a trial for three, others with a paucal for a small number. 2. *All relevant items (nouns, for instance) will mark number:* There are languages where the proportion of items for which number is relevant in this sense is quite small, and others where number marking is practically always available. 3. *Items which do mark number will behave the same:* Things are more interesting than that, e.g. Maltese has just a few nouns which have singular, dual, and plural, while the majority of nouns and the pronouns have only singular and plural. 4. *Number must be expressed:* There are instances where the marking of number is optional, and there are languages with special forms which allow the use of a noun without any commitment to the number of entities involved. 5. *Number is a nominal category:* Apart from nouns and pronouns, there are languages where number is a verbal category, marking the number of events rather than the number of individuals.

[8] Guthrie (1948) claims that another significant feature for Bantu languages is that even mass nouns and non-countable nouns tend to reveal prefixal elements which designate singular-plural distinctions.

(6)

Paired	**Singular**	**Plural**	**Gloss** [Kiswahili]	**classes**
I	*muuguzi*	*wauguzi*	nurse(s)	
II	*mnazi*	*minazi*	coconut tree(s)	
III	*jiwe*	*mawe*	stone(s)	
IV	*kiti*	*viti*	chair(s)	
V	*nyumba*	*nyumba*	house(s)	
VI	*uzi*	*nyuzi*	thread(s)	
VII	*ugonjwa*	*magonjwa*	disease(s)	

(7)

Paired	**Singular**	**Plural**	**Gloss**	[Kinyakyusa]	**classes**
I	*ʊmʊndu*	*aβandu*	person(s)		
II	*ʊmpiki*	*imipiki*	tree(s)		
III	*iβwe*	*amaβwe*	stone(s)		
IV	*ɪkɪtili*	*ɪfitili*	cap(s)		
V	*inyumba*	*inyumba*	house(s)		
VI	*ʊlʊkili*	*ingili*	cane(s)		
VII	*akakuku*	*utukuku*	chick(s)		
VIII	*uβuβine*	*uβuβine*	sickness(s)		

Three basic problems associated with the singular–plural pattern in indication of the feature *number* are apparent in the literature. First, it is difficult for someone to notice a noun prefix in isolation as belonging to a given noun class' (Massamba, 1995:611). Second, since some classes (mainly classes for abstract nouns, verbal nouns and locative nouns) do not show singular–plural differences, we cannot establish, using this approach, that all classes have their plural counterparts (Ibid: 612). Third, there are cases which involve a plural pairing with multi-singulars hence difficult to determine the function of classes. Maho (2003:161) states that some of the plural classes pair with more than one singular class. This is indicated in classes such as 10 which takes several singulars: *ufa-nyufa* 'crack(s)' [6/10], *nyumba-nyumba* 'house(s)' [9/10], *ubao-mbao* 'timber' [11/10], etc. (See Contini-Morava (1994) for further cases in Kiswahili).

Due to the three problems mentioned above, as well as other imbalances in the patterning of singular–plural feature, there are alternative patterns suggested for Bantu languages by scholars such as Carstens (1993, 2008) and Schadeberg (2001) for Kiswahili and Rugemalira (2014) for Mashami. Carstens, on the one hand, argues that features *number* and *gender* are fused in prefixal elements in Kiswahili (and other Bantu languages). According to her, examples *mzazi/wazazi* 'parent(s)' and *kiatu/viatu* 'shoe(s)' show two separate genders (see Section 2.4 for detailed discussion).

Schadeberg, on the other hand, argues that the inflectional number category [singular/plural] is restricted to the second nominal classification that is based on animacy (Ibid: 15). In this regard, *mzazi/wazazi* 'parent(s)', *kiatu/viatu* 'shoe(s)' and *umwana/abaana* 'child(ren)' show *number* distinctions. In other cases, the singular-plural formation in Bantu languages is a derivational process which does not support agreement, e.g. *mfalme* 'king' vs. *ufalme* 'kingship' and *apa* 'swear' vs. *kiapo* 'oath' (Ibid.:10–11).

Rugemalira argues that the singular and plural alternation of noun classes is explicitly and typically 'an inflectional process to mark a number contrast' (Ibid.:12). However, he argues that in other cases the change of noun class may result in that 'nouns may relocate into other classes to convey various shades of meaning' (Ibid.:12) hence a derivational process, e.g. *nríngi* 'agitator' vs. *uríngi* 'betrayal' (Ibid.:13). This proposition is a counter-argument against the fact that the feature *gender* is embedded in nominal classes (see Section 2.4 for further discussion).

In this paper, attention is paid to the manifestation of the grammatical feature *number* which is utilized in the *Concord* and *Agree* processes in Minimalist approach. More specifically, I suggest that *number*, an independent ϕ-feature, be treated as a marker of singular–plural distinction in the grammar of Kiswahili and Kinyakyusa.

Case

Various nouns and nominal expressions demonstrate change in morphology to designate *case*, i.e. a specific function in an affirmative sentence (Corbett, 2008). While the traditional *cases* (e.g. nominative, accusative, genitive, dative, locative, ablative etc.) can just as readily be identified by their affixes, other languages demonstrate *case* by other means such as syntactic operations (Spencer, 2008). In the minimalist approach to syntax, *case* as a ϕ-feature is basically checked by means of morphology (affixal elements), as indicated by the Hungarian suffix *-t* in example (8) (Ibid.:41). It means that since this feature is manifested in a dependent affix-like element, it might be higher than other features realised in lexical elements (Giusti, 2002).

(8) *Felepitjuk a haza-**t** a magunke-**t*** [Hungarian]
we.build the house-**ACC** the ours-**ACC**
'We are building the house, our own one.'

In other languages, the feature *case* is also indicated by lexical entries. In German, for instance, gender marking is primarily marked by the articles within DPs. Dittmar et al. (2008:1154) summarize the grammar of German

case marking by saying 'in active transitive sentences, the agent of the action is subject and is marked with nominative case marking, and the patient is direct object and is marked with accusative case marking.' Examples such as *der Hund* 'the dog' shows the pattern: article ((in)definite) + case (nominative) + noun-stem. Likewise, *den Hund* 'the dog' indicates the structure: article ((in)definite) + case (accusative) + noun-stem. In German, articles manifest in dissimilar case-patterns irrespective of their positioning in the sentence, as in (9) (Ibid:1155). Since this kind of case is manifested in lexical words, it might be located lower in the tree diagram (Giusti, 2002).

(9) ***Den*** *Hund beisst* ***der*** *Mann* [German]
the.ACC dog bites the.NOM man The dog bites the man.'

It becomes apparent now that *case* is a functional projection of the nominals across *case* marking languages and other languages which have no case marking morphology (Spencer, 2008)[9]. In line with Fillmore (1968), *case* is tied up to semantic roles performed by specific nominals in a sentence, e.g. agentive (nominative), benefactive (accusative), (dative) adverbial (locative) case etc.

On grammatical *case* in African languages, Kӧnig (2008) says that a *case* system is an inflectional system of marking nouns or noun phrases for the type of relationship they bear to their heads. She further argues that inflectional systems are expressed by affixes, tone, accent shift, or root reduction; adpositional system are included only insofar as they encode core participants such as subject [S], adverbials [A] and object [O]. Since *case* is manifested in affix-like elements in African languages, it might be located higher in the tree diagram (Giusti, 2002).

[9] Unlike Bantu languages, some languages such as Russian, the feature *case* is realized in six regular patterns in nouns, e.g. *komnata* 'room' in both singular and plural: nominative (*komnata/komnaty*), accusative (*komnatu/komnaty*), genitive (*komnaty/komnat*), dative (*komnate/komnatam*), instrumental (*komnatoj/komnatami*)and locative (*komnate/komnatax*) (Corbett, 2008:5).

Assumptions about *case* in languages (Corbet, 2008): 1. Canonical features and their values have a dedicated form (are 'autonomous'). Case has specific morphological markers (Ibid:7). 2. Canonical features and their values are uniquely distinguishable across other logically compatible features and their values. While *case* is expressed together with *number* (and also with *gender* in adjectives and some pronouns) the different values are normally distinguishable in the different combinations (Ibid:8). 3. Canonical features and their values are distinguished consistently across lexemes within relevant word classes (Ibid: 8). In Russian, the main *case* values are close to canonical in this respect, since they are distinguished by almost all nouns, adjectives and pronouns (Ibid.:10). 4. The use of canonical morphosyntactic features and their values is obligatory (Ibid:10). Thus, in Russian, it is certainly true that the use of the main six case values is obligatory (Ibid:11).

Previous studies which deal with agreement in Bantu languages demonstrated how the nominative case and the accusative case are indexed by verbal affixes (see Letsholo, 2004; Marten, 2000; Riedel, 2010; Lusekelo, 2013b). It is apparent that grammars of many Bantu languages reveal at least two *cases*, in this sense, namely the nominative (subject case) and accusative (objective case). Thus, since *case* is limited in the Bantu family, only nominative and accusative cases are apparently illustrative examples below.

(10) ***Mu****-uguzi* ***a****-me-****m****-let-e-a* ***m****-toto vi-atu* [Kiswahili]
1-nurse **3SG.SBJ**-PST-**3SG.OBJ**-bring-APPL-FV 1-child 8-shoe
'The nurse has brought the child a pair of shoes.'

(11) *A-****ßa****-mama* ***ßa****-li-****m****-p-ele u-****Luyano*** *i-fi-ndu* [Kinyakyusa]
AU-**2**-mother **3PL-SBJ**-PST-**3PL.OBJ**-give-PFV AU-1.Lugano
AU-8-food 'Mothers gave Ms. Lugano the food.'

Based on Split VP hypothesis (Lasnik, 2003), for instance, (10) has *muuguzi* 'nurse' in the in the nominative case, which is governed by the agreement in the vP shell. On the other hand, (10) has *mtoto* 'child' in the accusative, which is governed by the lexical verb (VP) (Alexiadou, 2004). Likewise, the Kinyakyusa example (11) has *aßamama* 'mothers' in nominative case (as licensed by agreement of the vP) and *uLuyano* 'Ms. Lugano' in the accusative, as governed by VP. This is possible by incorporation of the subjective markers such as *a-* in (10) and *ßa-* in (11) and the objective markers such as *m-* in (10) and *m-* in (11) respectively. This is typical property of the syntax of Bantu languages (Letsholo, 2004; Marten, 2000; Riedel, 2010; Lusekelo, 2013b).

Gender

The notion grammatical *gender*, which is another focus area of this paper, is defined from linguistic point of view as a system of classes of nouns which trigger specific types of inflections in nominal and the associated words, such as possessives, adjectives, and verbs (Corbett, 1991). Usually in gender marking languages, *gender* is divided into three, namely feminine, masculine and neuter (Ibid). Maasai example in (12) displays male-female distinctions (Payne, 1998:160).

(12) *enâ kíné* 'this (female) goat' [Maasai]
this. FEM goat
elê kíné 'this (male) goat' this.MASC goat

Though it is traditionally associated with biological sex, other features such as size, taste, height, length etc. also convey *gender* marking in several languages (see Payne, 1998, 2012; Shirtz & Payne, 2013).[10]

Bantuists (except for Carstens, 1993, 2008; Schadeberg, 2001 and Rugemalira, 2014) establish that Bantu languages have no typical *gender* system, rather possess nominal classification which indicate mainly *number* within DPs and with verbs (Contini-Morava, 1994, 2007; Massamba, 1995; Katamba, 2003). Nonetheless, there are instances in which the literature assumes both *number* and semantic patterns contribute to Bantu noun classifications (Maho, 1999). Kinyakyusa, for instance, demonstrates nominal classifications, agreement patterns, and semantic distributions in (13) (Lusekelo, 2009a:312).

(13) *Patterns of nominal classification in Kinyakyusa*

Cl	Prefix	Concord	Agree	Example	Gloss	Semantics
1	ʊmʊ	ʊmʊ	a	*ʊmwana afikile*	a child arrived	human
2	aβa	aβa	βa	aβana aβafikile	children arrived	human
3	um	um	ɣu	umpiki ɣuɣwile	a tree fell	plants
4	ɪmi	ɪmi	ɣi	ɪmipiki ɣiɣwile	trees fell	plants
5	ɪli	ɪli	li	ɪliso liswile	an eye swell	body parts
6	ama	ama	ɣi	amaso ɣiswile	eyes swell	body parts
7	ɪki	ɪki	ki	ɪkitili kisatwike	a cap fell	artefacts
8	ɪfi	ɪfi	fi	ɪfitili fisatwike	caps fell	artefacts
9	N	N	ji	inyundo jiɣwile	a hammer fell	objects
10	N	N	si	inyundo siɣwile	hammers fell	objects
11	ʊlʊ	ʊlʊ	lʊ	*ʊlʊpaso luɣwile*	a fence fell	long artefacts
12	aka	aka	ka	*akaɣwata kafikile*	a calf arrived	diminutives
13	ʊtu	ʊtu	ka	*utuɣwata tufikile*	calves arrived	diminutives
14	ʊβʊ	ʊβʊ	βʊ	ʊβʊndʊ βʊnunu	humanity is good	abstract
15	uku	uku	ku	ukuseka kuβiβi	to laugh is bad	infinitives
16	pa pa	pa	pakaja panandi	at a homestead is small		locatives
17	ku ku	ku	kukaja kunandi	at a homestead is small		locatives
18	mʊ mʊ	mu	nkaja munandi	In a homestead is small		locatives

Other scholars (e.g. Schadeberg, 1992; Carstens, 1993) argue that Bantu languages lack specific *gender* system of the kind mentioned in gender-marking languages such as Maasai (Payne, 1998, 2012). Bantu languages possess some derivational system which combines number and semantics

[10] *Gender*, available in gender-marking languages, is associated with the biological differentiations of sex, and socio-pragmatic creations on size, weight, height etc. in a given society. For instance, in Maasai, 'gender system is cognitively-semantically and pragmatically quite transparent.... The Feminine gender form may indicate biologically feminine and small entities.... The Masculine gender form may indicate biologically masculine and large entities (Payne, 2012:59).

of nouns and its modifiers (Schadeberg, 2001; Carstens, 2008). However, a re-evaluation of such suggestions concludes that the ϕ-feature *gender* is not really attested in Kiswahili and Kinyakyusa, rather derivation is available in Bantu nominal classes.

Specifically, Carstens (2008:135) suggests that 'prefixes are gender-specific number morphology'. It means that the feature *gender* is associated with specific prefixes attached to specific nominal stems. Thus, in Carstens (1993), for instance, it is argued that in Bantu languages nominal stems have inherent classes accounted for gender system. She argues further that 'prefixes are specified only for *number*. The *gender* specification is supplied entirely by the noun' (Ibid.:155). She maintains her argument as she suggests that specific prefixes to be selecting heads might suppose that gender as a general category is a head selecting nominal complements, or perhaps that each of the Bantu genders is a head selecting stems with matching gender specifications. The prefixes themselves would spell out singular or plural on a gender-specific basis, at the point where number features are added (Carstens, 2008:139).

Carstens (2008:136) gives the following Kiswahili Bantu genders[11]: Gender A: stems of Classes 1/2 e.g. *mwanafunzi/wanafunzi* 'student(s), Gender B: stems of Classes 3/4, e.g. *mti/miti* 'tree(s)', Gender C: stems of Classes 5/6, e.g. *tawi/matawi* 'branch(es)', Gender D: stems of Classes 7/8, e.g. *kiti/viti* 'chair(s)', Gender E: stems of Classes 9/10, e.g. *ndege/ndege* 'bird(s)', Gender F: stems of Classes 11/10, e.g. *ubao/mbao* 'lumber(s)'. As for examples (1-2) above, *mtoto/watoto* will be Gender A and *kiatu/viatu* is Gender D. (See details and discussion in Section 3).
Due to the contradicting ideas, in this paper, the grammatical feature *gender* is approached with caution. It is mentioned, in passing, in Sections 3.1 and 3.2, so as to establish a proper hierarchical difference between ϕ-features.

[11] Although they offer different groups, both Schadeberg (1992:15) and Carstens (1993:154) suggest genders in Kiswahili but Schadeberg, gives slightly different six genders: GENDER A 1/2 *mtoto/watoto* 'child/ren', GENDER B 3/4 *mnazi/minazi* 'palm tree(s)', GENDER C 5/*6 jicho/macho* 'eye(s)', *kitanda/vitanda* 'bed(s)', GENDER D 9/10 *ndizi/ndizi* 'banana(s)', GENDER E 11/10 *ukuni/kuni* (stock of) firewood', and GENDER F 11/6 *ugonjwa/magonjwa* 'disease(s)'. Carstens offers five genders: 1/2, 3/4, 5/*6*, 7/8 and 9/10. These suggested *genders* do not entirely offer the three regular patterns [masculine-feminine-neuter, as Payne (2012) and Corbett (1991) indicate] rather Schadeberg (1992:15) says 'most noun classes can be paired into classes, one class being singular, the other the plural. Genders are more or less vaguely connected with specific areas of meaning'. Schadeberg (2001) suggests that genders in Kiswahili, as well as in other Bantu languages, are both inflectional (as singular-plural markers on animacy grounds) and derivational, in several occasions, in change of meaning of nouns.

Person

The ϕ-feature *person* is manifested in various pronouns. Generally, it has first person (*I, we, us*), second person (*you*) and third person (*he, she, it, them*). In the Bantu language Kiswahili, there are pronouns referring to person, e.g. *mimi* 'I', *sisi* 'us', *wewe* 'you' and *wao* 'they, them' (Contin-Morava, 2007). Kinyakyusa data show that the language has such pronouns marking *person*: *une* 'I', *uswe* 'us', *uɣwe* 'you (sg)', *umwe* 'you (pl)', *abene* 'they, them'.

The feature *person* seems to help to realise the Concord and Agree across world languages (Danon, 2011). The feature *person* is available in example sentence (14) for Kinyakyusa and (15) for Kiswahili.

(14) *Lıınga* ***βa****-fik-ıle* *apa* *po* *a-**tu**-ku-**βa**-p-aɣa*
when **3PL.SBJ**-arrive-PFV here then FUT-**1PL.SBJ**-INF-**3PL.OBJ**-give-HAB
'When they arrived here, then we will give them.'

(15) *Tu-ki-maliza* *kazi* *tu-ta-val-ish-w-ataji*
1PL.SBJ-finish 5.work 1PL-SBJ-FUT-wear-CAUS-PASS-FV
5.crown
'When we finish the work, we will be crowned.'

The affixes that realise the feature *person* are attached to verbal elements in example sentences above. In (14) the third person is marked by the affix ***βa*** 'they, them' [third person] which is attested in both dependent and independent clauses for Kinyakyusa. As illustrated in (15), the same is attested in Kiswahili where by an affix ***tu*** 'we' [first person] is attached to the verbs and it functions to manifest the first person. (Section 3.2 offers a description of this feature as it manifests in pronominal expressions in these languages).

Concord in Kiswahili and Kinyakyusa

The different realisations of three ϕ-features, namely *gender*, *number* and *person* in Bantu DPs is offered in this section. The theoretical analysis herein provides a substantive hierarchical structure of these features within Bantu DPs.

The Hierarchy of ϕ-features _Number_ and _Gender_

The separation of ϕ-features *number* and *gender* in DPs has created a debate. Some scholars postulate that *gender* and *number* are fused together in certain African languages (Koopman, 2003; Carstens, 2008) while others claim that the order of *gender* and *number* displays separate sources in Semiotic and Romance languages (Alexiadou, 2004). There are

also scholars who argue that number phrase (NumP) and gender phrase (GenP) are proper projections of DPs, inter-alia from different heads (Danon, 2011; Shirtz & Payne, 2013). In this paper, I disentangle the hierarchy of these features by arguing that NumP occurs higher than GenP within DPs. The main evidence to substantiate this postulation is that the feature *number* is fused within the lexical nouns in Kiswahili and Kinyakyusa while the feature *gender* is not vividly expressed.

On theoretical grounds, the postulation NumP > GenP is defended by the overt realisation of linguistic materials for *number* on S-structures. For instance, once the feature *number* is provided in the noun, it surfaces explicitly as an affix in modifying (overt) elements within a DP, hence we obtain Num + stem > Modifiers in Bantu languages. The fact that overt spell-out of the feature *number* is possible through affixation results into it being placed higher in the hierarchy because functional heads which are manifested overtly in affixes are higher in DPs (Giusti, 2002; Lasnik, 2003). This claim is illustrated in (16) whereby the feature *number* [singular in this case] occurring within the lexical noun *mfano* 'an example' is transferred to the modifiers such as a numeral *mmoja* 'one' and an adjective *mfupi* 'short'. Example (17) indicates the marking of *number* [in plurality] in the Nyakyusa DP. The nominal-affix *ßa-* manifests in the lexical-noun *aßaaputi* 'priests', the numeral *ßahano* 'five' and adjective *aßakeke* 'young'. Thus, it is the lexical noun with its feature *number* which discharges the ϕ-feature to its modifiers.

(16)	*m-fano*	***m****-moja*	***m****-fupi*	[Kiswahili]
	3.SG-example	**3.SG**-NUM	**3.SG**-ADJ	'one short example'
(17)	*a-****ßa****-aputi*	***ßa****-hano*	*a-****ßa****-keke*	[Kinyakyusa]
	AU-**3.PL**-priest	**3.PL**-NUM	AU-**3.PL**-ADJ	'five young priests'

This postulation is similar to the hierarchy attested in Romance languages whose grammars permit overt realisations of *number* but not *gender* (Alexiadou, 2004). This is demonstrated by the Spanish examples (18-19) in which *number* is primarily and inherently expressed by the articles *la* and *el* [in this case singular] while *gender* is introduced later, by the suffixal markers *-o* 'masculine' and *-a* 'feminine' (Ibid.:16).[12]

(18) *la* *muchach-a* *american-a* [Spanish]

[12] In gender-marking languages such as Maasai, the hierarchy *number*>*gender* is not acceptable. Koopman (2003:213) proposes the hierarchy GenP > NumP > CaseP for Maasai DP. It means that in gender-marking languages *gender* is above *number*, which manifests at lower rank. Danon (2011) also accepts that the feature *gender* is fused in lexical-nouns, hence occurs higher, while the feature *number* is obtained at an intermediate node.

the. **SG** girl-FEM ADJ-FEM 'the American girl'

(19) *el muchach-o american-o* the.**SG**boy-MASC ADJ-MASC
'the American boy'

he *genders* suggested to be attested in Bantu DPs by Carstens (1993, 2008; Schadeberg, 1992, 2001) are not primarily expressed in the syntactic structures on the surface. It is the feature *number* which is explicitly manifested in the S-structure. Carstens (1993) argues that in Bantu languages nominal stems have inherent classes accounted for *gender*, a system which absorbs both *number* and *gender*. She argues further that 'prefixes are specified only for *number*. The *gender* specification is supplied entirely by the noun' (Ibid.:155). This claim, which is also maintained in her recent work (Carstens, 2008), is porous because genders are not really expressed overtly by noun-classes. The prominence of the feature *number* is evident in the concord, as illustrated in (20-22) for Kiswahili. This happens in the way affixes for *number* [*m-* and *ji-* for singularity and *ma-* for plurality] are manifested in the lexical-nouns and its dependents. In example (22), the derivational prefix *ji-* [augmentative, pejorative] does not discharge the feature *gender* within the concord of DP because it is not prominent in the language.

(20) ***M**-tu* ***m**-fupi* ***a**-me-fik-a* [Kiswahili]
1-person **1**-ADJ **3SG.SBJ**-PST-arrive-FV 'The short man has arrived.'

(21) ***Ji**-tu* ***Ø**-fupi* ***li**-me-fik-a*
5-person 5-ADJ **3SG.SBJ**-PST-arrive-FV
'The giant short person has arrived.'

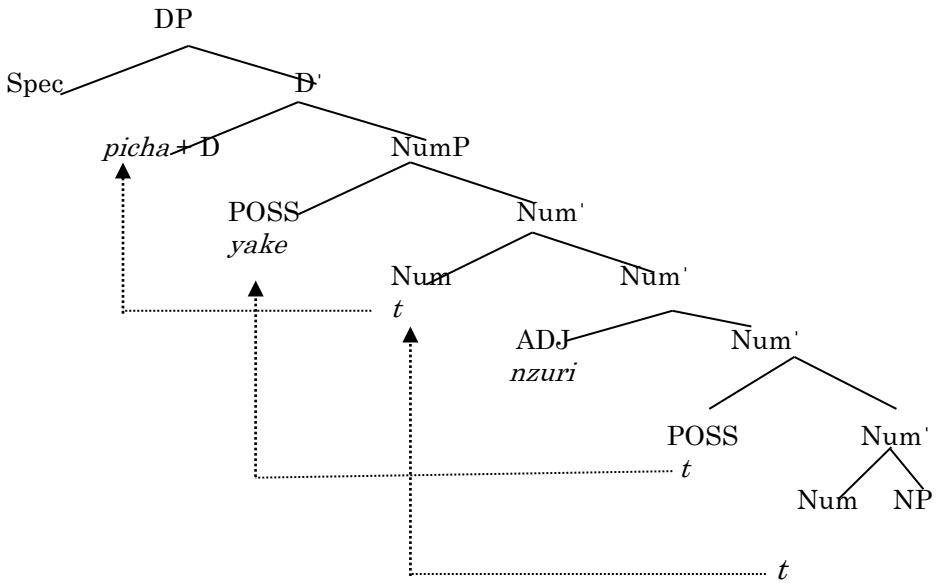
(22) ***Ma**-ji-tu* ***ma**-fupi* ***ya**-me-fik-a*
5-6-person 1-ADJ **3SG.SBJ**-PST-arrive-FV
'The giant short people have arrived.'

It is argued that the head of a DP is a D which is occupied by the lexical noun, such as *picha* 'picture' (Carstens, 1993), because Bantu languages have no overt determiners[13]. She argues that due to Move(ment), the lexical noun moves from an NP at the bottom of the tree to the Spec of the DP in order to check for the *number,* as in (23). An intermediate node is

[13] The primary determiners are articles, e.g. *a*, *the*, *an* as attested in English or *le* and *une* as found in French (Jones, 1996). Some scholars argue that Bantu languages have augments (pre-prefixes) which provides a function similar to articles (Visser, 2010; Allen, 2014). Other Bantuists find it difficult to comprehend the suggestion that pre-prefixes function as articles in Bantu languages because the main function of pre-prefixes is not a straightforward one (Maho, 1999).

occupied by the possessive *yake* 'her' which occurs higher than an adjective *nzuri* 'good'. It is also argued that there exists an intermediate node whose head is number, hence NumP (Ibid.).

(23)



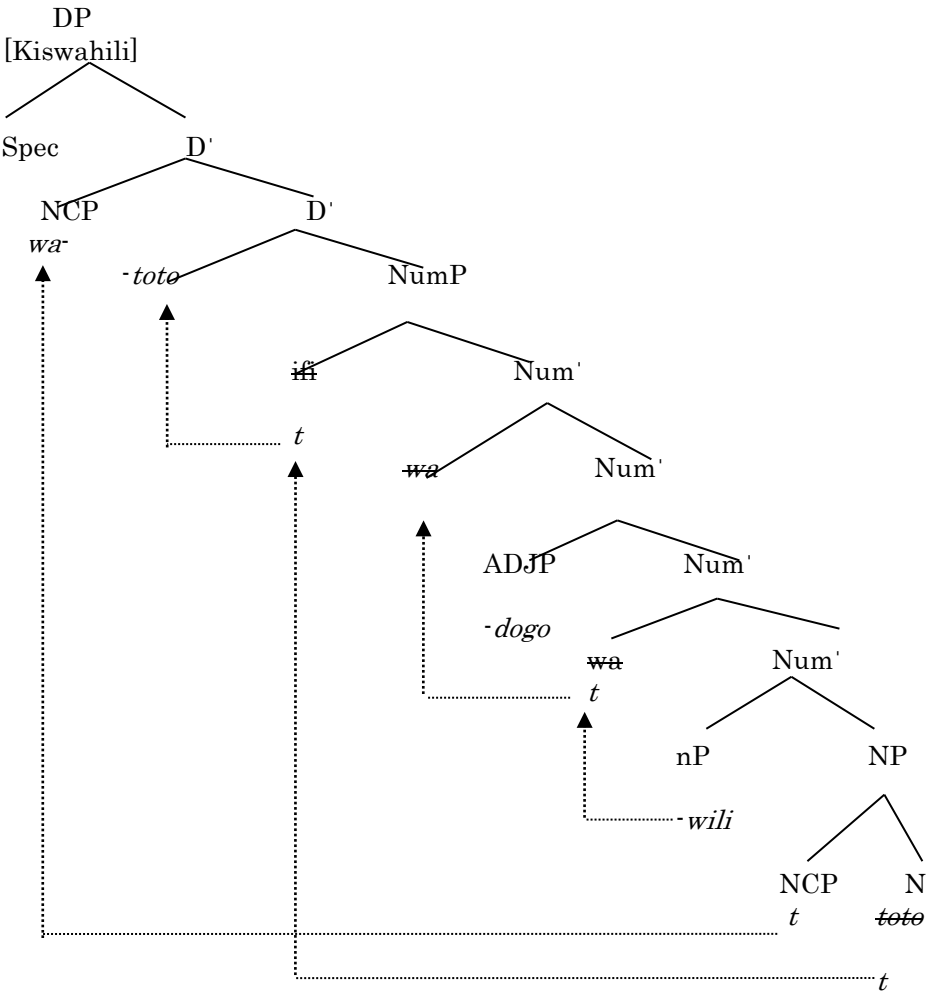
Contrary to Carstens (1993, 2008), I defend the idea that the feature *number,* which is (overtly) expressed in NCP, occupies the highest Spec position of the Bantu DP, as illustrated in (23-24). This is supported by the evidence that in Eastern Bantu languages the feature *number* is embedded in nouns which are fully expressed in (overt) nominal prefixes (Contini-Morava, 1994; Lusekelo, 2013a). The second evidence is, since it is embedded in nouns, the feature *number* is assigned to nouns first. I argue that the feature class (*gender*) is assigned later, say for pragmatic reasons.[14] Further evidence in support of the theorization that the ϕ-feature *number* is higher than *genders* is semantic in nature. The meanings of nouns without feature *number* become uncertain or vague. All these pieces of evidence support the postulation that any ϕ-feature which is assigned later occupies a lower position (Alexiadou, 2004).

Moreover, the affixal *number* available in the lexical-noun transfers its property across modifiers through Move within DPs. This is the reason that (24-25) have *t* [Trace] for the number affixes. It means that the

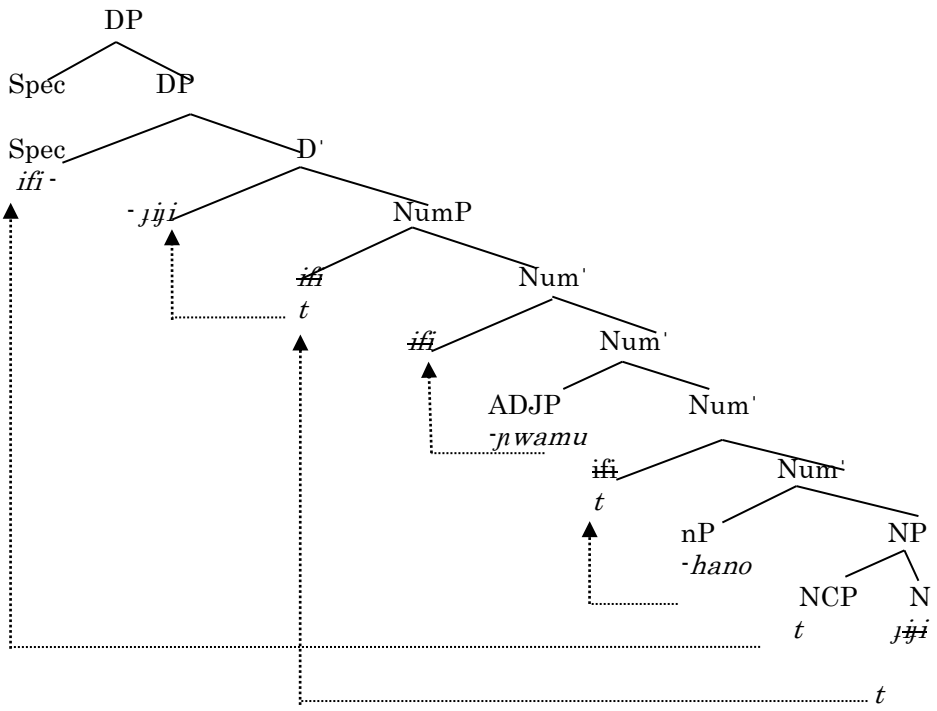
[14] It is obvious that any changement of the nominal prefixes leads to the alterations of meanings in nouns (Carstens, 2008; Rugemalira, 2014). I argue that this is meant to offer pragmatic ends, e.g. *mtu* 'any person' vs. *jitu* 'a bad person, a gigantic person' in Kiswahili or *mbene* 'goat' vs. *kapene* 'a small goat' in Kinyakyusa.

lexical-nouns *watoto* 'children' and *ifiŋŋi* 'villages' carry *number* which governs concord across modifiers, namely adjectives such as *-dogo* 'small' and *ŋwamu* 'big' and lexical numerals, e.g. *-wili* 'two' and *fihano* 'five' etc. in (24) and (25) respectively.

(24)



(25)



In this paper, I propose three steps to the proper manifestations of ϕ-features in Kiswahili and Kinyakyusa. For each proposal, some explanations are necessary for the better understanding of trees (24) and (25) above. Firstly, the noun class prefix (NCP) occupies the Spec position of the DP because it takes the left-most position. Rizzi (1997) argues that the left-most position is an important constituent in a phrase and it becomes the head of the phrase. As the first step, the NCP moves from the NP at the bottom of the DP to the Spec of the DP, the place where it takes its highest position. Based on its positioning, I argue that NCP (with the ϕ-feature *number*] occupies the Spec of the DP. Secondly, in examining the arrangement of elements in trees (24) and (25) above, one finds that nominal-stems are supposed to occur at the bottom of the trees under NP. However, since Bantu nominal stems may not convey meanings without prefixes, it follows that noun-stems move to the highest position occupied by NumP, a position adjacent to the NCP in the left periphery. The purpose of this second step of Move(ment) is to obtain the feature *number* thus check it. Thirdly, all modifiers in Bantu DPs tend to Move to the NumP in order to obtain and check for the ϕ-feature *number*. This is the third step which involves many local movements within the DPs.

This postulation is also defended by the fact that the ϕ-features *number* in Bantu languages is separable from the feature *gender*. Since *genders* do not appear to be fused in nominal stems, then they are assigned later. This

entails that *number* is valued earlier than *gender* which is checked later. This kind of argumentation is borrowed from the existing literature. Alexiadou (2004), for instance, argues that in Romance languages *number* is valued first and *gender* is introduced later hence the former is higher than the latter. Danon (2011) argues that for languages with *number,* separate from lexical-nouns, *gender* is valued first because it is higher than *number*. The opposite is a true case for Kinyakyusa and Kiswahili whose grammars permit *number* to be fused in nouns hence it is valued first. *Genders* are assigned on pragmatic goals hence it is valued later.

Introducing the ϕ-feature *person*: Towards the Order of *Number, Gender* and *Person*

For the DP-internal structure, scholars arrive at dissimilar conclusions about the hierarchical order of ϕ-features. For example, Koopman (2003:213) argues that in Maasai the linear order of features is *gender>number>case*; Shirtz and Payne (2013) argue that the order *number>gender>case* is preferred for Maasai. For Kiswahili, Baker (2008) argues that agreement is marked by the features *person*, *number* and *gender* in Kiswahili; Lusekelo (2013a) proposes the order *number>person* for Kiswahili. In general strands, Danon (2011:304) suggests that the hierarchy of ϕ-features *number, gender* and *person* attested across natural language is *gender>number>person*. In this section, based on evidences below, I argue that the canonical order of these features for Kiswahili and Kinyakyusa is *number > gender > person.*

I want to argue in this paper that the conjecture of the structure *number > gender > person* is plausible for Kinyakyusa and Kiswahili. This is because I have already argued that *number*, which is fused in lexical-nouns, occupies a higher position than gender, which is introduced later, for pragmatic purposes. I treat this first approach as a morphological apparatus in assigning hierarchy of ϕ-features. I have also argued that pragmatics serves as a tool to assign ϕ-features in some languages. This is also suggested by Alexiadou (2004) and Shirtz and Payne (2013) who argue that *gender* is assigned later on pragmatic grounds hence it is lower in the hierarchy. I treat this kind of argumentation as a pragmatic target of ϕ-features.

However, the ϕ-feature *person,* which is available in pronominal expressions and vP agreement patterns, needs to be examined in detail. The feature *person* explicitly in pronominal expressions is exemplified in (26-27) for Kinyakyusa and (28-29) for Kiswahili. These examples exhibit that the feature *person* is attested in both DP concord and vP agreement. The concord is demonstrated by *sisi wote* 'all of us' for Kiswahili and *aßo*

ßosa 'all of them' for Kinyakyusa. The vP agreement also indicates the feature *person* in affixes for subjective cases.

(26) ***Umwe*** *mw-esa* ***mu****-lilemo* [Kinyakyusa]
2PL.SBJ 2PL-all **2PL.SBJ**-eat
'You (pl) have all eaten.'

(27) ***Aßo*** *ß-osa* ***Ba****-ø-fik-ile*
3PL.SBJ 3PL-all **3PL.SBJ**-PST-arrive-PFV
'They have all arrived.'

(28) ***Sisi*** *w-ote* ***tu****-me-fik-a* [Kiswahili][15]
1PL.SBJ 1PL-all **1PL.SBJ**-PST-arrive-FV
'We have all arrived.'

(29) ***Nyinyi*** *w-ote* ***mu****-me-fik-a*
2PL.SBJ 2PL-all **2PL.SBJ**-PST-arrive-FV
'You have all arrived.'

The literature on ϕ-features shows that the distribution of *person* morphology is found in verbs and nominals (Jerro, 2013). Jerro states that, 'broadly speaking, verbs are generally the only categories that show *person* agreement' (Ibid.:21). It should be noted here that pronominal expressions also display the feature *person* in Kiswahili and Kinyakyusa, as shown in examples (26-29) above. He argues that adjectives generally show agreement in *number* and *gender* to the exclusion of *person* (Ibid:21). This is also attested in Kinyakyusa and Kiswahili. He convincingly states that in Bantu *person* is found on verbal predicates (Ibid.:22), a behaviour which is found in Kiswahili and Kinyakyusa.

Nonetheless, the present paper wants to question further some of the suggestions in Jerro (2013:23). For example, he claims that 'quantifier *-ese* 'all' is an agreeing determiner in Kinyarwanda'. He also claims that there is 'a non-agreeing quantifier *buri* 'every' and a class of distal and proximal determiners which agree in *gender*, e.g. *uyu* 'this". Supported by Kiswahili and Kinyakyusa data below, I argue in this paper that this is a common phenomenon across Bantu languages. Furthermore this paper further stipulates that, while the quantifier "ALL" agrees in *person* and *number*, a

[15] One of the reviewers suggested that some prescriptive Kiswahili grammarians would not accept these sentences as grammatical. They would rather say *Sisi sote tumefika* and *Nyinyi nyote mumefika* for examples (26) and (27) respectively. This being the case, Kiswahili would behave the same as Kinyakyusa. Nonetheless, to underscore language differences, I will maintain examples given above.

distributive "EVERY/EACH" does not agree in any ϕ-features (*number, gender, case* and *person*) across Bantu languages.

In Kiswahili, for instance, the distributive *kila* 'each/every' does not agree in any ϕ-features (see 30 below)[16] but quantifiers, e.g. *vyote* 'all', agree in feature *number* within the DP, as illustrated in (31) below. The vP-external pattern demonstrates agreement in features *number* and *person* across the auxiliary verb, e.g. *kuwa* 'is/am/was/were/be' and main verb, e.g. *soma* 'read' and *nunua* 'buy' in (30). It is obvious now that the features *number* and *person* are shown by the morphology *tu-* 'plural, first person'. Likewise, in (31), singularity and first person are indicated by the morphology *ni-*.

(30) ***Sisi*** ***tu****-li-kuwa* ***tu****-li-soma* ***kila*** *kitabu ch-ake ki-zuri*
1PL.SBJ **1PL-SBJ**-PST-be **1PL.SBJ**-PST-read **every** 7-book 7-his 7-good
'We used to read any of his good books.'

(31) *Mimi* ***ni****-na-soma* ***vi****-tabu* ***vy****-ake* ***vy****-ote* ***vi****-zuri*
1SG.SBJ **1SG.SBJ**-PRES-read **8**-book **8**-his **8**-all` **8**-good
'I read all his good books.'

Likewise, in Kinyakyusa the distributive *kukuti* 'each/every' does not agree in any ϕ-features (see 32 below). In regards to DP-internal concord, quantifiers, e.g. *-osa* 'all', agree in ϕ-feature *number* within the DP, as illustrated in (33) below.

(32) ***Umwe*** ***mu****-ku-ßombela* ***kukuti iky****-alo* ***ky****-ake*
2PL.SBJ **2PL.SBJ**-INF-weed **every** **7**-farm **7**-his
'You (pl) are weeding any of his farm.'

(33) ***Uywe*** ***ku****-ßombela* ***ify****-alo* ***fy****-ake* ***fy****-osa*
2SG.SBJ **2SG.SBJ**-weed **8**-farm **8**-his **8**-all
'You (SG) are weeding all his farms.'

For the canonical order of all three ϕ-features (*gender*, *number* and *person*), the feature *number* manifests itself first. Hence it becomes higher in the hierarchy. Then genders are assigned to nouns for pragmatic ends. Hence they become second in hierarchy. The feature person occurs at the

[16] One of the reviewers is sceptical on the originality of the distributive KILA 'every/each' in Kiswahili. I agree that KILA is a relatively recent loanword from Arabic. Its non-agreeing property might be borrowed from the source language into the target language. (The same applies to borrowed numerals such as *saba* 'seven', *nane* 'eight', *ishirini* 'twenty' etc. which do not agree). Nonetheless, I will not pursue the effects of borrowing on *phi*-features in this paper.

bottom of the structure. This is shown in examples (14-15), repeated here as (34-35) for exposition purposes.

(34) *Lınga* ***ßa****-fik-ıle apa po a-****tu****-ku-****ßa****-p-aya*
when **3PL.SBJ**-arrive-PFV here then FUT-**1PL.SBJ**-INF-**3PL.OBJ**-give-HAB
'When they arrived here, then we will give them.'

(35) ***Tu****-ki-maliza kazi* ***tu****-ta-val-ish-w-a taji*
1PL.SBJ-finish 5.work **1PL-SBJ**-FUT-wear-CAUS-PASS-FV 5.crown
'When we finish the work, we will be crowned.'

Linearization of Lexical Dependents and the Hierarchy of ϕ-features in Bantu DPs

The linearizations of lexical dependents in determiner and modifier positions in Bantu DPs have implications on subsequent hierarchical ordering of the ϕ-features. The lexical dependents include numerals, demonstratives, quantifiers, possessives and adjectives (Rugemalira, 2007; Mose, 2012; Lusekelo, 2013b). These dependents carry 'ϕ-features that are marked on various heads within the DP, such as determiners, nouns, and adjectives' (Danon, 2011:297). Since these elements are linearized, it follows that ϕ-features are also hierarchically arranged depending on the linearization of lexical elements.

Previous studies (Rugemalira, 2007; Lusekelo, 2013b) posit the canonical order of Bantu DPs as EVERY/EACH (DEM) > N > POSS/(DEM) > ADJ/NUM/QUANT.[17] This order is manifested in examples (36-40) (Lusekelo, 2009a:55, 2009b:324). These examples demonstrate how the ϕ-feature *number* is realized in all lexical-elements in DPs.

(36) ***vi****-tabu hi-****vi*** ***vy****-ote* N>DEM>QUANT
[Kiswahili]
8-book 8-these 8-all
'all these books'

(37) ***u****-limi* ***wa****-ke* ***m****-refu* N>POSS>ADJ
9-tongue 1-her 1-long
'her long tongue'

[17] As hinted by the reviewer, there are possibilities that some elements (perhaps demonstratives and adjectives) in the DP can be scrambled to the initial, middle or final position of the DP (see Carstens, 1993; Rugemalira, 2007). However, the primary order of dependents for these languages will resemble, in several strands, the order provided herein. The variation is accounted for by the pragmatic goals of the movement of elements (Allen, 2014), a topic which is outside the range of this paper.

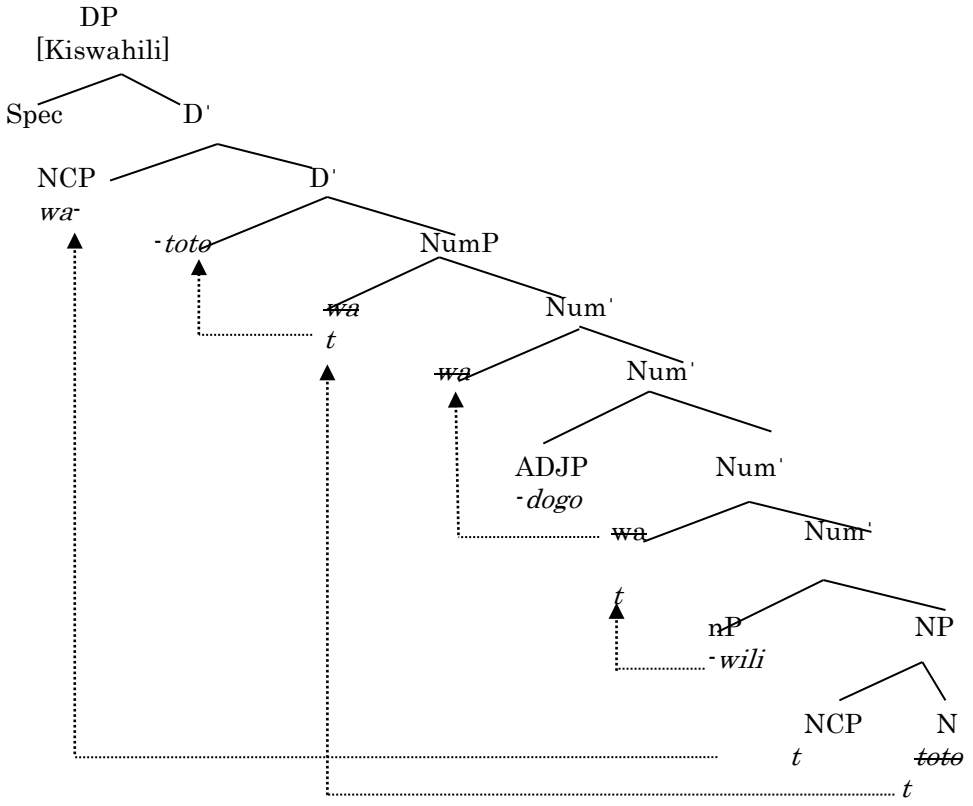
(38) *kila* ***gari*** *bovu* DISTR > N>ADJ
every 5.car 5.bad
'each wrecked car'

(39) *kukuti* ***ka****-ndu* ***ka****-ke* DISTR > N >POSS
[Kinyakyusa]
each 12-thing 12-his
'every item of his'

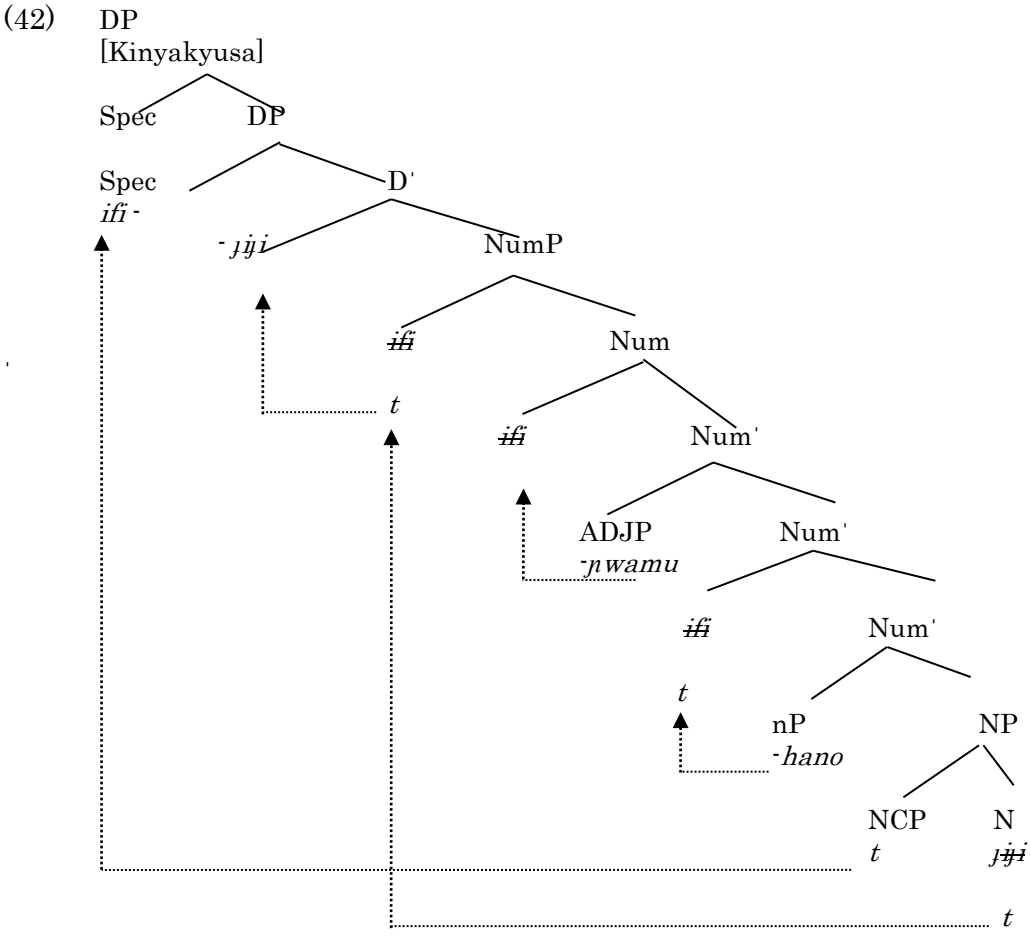
(40) *ɪ-nguku ɪ-jɪ i-ja-angu ɪ-nyelu* N>DEM >POSS >ADJ
AU-9.fowl 9-this AU-9-mine AU-9.while
'this white hen/fowl of mine'

The prominence of ϕ-feature *number* is central within Bantu DPs in that its valuation is obtained earlier. Also, it occupies the prominent position, the far-left hemisphere (Rizzi 1997), as shown in tree diagrams (41-42) below.

(41)



(42)



It is obvious now that the feature number is introduced within the Bantu DP. Then other elements (e.g. quantifiers, numerals and adjectives) obtain it during feature checking processes. This being realized, the checking of the other ϕ-features, such as *person* and *case*, becomes imperative, as shown in (43). It means that the feature number is valued first within the concord then the feature person is checked within agreement to vP.

(43) ***Wa****-toto* ***w****-ote* ***wa****-me-fik-a*
[Kiswahili]
2-child **2-**all **3PL.SBJ-**PST-arrive-FV
'All children have all arrived.'

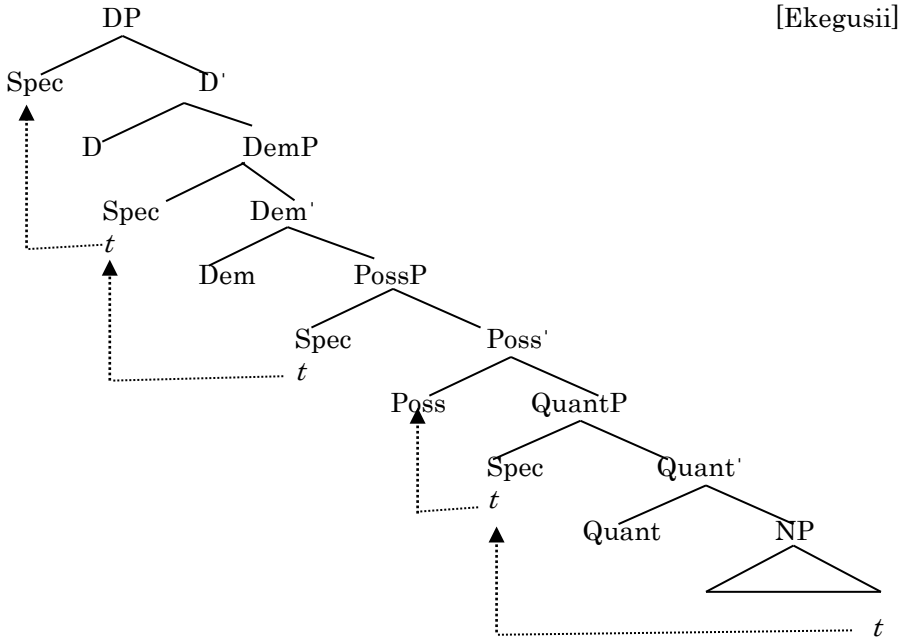
Given the presence of demonstratives and quantification words (quantifiers and numerals) in a DP, there is challenge by Mose (2012). He proposes that demonstratives are generated in the DEM position which is projected below the DemP and they move to D position (which is a strong

head position) universally (Ibid). As in *omosacha oyo* 'this man' in Ekegusii, he claims that 'the demonstrative *oyo* is the base generated at the Dem position of the DemP' (Ibid: 45). Since the D position is a strong head position, the demonstrative Moves to fill it overtly, while the NP *omosacha* first Moves to the specifier position, of the demonstrative to check agreement features with the demonstrative after which it further Moves to the specifier position to check the *number* features (Ibid.).

The suggestion offered by Mose (2012) takes us to the second question in (1) above, which I rephrase as follows: Is it the DEM which Moves to the Spec position of the DP or NUM together with the nominal-stem, as Carstens (1993, 2008) proposes? Put in other words, "when lexical dependents of the head-noun scramble across the DP, do they Move without checking for the feature *number*?" My summative answer to this question is the ϕ-feature *number* occurs higher as the Spec of the DP. All other lexical elements, including the noun-stem, move to check for this feature. Based on the left-periphery hypothesis (Rizzi, 1997), I argue that the NCP (with the ϕ-feature *number*) becomes the head of the Bantu DP. This is because it occupies the left most position of the DP, as shown in tree diagrams (41-42) above. Also, based on the postulation that functional elements (whether lexical or affixal) designate specifiers of various nodes across DPs (Giusti, 2002), the NCP, with the ϕ-feature *number* embedded in it, becomes the Spec of the Bantu DP.

This answer questions the hierarchy of lexical dependents presented in (44) below. Mose (2012:52–53) suggests that the NP Moves first to the Spec position of the QuantP to check for agreement features. It then further Moves to the Spec of the PossP and the Spec of DemP to check again for the agreement features. Lastly, the NP finally lands in the Spec position of the DP to check the *number* feature.

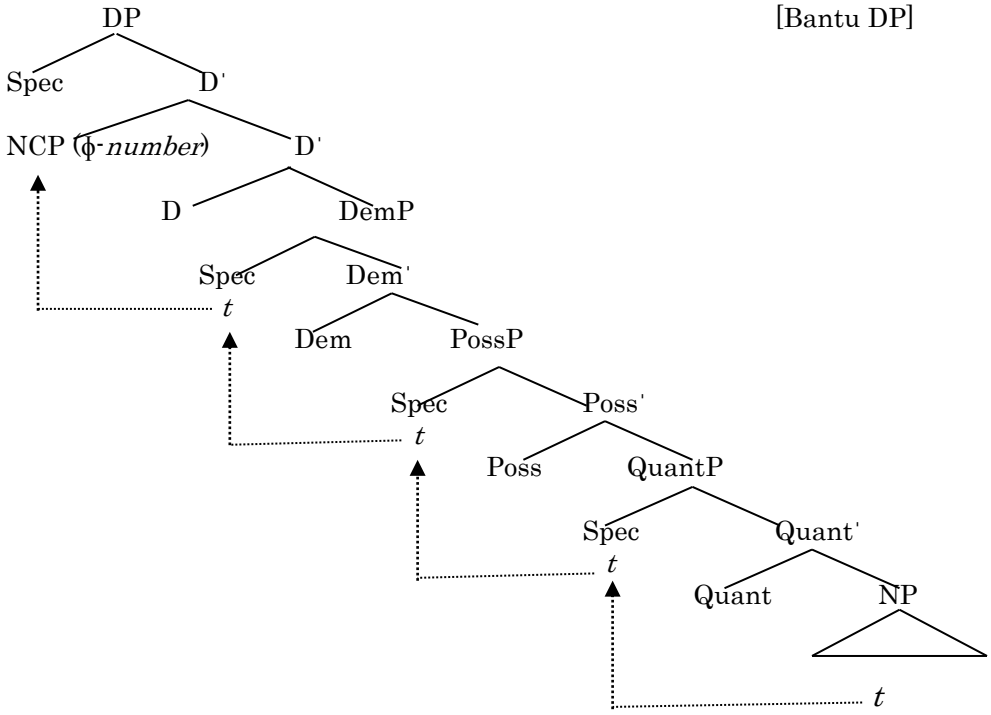
(44) [Ekegusii]



Contrary to Mose (2012), I would like to put one point straight herein; that the main ϕ-feature which is valued in this tree is *number*. Thus, the noun Moves from the NP position, right at the bottom of the tree, to the Spec DP position at the topmost part of the phrase. During the move, the noun-stem wants to check for this feature. This inference is consistent with the claim by Lusekelo (2013a) that the ϕ-feature *number* is higher and controls *concord* in Bantu DP.

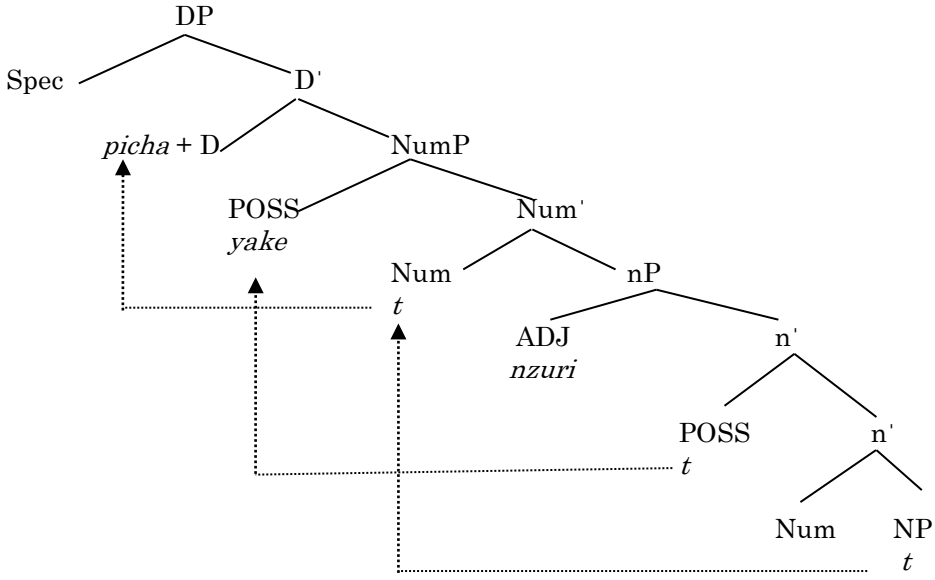
This being the case, the third question remains: In the Move of the NPs, since the ϕ-feature *number* reigns the highest Spec position of the DP, what warrants the QuantP (which embraces mainly quantifiers and numerals in the Bantu family (Zerbian & Krifka, 2008)) to appear beneath the PossP and DemP in Bantu? My quick answer to this question is that the ϕ-feature *number* is attested within and remains within lexical-nouns. It also maintains the left-most position in a DP, as illustrated in (41-42) above. The quantification elements (numerals and quantifiers) obtain the ϕ-feature *number* from lexical-nouns and NCP, as shown in (45).

(45) [Bantu DP]



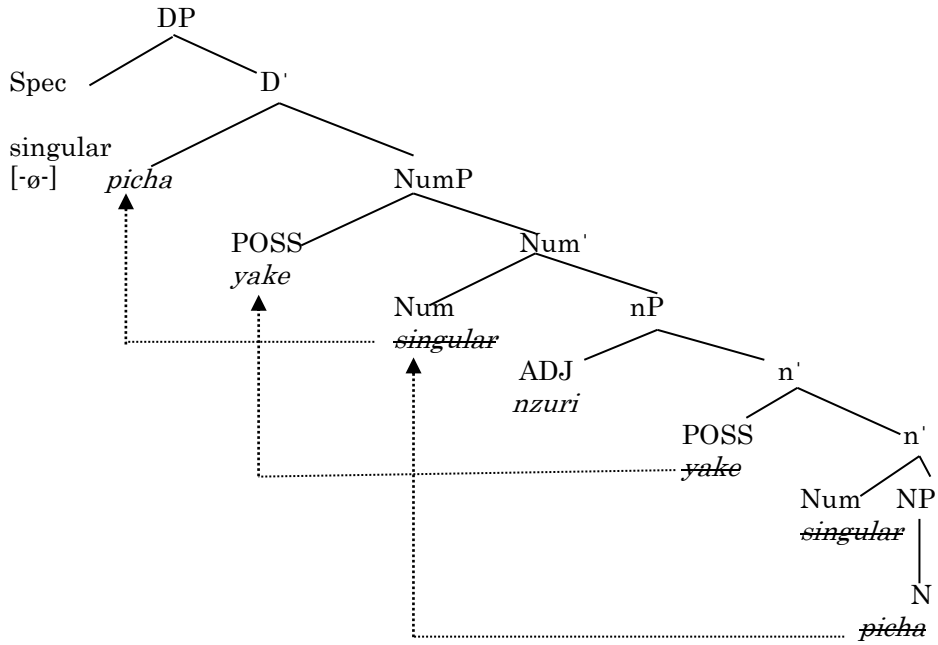
Given the presence of possessives and adjectives, Carstens (2008:153) suggests the following order of constituents of Bantu DP in (46).

(46)



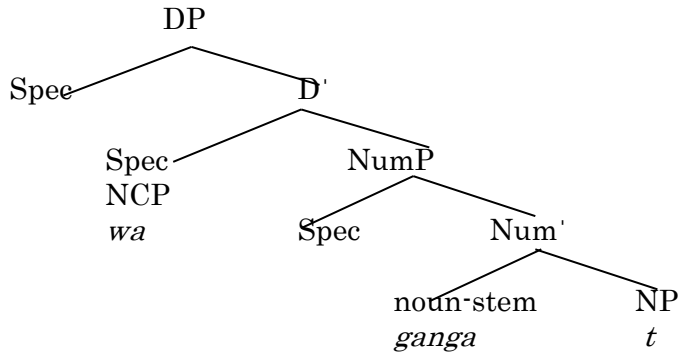
Carstens claims that 'genitive pronouns occupy Spec of a functional category in the DPs middle field, perhaps NumberP' (Ibid.:152). I emphasise here that the feature *number* is not in the middle of the DP; rather it is higher in the left-most zone of the DP. In fact, the noun *picha* 'picture', which bears a zero NCP, helps to check for the feature *number* which is singular in this example. Moreover, the possessive *yake* 'her', a dependent to the head-noun, occurs in singular. Thus, I propose the tree diagram in (47) below.

(47)



I argue here that the determiner position in Bantu DPs, which is a Spec position of the whole DP (see also Mose 2012), is occupied by the *number* element in the NCP. Thus, a noun with neither a determiner nor a modifier will have the architecture similar to (48).

(48)



Furthermore, the proposed determiner elements in Bantu DPs, i.e. DEM and POSS (Rugemalira, 2007; Lusekelo, 2013b), tend to occur below the NCP which is the left-most element. This entails that the lexical-noun carries both, the feature *number* and content of the noun. This being the case, the feature *number* becomes higher than other features such as *case* and *person* in Kiswahili and Kinyakyusa.

Agree in Kiswahili and Kinyakyusa

Based on the split VP hypothesis (Lasnik, 2003; Alexiadou, 2004), in this section, an analysis of the vP agreement pattern is offered. The focus is on the valuation of the four ϕ-features (*number*, *case*, *gender* and *person*) in vPs in Kiswahili and Kinyakyusa.

Valuation of *Number*, *Case*, *Gender* and *Person*

The focus in the analysis is on the vP because, under the Agree Theory in minimalism (Chomsky, 2001, 2008), it is said that vP consists of all ϕ-features being expressed in verbs. Baker (2008:1) says 'verbs are consistently the most prolific agreers, often agreeing with their subjects in person, number, and gender features, and sometimes agreeing with their objects in these features as well'. In this paper I will argue that the ϕ-feature *gender* should be discarded when analyzing their order in vP in Kiswahili and Kinyakyusa. This suggestion is contrary to Baker (2008:2) who argues that 'a transitive verb in [Kis]wahili, in which the verb agrees with its understood object in *person*, *number*, and *gender* as well as with its subject' (Ibid: 2).

Data suggest that only three ϕ-features (*number*, *person* and *case*) are valued in the verbs. Example (49) displays that the Kiswahili verb *leta* 'bring' carries the formative *a-* which signals three ϕ-features: singularity hence *number* valuation, nominative position of the DP hence *case* checking, and first person hence *person* interpretation. Likewise, the affix -*wa*- designates three ϕ-features: indication of the DP in the objective position (accusative *case*), the singularity of such DP (*number* marking), and third person (*person* marking).

(49) *Baba* ***a****-me-****wa****-let-e-a* ***wa****-toto* *vi-atu* [Kiswahili]
1.father **3SG.SBJ**-PST-**3PL.OBJ**-bring-APPL-FV **2**-child 8-shoe
'Father brought for the children pairs of shoes.'

Though some previous studies suggest that *genders* are attested in Bantu vPs, evidence points to a different syntactic behaviour. It appears that the ϕ-feature *gender* is not really attested in Bantu vPs. Thus, while Baker (2008) suggests that in the Bantu vPs *number*, *person* and *gender* are valued in agreement, I contentedly argue that the valued ϕ-features in Bantu vPs are *number*, *person* and *case*. The difference arises on the underlining of *gender* in the former and *case* in the later. In what follows, therefore, I present ideas in defense of the latter.

Carstens (2008) suggests that *genders* in prefixes control the selection of noun-stems to co-occur with and specify *number* feature of Bantu DPs. She correctly cautions that '*gender* itself has no any semantic content; rather,

some semantic properties of the nouns seem to serve as sorting criteria' (Ibid.:139). I emphasise here that such *genders* suggested for Bantu languages are assigned later at the pragmatics level to obtain communicative goal. In several instances, in line with Rugemalira (2014), the purpose of assigning a secondary NCP to existing nouns is meant to be derivational, rather than inflectional, as exemplified by (50). This entails that valuation of ϕ-features is done at a stage available after derivation.

(50) Derivation of nouns by NCP in Kinyakyusa

i.	Diminutive	*mbene*	9.goat	*kapene*	12-small goat
ii.	Augmentative	njoka	9.snake	ijoka	5-big snake
iii.	Abstraction	mundu	1-person	uβundu	14-humanity
iv.	Infinitive	lima	cultivate	ukulima	15-to cultivate
v.	Locatives	mipiki	4-tree	mmipiki	18-in trees

For the manifestation of ϕ-features, these *genders* fall outside of range because the secondary NCP controls agreement (in number, person and case), as illustrated in (51-52). Example (51) displays the valuation of number, person and case in primary NCP. Example (52) shows indication of plurality (ϕ-*number*), the third person (ϕ-*person*), and nominative case (ϕ-*case*) in secondary NCP. *Gender* is not valued at the level of secondary NCP. Hence it is insignificant.

(51) *I-njoka* ***si****-fyuk-ile* *mu-m-piki* [Kinyakyusa]
AU-10.snake **3PL.SBJ**-climb-PFV 18-3-tree
'Snakes have climbed the tree.'

(52) *I-****mi****-joka* ***yi****-fyuk-ile* *mu-m-piki*
AU-**4**-9.snake **3PL.SBJ**-climb-PFV 18-3-tree
'Big snakes have climbed the tree.'

Coordinated Nouns: A Porous Theoretical Area in Bantu DPs and vPs

Some strategies to realise ϕ-features in coordinated DPs in Bantu languages contradict the ideas advanced in the preceding sections. The first strategy is regular because it permits the agreement in ϕ-feature of the plural counter part of the conjoined nouns which come from one class (Marten, 2000; Schadeberg, 2001; Riedel 2010). For instance, Kiswahili allows agreement by the plural marker *wa-* in the subjective and objective cases (53). Kinyakyusa permits this kind of agreement, as illustrated in (54). The conjoined nouns *umama* 'mother' and *umwana* 'child' from noun class 1 [*mu-*] which agrees with their plural counterpart in class 2 [*βa*]. In both examples, the ϕ-features *number, case* and *person* are valued.

(53) *Ana na Juma* ***wa****-li-****wa****-ona Ali na Asha*
[Kiswahili]

1.Ana and **1.**Juma **3PL.SBJ-**PST-**3PL.OBJ-**see **1.**Ali and **1.**Asha
'Ana and Juma saw Ali and Asha.'

(54) *Uswe* ***tu****-ku-****fi****-ßumba ı-****kı****-kota na* ***kı****-kombe* [Kinyakyusa]
we **1PL.SBJ**-PRES-**3PL.OBJ-**mould AU-**7**-chair and **7**-cup
'We mould a chair and a cup.'

The second strategy is irregular because it checks ϕ-features of the first conjoint in Bantu languages.[18] Whereas example (55) shows agreement to the first conjoint in the accusative case in Kiswahili, example (56) indicates agreement with the first conjoint nouns in accusative case in Kinyakyusa.

(55) *Ana* ***a****-li-****ki****-ona* ***ki****-su na ma-kochi*
1.Ana **3SG.SBJ**-PST-**3SG.OBJ-**see **7**-knife and 6-couch
'Ana saw the knife and couches.'

(56) *A-****ßa****-ndu* ***ßa****-li-****n****-twele u-****mw****-ana nai-ŋombe* [Kinyakyusa]
AU-**2**-person **3PL.SBJ**-PST-**3PL.OBJ-**bring AU-**1**-child and AU-9.cow
'The people brought the child and the cow.'

A third strategy is also irregular as it permits borrowing of ϕ-features from another class. Example (57) shows how Kiswahili permits classes 8 as a default class (Marten, 2000). I argue here that there is imposition of ϕ-features which were not embedded in the conjoined nouns.

(57) *Ana* ***a****-li-****vi****-ona* ***ki****-su na ma-kochi* [Kiswahili]
1.Ana **3SG.SBJ**-PST-**3SG.OBJ-**see **7**-knife and 6-couch
'Ana saw the knife and couches.'

Lastly, there are cases in which ϕ-features are not checked at all. This is illustrated by (58) in which the feature number attested in nouns *mito* 'rivers' and *msitu* 'forest' does not agree. I argue here that in such cases Agree is violated because no ϕ-feature is checked.

(58) *Ana* ***a****-li-ona mi-su na m-situ* [Kiswahili]
1.Ana **3SG.SBJ**-PST -see **4**-knife and 3-forest
'Ana saw rivers and a forest'

Although several strategies to check for ϕ-features in coordinated Bantu DPs violate the valuation of appropriate features, the status of valuation of

[18] The same observation is hinted by Legate (2005:152) that 'the agreement may be triggered by on DP in a conjoint structure' in other languages.

three features in Bantu vPs remains important. This is because the ϕ-features *number*, *case* and *person* are valued in the conjoined DPs.

Conclusion

For the valuation of ϕ-features in Kiswahili and Kinyakyusa DPs and vPs, two significant points have been advanced. Firstly, although it is argued that in the Bantu DPs the ϕ-features *number*, *genders* and *person* are valued (Schadeberg, 2001; Carstens, 2008; Baker, 2008), I argued that the feature *number* is paramount in Bantu DPs. Also, I showed how in Bantu vPs three features are prominent, namely *number*, *case* and *person*. Thus, I defended the proposition that *genders* are really not part of the ϕ-features which are checked in Bantu vPs. Secondly, it is established that a bundle of ϕ-features does not occur in one head, i.e. at least each feature originates in a different head within DPs and in vPs (Legate, 2005). However, difficulties in pin pointing the hierarchy of all the four features had been an endeavour pursued in this paper. It is concluded that the feature *number* is supreme. The manifestations of the other ϕ-features include prominent marking of *case* and *person* features in Bantu vPs. It is suggested that in DPs, the hierarchy is *number>person>genders* while in vPs, the prominent order is *number>person>case.* The prominence of the ϕ-features *number*, *case* and *person* is manifested even in coordinated DPs, which tend to confuse the pattern in irregular strategies.

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