

## **Agreement with locatives in Kinyarwanda: a comparative analysis**

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### **Abstract**

In Bantu languages such as Chichewa or Herero, locatives can function as subjects and show noun class agreement (in class 16, 17 or 18) with predicates and modifiers. In contrast, (preverbal) locatives in Sotho-Tswana and Nguni have been analysed as prepositional adjuncts, which cannot agree. Our paper compares locatives in Kinyarwanda (JD61) with locatives in these other Bantu languages and demonstrates that the Kinyarwanda locative system is essentially of the Chichewa/Herero type. We show that Kinyarwanda locatives are nominal in nature, can act as subjects, and agree with predicates and modifiers. However, even though Kinyarwanda has four locative noun classes (16, 17, 18 and 25), there is only one locative agreement marker (class 16 *ha-*), which indiscriminately appears with all locatives, regardless of their noun class. We explain this fact by arguing that noun class features in Kinyarwanda do not participate in locative agreement; instead, the invariant class 16 marker expresses agreement with a generic feature [location] associated with all locatives. We offer a syntactic analysis of this peculiar aspect of Kinyarwanda locative agreement, and we propose a parameter that accounts for the relevant difference between Kinyarwanda and Chichewa/Herero-type Bantu languages.

### **1. Introduction**

All nouns in Bantu languages belong to noun classes, and noun class membership determines agreement and concord with predicates and modifiers. For example, the noun **umugozí**, ‘string’, in the Kinyarwanda (JD61) example in (1) belongs to

class 3 (marked by the noun class prefix **mu-**) and triggers class 3-agreement on both the adjective and the verb:<sup>1</sup>

- (1)        **umugozí    muníni    urabóneka**  
             **u-mu-gozí mu-níni    u-ra-bón-ik-a**  
             AUG-3-string    3.ADJ-thick    3.SM-DJ-see-NEUT-FV  
             ‘The thick string is visible.’

In many Bantu languages, locatives are also marked by noun class morphology. The examples in (2)-(4) illustrate this for Herero (R31):

- (2)        ***po-ndjúwó    p-á-rará    é-rúngá***  
             16-9.house        16.SM-PST-sleep    5-thief  
             ‘At the house slept a/the thief.’

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<sup>1</sup> Unless otherwise indicated, all examples in this paper are from Kinyarwanda. They reflect the judgments of the second author (JPN), a native speaker of Kinyarwanda. We present each Kinyarwanda example by four lines. Line 1 represents vowel lengthening, surface tone, and phonologically conditioned sound changes. Line 2 presents the underlying morphemes and lexical tone; the interlinear glosses are in line 3; and line 4 provides a translation. Bantu noun class prefixes and the corresponding agreement markers are marked through numbers, following Meinhof (1906); high tone is marked by an acute accent on the syllable; low tone is unmarked. In the examples from other Bantu languages that are quoted from the literature, we have occasionally adapted the presentation and glosses to our format. In all examples, we have highlighted locative markers in italics.

(3) **ko-mu-tí kw-á-pósé ozó-ndjimá**

17-3-tree 17.SM-PST-make.noise 10-baboons

‘In the tree made noise (the) baboons.’

(4) **mo-ndundú mw-á-váz-éw-á ómu-atjé**

18-9.mountain 18.SM-PST-find-PASS-FV 1-child

‘On the mountain was found a/the child.’

[Herero; Marten 2006: 113]

Herero has three locative noun class prefixes that are reflexes of the locative markers **\*pa** (class 16), **\*ku** (class 17) and **\*mu** (class 18) that have been reconstructed for Proto-Bantu (Grégoire 1975; Maho 1999; Meeussen 1967; Meinhof 1906, 1910). As (2)-(4) show, these so-called “secondary” prefixes derive locatives by combining with nouns from other noun classes. For example, the locative prefix **ko-** in (3) attaches to the class 3 noun **mutí**, ‘tree’, to form the class 17 locative noun **komutí**, ‘in the tree’.

(2)-(4) are locative inversion constructions, in which the thematic subject appears postverbally, and the locative is realised as the subject of the sentence. Importantly, subject agreement with the verb in these Herero constructions is controlled by the locative. The subject agreement marker on the verb must reflect the noun class of the locative; replacing it with the subject marker of the noun’s original noun class would render the examples in (2)-(4) ungrammatical. This agreement pattern suggests that locatives in Herero are noun phrases; as such, they can function as syntactic subjects and trigger noun class agreement with the verb.

The focus of our paper is on the locative system of the Bantu language Kinyarwanda. As (5)-(7) show, Kinyarwanda differs from Herero with respect to locative agreement in locative inversion constructions (Ngoboka 2016):

- (5) **ku rubárazá hazaakorera abakené**  
**ku ru-bárazá ha-za-kór-ir-a a-ba-kené**  
 17 11-veranda 16.SM-FUT-work-APPL-FV AUG-2-poor.people  
 ‘It is poor people who will work on the veranda.’
- (6) **mu muhaánda hahagaze(mó) Yohaáni**  
**mu mu-haánda ha-hágarar-ye(=mó) Yohaáni**  
 18 3-road 16.SM-stand-ASP(=18.LOC) 1.John  
 ‘It is John who is standing in the road.’
- (7) **i Buraayi hagura(yó) imódoká abíishoboye.**  
**i Buraayi ha-gur-a(=yó) i-módoká a-ba-íishobor-ye**  
 25 14.Europe 16.SM-buy-FV(=25.LOC) AUG-10.cars AUG-2-be.wealthy-ASP  
 ‘It is wealthy people who buy cars in Europe.’

Kinyarwanda has three secondary locative markers, class 17 **ku**, class 18 **mu** and class 25 **i** (reconstructed as Proto-Bantu **\*i-** by Meeuussen 1967). Importantly, however, in each of the examples in (5)-(7), the verb is prefixed with the invariant class 16 subject marker **ha-**. The specific noun class of the preverbal locative subject is thus not reflected in the verbal morphology.

The use of an invariant locative subject marker in locative inversion constructions is also attested in Southern Bantu languages of the Sotho-Tswana

and Nguni groups (see e.g. Buell 2012; Creissels 2011; Demuth and Mmusi 1997; Zerbian 2006). This is often interpreted as evidence that preverbal locatives in these languages are not genuine subjects, but adjuncts, which do not agree with the verb. In addition, many authors have suggested that locatives in Sotho-Tswana and Nguni are not noun phrases, but prepositional phrases (see e.g. Buell 2007, 2012; Carstens 1997; Demuth 1990; Marten 2010). Given the use of the invariant subject marker **ha-** in (5)-(7), it is tempting to draw similar conclusions about the categorial and syntactic status of locatives in Kinyarwanda.

However, in this paper we show that these conclusions do not hold up to closer scrutiny. By examining the grammatical properties of Kinyarwanda locatives, we establish rather that the Kinyarwanda locative system is similar to that of languages of the Herero-type. Locatives in Kinyarwanda are nominal categories which can act as thematic and grammatical subjects, and the invariant class 16 subject marker **ha-** in Kinyarwanda is in fact a locative agreement marker. However, in contrast to the locative agreement markers that appear in the Herero examples (2)-(4), we suggest that the class 16 marker in Kinyarwanda does not signal agreement with a specific locative noun class, but with a generic grammatical feature [location], which we argue is associated with all locatives in Kinyarwanda, regardless of their noun class.

In Section 2 of the paper, we discuss the distinction between nominal and prepositional types of locatives in Bantu, and we introduce the specific syntactic analyses that have been proposed for these locatives. Section 3 offers a detailed discussion of locatives and locative agreement in Kinyarwanda. We show that with respect to a number of properties, such as locative concord on modifiers and the licensing of anaphoric locative reference under pro-drop, locatives in Kinyarwanda

consistently pattern with locatives in Herero-type languages, but behave differently from locatives in Nguni and Sotho-Tswana. We conclude from this comparison that locatives in Kinyarwanda are noun phrases that can function as genuine subjects and license locative agreement. In Section 4, we offer an analysis of locative agreement which allows us to reduce the agreement difference illustrated by the examples in (2)-(7) to a single parameter associated with head movement in locative noun phrases. This parameter determines whether or not locative noun class information is “visible” for agreement in a particular Bantu language. Section 5 concludes the paper.

## 2. Two types of locatives in Bantu

As mentioned in Section 1, many Bantu languages have a productive locative noun class system in which noun class markers of the locative classes 16, 17 and 18 combine with nouns from non-locative classes to derive locative expressions. When these locatives appear in subject position, they trigger agreement with the verb, as witnessed by the occurrence of a locative subject marker reflecting the corresponding noun class of the locative subject. In Section 1, we already illustrated locative noun class agreement with examples from Herero; (8)-(10) are corresponding examples from Chichewa (N31):

- (8)        *pa-m-sikã-pa*        *pá-bád-w-a*        *nkhonya*  
              16-3-market-16.DEM    16.SM-be.born-FV    10.fist  
              ‘At this market a fight is going to break out.’

(9) ***ku-mu-dzi ku-na-bwér-á a-lěndo***

17-3-village 17.SM-PST-come-FV 2-visitor

‘To the village came visitors.’

(10) ***m-nkhalāngo mw-a-khal-á mí-kāngo***

18-9.forest 18.SM-PERF-remain-FV 4-lion

‘In the forest have remained lions.’

[Chichewa; Bresnan and Kanerva 1989: 9]

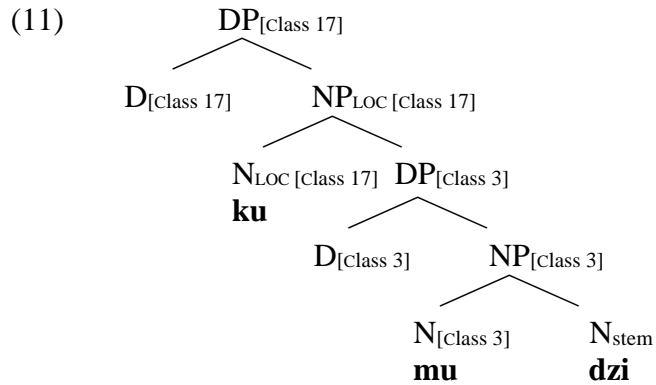
In the remainder of our paper, we refer to languages such as Herero and Chichewa, in which locatives trigger rich and productive locative noun class agreement, as “Type 1”-languages.<sup>2</sup>

According to the standard analysis of locatives in Type 1-languages, locative phrases are derived by merging the phrasal projection of the base noun with a locative noun (or nominal classifier), which projects its own noun phrase (see Bresnan and Mchombo 1995; Carstens 1997; Marten 2012; Myers 1987). We adopt this analysis here. Following work in the generative tradition, we represent noun phrases as DPs (= determiner phrases; see Abney 1987 and much subsequent

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<sup>2</sup> In the following sections, we illustrate the properties of Type 1-languages with examples from Chichewa. As far as we could establish, the locative systems of languages such as Herero, Bemba (M42) or Shona (S10), which all show locative noun class agreement in classes 16, 17 and 18, are identical to that of Chichewa in all relevant respects. The same applies to Type 1-languages such as Bukusu (JE31c), in which a fourth derivational locative class (class 25) exists which participates in agreement relations.

work). (11) is the (slightly simplified) representation of the Chichewa class 17 locative **kumudzi** in (9):<sup>3</sup>



As (11) shows, the noun class of the locative DP is determined by the locative noun ( $N_{\text{LOC}}$ ). Therefore, when a DP like (11) is realised as the subject of the sentence, the predicate will show locative agreement in class 17.

The locative systems of the Southern Bantu languages belonging to the Nguni (S40) and the Sotho-Tswana (S30) groups differ significantly from the pattern illustrated by the Herero and Chichewa examples. One important difference concerns the form of the subject marker that appears with preverbal locatives. In

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<sup>3</sup> Note that in (11), the locative noun/classifier  $N_{\text{LOC}}$  is represented by the locative noun class prefix (see Bresnan and Mchombo 1995; Marten 2012; Myers 1987). An alternative analysis is proposed in Carstens (1997), who argues that  $N_{\text{LOC}}$  is phonologically null in Bantu, and that the locative noun class prefix spells out the highest functional head of the locative noun's complement. Since Carstens' theory forms the basis of our analysis of locative agreement in Kinyarwanda, we discuss the details of her proposal in Section 4. However, nothing in our paper hinges on the choice between Carstens' representation of locatives and the slightly simplified one in (11), and we therefore adopt (11) in our discussion in Sections 2 and 3, in order not to unduly complicate the exposition.



contrast to Type 1-languages, the Nguni and Sotho-Tswana languages only have one invariant locative subject marker (a reflex of Proto-Bantu class 17 \***ku**), which appears with all types of preverbal locatives, regardless of how they are formed. For example, most locatives in the Nguni languages (which include Zulu and Swati) are marked by means of the locative prefix **é-** (possibly related to locative class 25; cf. Grégoire 1975), which usually co-occurs with the locative suffix **-ini/-eni**, in these languages, (12). Locatives derived from the “human” classes 1 and 2, or from nouns which are modified by a preverbal demonstrative are formed by means of the prefix **kú-**, which resembles the class 17 locative marker (but see below), (13) (see Buell 2007, 2012; Taylor 1996, 2007; Van der Spuy 2014 for Zulu; Marten 2010 for Swati). Whatever the form of the locative in preverbal position, however, the verb is invariably prefixed with the class 17 subject marker **kú-**:<sup>4</sup>

- (12)      **é-hláth-íni    ku-dlál-a    í-zin-káwu**  
             LOC-5.forest-LOC 17.SM-play-FV    AUG-10-monkey  
             ‘In the forest play monkeys.’

- (13)      **kú-le            makéthe    kú-lw-a            á-bá-ntu**  
             LOC-this        9.market        17.SM-fight-FV    AUG-2-person  
             ‘At this market people fight.’

[Zulu; own data]

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<sup>4</sup> In contrast, in Type 1 Bantu languages such as Ganda (JE15) or Bukusu (JE31c), a class 25 locative licenses the class 25 subject marker (Grégoire 1975; Marten 2012).

An invariant locative subject marker also appears with all types of locatives in the Sotho-Tswana languages. The following examples illustrate this for Tswana:

- (14) **fá-se-tlharé-ng gó-émé ba-símané**  
 LOC-7-tree-LOC 17.SM-stand:ASP 2-boys  
 ‘By the tree stand the boys.’

- (15) **kó-Maúng gó-tlá-ya roná maríga**  
 LOC-Maung 17.SM-FUT-go we winter  
 ‘To Maung we shall go in winter.’

- (16) **mó-le-fátshé-ng gó-fúla di-kgomó**  
 LOC-5-country-LOC 17.SM-graze 10-cattle  
 ‘In the country are grazing the cattle.’

[Tswana; Demuth and Mmusi 1997: 8-9]

As (14)-(16) show, locatives in Tswana are formed by means of the locative suffix **-ng** and by three locative markers **fá**, **kó** and **mó**, which have been analysed as variants of the locative noun class prefixes of classes 16, 17 and 18 by Demuth and Mmusi (1997) (but see Creissels 2011, and below). However, the verb in Tswana never shows class 16 or class 18 locative noun class agreement, and instead is invariantly inflected with the class 17 subject marker **gó-**. In Southern and Northern Sotho, where locatives are also marked by the suffix **-ng**, but lack the initial locative markers that exist in Tswana, the invariant class 17 subject marker is **hó-** (Demuth 1990; Machobane 1995; Zerbian 2006).

The fact that different locative noun classes are not distinguished in the form of locative subject markers in Nguni and Sotho-Tswana is one of the reasons why the relation between preverbal locatives and the verb in these languages is typically not treated as an agreement relation in the literature. (Other reasons will be discussed in Section 3). In recent years, a consensus has emerged that the syntax of constructions such as those in (12)-(16) is fundamentally different from that of comparable constructions in Type 1-languages (see Salzmann 2011; Guérois 2016 for discussion). First, most authors assume that preverbal locatives in Nguni and Sotho-Tswana are not subjects, but topicalised adjuncts with an adverbial, or frame-setting, function. In examples such as (12)-(16), these locative adjuncts combine with so-called impersonal constructions without referential subjects, in which the class 17 subject marker has a purely expletive function (see e.g. Baker 1992; Demuth 1990 for Southern Sotho; Zerbian 2006 for Northern Sotho; Carstens 1997, Creissels 2011 for Tswana; Buell 2007, 2012; Van der Spuy 2014 for Zulu; Marten 2010 for Swati).<sup>5</sup> That the class 17 subject marker is indeed used in expletive constructions in Nguni and Sotho-Tswana is illustrated by (17) and (18):

- (17)        **ku-bonakal-a ukuthi ba-zo-fik-a kusasa**  
               17.SM-seem-FV    that        2.SM-FUT-arrive-FV    tomorrow  
               ‘It appears that they’ll arrive tomorrow.’

[Zulu; Buell 2012: 16]

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<sup>5</sup> However, see Demuth and Mmusi (1997) and Machobane (1995) for the opposing view that fronted locatives in Southern Sotho and Tswana are subjects.

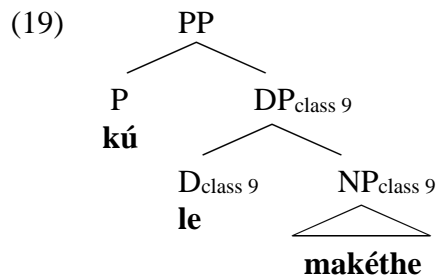
(18) **hó-a-bát-a kántlé**

17.SM-PRES-cold-FV outside

‘It’s cold outside.’

[Southern Sotho; Demuth 1990: 242]

Second, in contrast to locatives in Type 1-languages, which are analysed as NPs/DPs, locatives in Sotho-Tswana and Nguni have been argued to be PPs (see Baker 1992; Demuth 1990 for Southern Sotho; Carstens 1997 for Tswana; Buell 2007, 2012 for Zulu; Marten 2010 for Swati). According to this view, the syntax of the Zulu locative in (13) looks like (19):



As (19) shows, the marker **kú** does not have the status of a locative noun class prefix. Instead, **kú** has been reanalysed as a preposition, a historical process called the “Great locative shift” by Marten (2010). According to Grégoire (1975: 98), the Nguni locative marker **kú** is not even diachronically related to locative noun class: Grégoire argues that its historical origin is the marker **kúdí**, ‘où est’ (‘where is’), which is still used with augmentless nouns in some Bantu languages instead of the regular locative noun class prefix (see Guérois 2016 for discussion).

Similar ideas are expressed for Tswana in Carstens (1997) and Creissels (2011). Carstens (1997) argues that the Tswana locative markers **fá**, **kó** and **mó** in locative

constructions such as (14)-(16) are prepositions, and Creissels (2011) adds support to this view by showing that the tonal and morphological properties of locatives in Tswana are incompatible with the idea that these locative markers are in any way related to locative noun class prefixes. Rather, Creissels (2011) argues that they are historically derived from locative demonstratives that were used as deictic adverbial modifiers; synchronically, Creissels (2011: 41) views them as “emerging locative prepositions”.

In summary, this section has discussed two types of locative system found in Bantu. In Type 1-languages like Herero and Chichewa, locatives are DPs derived by means of productive nominal locative noun class morphology. These locative DPs can function as true subjects and trigger locative noun class agreement with the verb. In contrast, in languages of the Sotho-Tswana and Nguni groups (which we now call “Type 2”-languages), locatives are not DPs, but PPs, which do not function as subjects, and which cannot agree with the verb. There is only one invariant locative subject marker in Type 2-languages, and it has an exclusively expletive function.

### **3. Locatives and locative agreement in Kinyarwanda**

We now turn to locatives in Kinyarwanda. As discussed in detail in Ngoboka (2016), Kinyarwanda has four locative noun classes (16, 17, 18 and 25). Class 16 includes a few adverbials, pronouns and a pronominal clitic, and the locative noun **ahaantu**, ‘place’, which consists of the nominal root **ntu**, the noun class prefix

**ha-**, and the initial vowel **a-**, (20). No locatives can be derived from non-locative classes by means of class 16 noun class morphology:

- (20)      **ahaantu**      **háanyu**      **hasa**      **néezá**  
             **a-ha-ntu**      **ha-a-nyu**      **ha-s-a**      **néezá**  
             AUG-16-place      16-ASS-2P      16.SM-look-FV      well  
             ‘Your place looks nice.’

In contrast, the noun class prefixes of class 17 and 18 (**ku-** and **mu-**) are secondary prefixes in Kinyarwanda and are used to derive locatives from existing nouns, (21)-(22). In addition, Kinyarwanda also has a secondary locative prefix **i-** of class 25 (Grégoire 1975)<sup>6</sup>, which is typically used with place names, (23):

- (21)      **kuu nzu**      **hasa**      **néezá**  
             **ku**      **n-zu**      **ha-s-a**      **néezá**  
             17      9-house      16.SM-look.like-FV      well  
             ‘(On/at/the area around) the house looks nice.’

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<sup>6</sup> There is no consensus about the correct classification of the \***i**-locative class. It is called class 25 by Grégoire (1975), but Meeussen (1967) refers to it as class 24, while Maho (1999), Katamba (2003) and Jerro (2016) label it class 23. Bizimana (1998), Coupez (1980), Ngoboka (2016) and Overdulve (1988) categorise \***i**-locatives in Kinyarwanda as class 19. We adopt Grégoire’s (1975) classification in this paper.

- (22) **mu mugí haageze abajuura**  
**mu mu-gí ha-a-ger-ye a-ba-juura**  
 18 3-town 16.SM-RECPST-arrive-ASP AUG-2-thieves  
 ‘Thieves have arrived in town.’

- (23) **i Kigalí harakóonje**  
**i Kigalí ha-ra-kóonj-ye**  
 25 9.Kigali 16.SM-DJ-be.cold-ASP  
 ‘(In) Kigali is cold.’

Even though Kinyarwanda locatives are marked as belonging to noun class 16, 17, 18 or 25, there is only one locative subject marker that can attach to the verb in locative constructions, namely the class 16 marker **ha-** (Jerro 2016; Ngoboka 2016; Nkusi 1995). No other subject marker is possible in any of the examples in (20)-(23). At first sight, Kinyarwanda therefore resembles Tswana, which also has locative markers seemingly distinguishing different noun classes, but only one invariant locative subject marker (see (14)-(16) in Section 2). One could therefore suspect that Kinyarwanda is a Type 2-language and that the locative constructions in (21)-(23) are impersonal (expletive) constructions with preposed adjunct-PPs.<sup>7</sup> This assumption seems to be supported by the fact that the class 16 marker **ha-** is indeed used as an expletive marker in impersonal constructions in Kinyarwanda (Kimenyi 1976; Ngoboka 2016):

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<sup>7</sup> See Grégoire (1975), Kimenyi (1976) and Nkusi (1995) for the view that the locative markers in Kinyarwanda are prepositions; see Nakamura (1997) and Zeller and Ngoboka (2006) for an analysis of Kinyarwanda locatives as PPs.

(24) a. **haríjimyē**

*ha-ra-íjím-ye*

16-DJ-be.dark-ASP

‘It’s dark.’

b. **harakóonje**

*ha-ra-kóonj-ye*

16.SM-DJ-be.cold-ASP

‘It’s cold.’

However, in contrast to what is suggested by the apparent similarities between the Kinyarwanda and the Tswana data, we argue that Kinyarwanda is in fact a Type 1-language. In the following sections, we provide evidence for this claim, by showing that locatives in Kinyarwanda are nominal categories (DPs) which can function as thematic and syntactic subjects and trigger locative agreement with DP-internal and DP-external elements.

### 3.1 Kinyarwanda locatives as DPs

As pointed out above, Kinyarwanda superficially resembles Tswana. Both languages have locative markers belonging to different locative noun classes, but only one invariant locative subject marker. However, there is a critical tonal difference: while the Tswana locative markers all bear high tones (see (14)-(16) above), the locative markers in Kinyarwanda are consistently low-toned. Importantly, as Creissels (2011) points out, the locative noun class prefixes of Proto-Bantu have been reconstructed as low-toned. For Creissels, this fact



constitutes an argument against the view that the Tswana locative markers are reflexes of Proto-Bantu locative noun class morphology, and rather supports a prepositional account. In contrast, the tonal properties of the Kinyarwanda locative markers are consistent with an analysis which treats them as genuine noun class prefixes of classes 17, 18 and 25. This analysis would imply that locatives in Kinyarwanda are nominal categories; as discussed in Section 2 above, locative noun class prefixes in Bantu have been analysed as nominal heads which project locative NPs/DPs.

Syntactic evidence for the nominal status of locatives in Kinyarwanda is provided in Ngoboka (2016). Ngoboka shows that locatives in Kinyarwanda share crucial syntactic properties with DPs, but not with PPs. For example, the complements of a locative noun class prefix cannot be conjoined, (25a), but the complements of an (instrumental) preposition can, (26):

- (25) a. **\*twaágeze        muu nzu        ná        cyuúmba**  
**tu-á-ger-ye        mu        [n-zu        ná        ki-uúmba]**  
1P-REM-arrive-ASP    18        [9-house    and    7-room]  
‘We arrived in the house and the room.’
- b. **twaágeze        muu nzu        nó        mu        cyúumba**  
**tu-á-ger-ye        [mu    n-zu]        nó        [mu    ki-úmba]**  
1P-REM-arrive-ASP    [18    9-house]    and    [18    7-room]  
‘We arrived in the house and in the room.’

- (26)      **dukata    impapuro    n’    íicyúuma    cyaangwa    imákasí**  
**tu-kat-a    i-n-papuro    n’    [i-ki-úuma    cyaangwa    i-mákasí]**  
1P-cut-FV    AUG-10-paper    with    [AUG-7-knife or                    AUG-9.scissors]  
‘We cut paper with a knife or scissors.’

The difference between (25a) and (26) supports the view that Kinyarwanda locative markers are noun class prefixes, and not prepositions.

The strongest evidence that locatives in Kinyarwanda are DPs comes from the agreement properties of locative-internal modifiers. In Type 1 Bantu languages, adjectives and possessors show what is known as “alternative agreement” or “alternative concord” when they modify locative nouns (Bresnan and Mchombo 1995; Carstens 1997; Gregoire 1975; Kuperus and Mpunga wa Ilunga 1990; Marten 2012; Myers 1987; Stucky 1978). As the Chichewa examples in (27) and (28) demonstrate, modifiers can either agree with the noun class of the locative (“locative concord”; “outer agreement”) or with the noun class of the base noun from which the locative is derived (“noun concord”, “inner agreement”):

- (27) a.    **pa tebula    loyela**  
          16 9.table    9.clean  
          ‘(somewhere) on the clean table’
- b.    **pa tebula    poyela**  
          16 9.table    16.clean  
          ‘a clean place on the table’

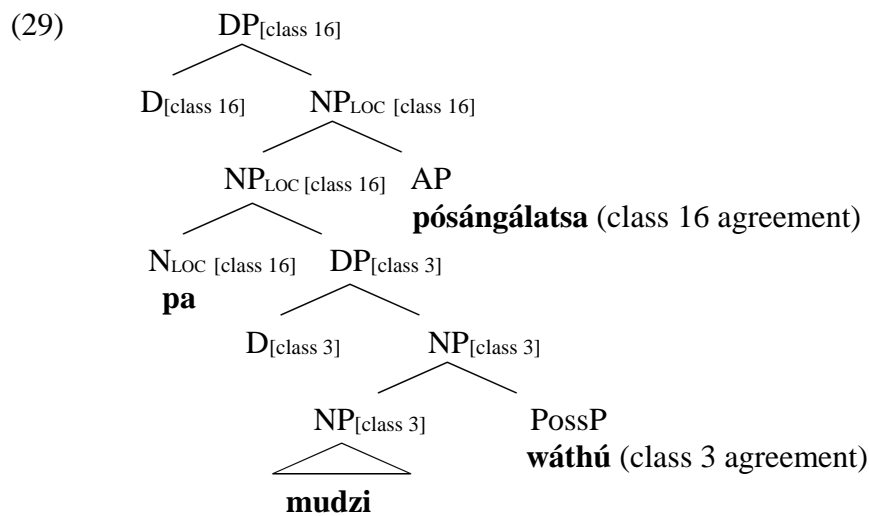
[Chichewa; Carstens 1997: 385-6]

- (28) a. ***pa mu-dzi p-áthú p-ó-sángálatsa***  
 16 3-village 16-our 16-ASS-INF.please  
 ‘at our pleasant village’
- b. ***pa mu-dzi w-áthú p-ó-sángálatsa***  
 16 3-village 3-our 16-ASS-INF.please  
 ‘at our pleasant village’
- c. ***pa mu-dzi w-áthú w-ó-sángálatsa***  
 16 3-village 3-our 3-ASS-INF.please  
 ‘at our pleasant village’
- d. ***\*pa mu-dzi p-áthú w-ó-sángálatsa***  
 16 3-village 16-our 3-ASS-INF.please  
 ‘at our pleasant village’

[Chichewa; Bresnan and Mchombo 1995: 199]

The possessor and adjectival modifiers in the above examples can show either locative concord (class 16 in (27) and (28)), or noun concord (class 9 or 3). As (28b) reveals, “mixed” agreement is possible with multiple modifiers; however, a modifier agreeing with the base noun cannot be preceded by a modifier showing locative concord, (28d) (see Carstens 1997; Myers 1987).

In the Bantu literature, alternative concord is generally analysed in terms of different attachment sites that are available for the relevant modifiers. While a modifier that adjoins to a projection of the base noun will show noun concord, locative concord is licensed when the modifier attaches to a projection of the locative noun (see Bresnan and Mchombo 1995; Carstens 1997; Marten 2012; Myers 1987). (29) is the corresponding representation of example (28b):



Because of their nominal nature, locatives in Type 1-languages include two possible NP-projections to which modifiers can adjoin. In contrast, since locatives in Type 2-languages are PPs, their syntax does not include a second “outer” nominal layer corresponding to the locative. Therefore, it is predicted that modifiers in Type 2-languages can only show “inner” noun concord. This prediction is confirmed for the Nguni languages, and also holds for Sotho-Tswana, at least with respect to adjectival modifiers (see Machobane 1995 for Southern Sotho; Zerbian 2006 for Northern Sotho; Carstens 1997, Creissels 2011 for Tswana; Marten 2010 for Swati; Buell 2012, Van der Spuy 2014 for Zulu):<sup>8</sup>

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<sup>8</sup> It seems clear from the available data that Sotho-Tswana languages never allow locative concord with adjectives, but the situation with other modifiers is more complicated. Although the discussions in Carstens (1997), Creissels (2011) and Zerbian (2006) suggest that locative concord is impossible with all types of modifiers in Tswana and Northern Sotho, Machobane (1995) demonstrates that locatives in Southern Sotho can show locative (class 17) concord with possessors and quantifiers:

(30) a. **e-khaya l-a-mi**

LOC-5.home 5-ASS-1S

‘at my home’

b. **\*e-khaya kw-a-mi**

LOC-5.home 17-ASS-1S

[Zulu; Van der Spuy 2013: 64]

(31) a. **kú-lezi zin-dlu ézin-hlé**

LOC-10.these 10-house 10.ADJ-beautiful

‘in these beautiful houses’

b. **\*ku-lezi zin-dlu oku-hle**

LOC-10.these 10-house 17.ADJ-beautiful

[Zulu; own data]

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(i) **mo-tse-ng há-Masúpha**

3-village-LOC 17.ASS-Masúpha

‘at Masupha’s village.’

(ii) **mo-tse-ng hó-hle**

3-village-LOC 17-all

‘all over the village’

[Southern Sotho; Machobane 1995: 118]

According to the analysis in the text, (i) and (ii) would be evidence that locatives in Southern Sotho are DPs, and that Southern Sotho is therefore not a prototypical Type 2-language. We consider it possible that the analysis we propose for Kinyarwanda in Section 4 offers a potential solution for the problem raised by examples such as (i) and (ii) (anticipating our analysis, it may be that locative concord in (i) and (ii) is agreement with a generic feature [location], which, despite the absence of locative nouns in Tswana, may still be present, and accessible for certain types of modifiers). However, we have to leave the elaboration of this possibility as a topic for future research.

(32) a. **me-tse-ng éme-ngata**

4-village-LOC 4.ADJ-many

‘in many villages’

b. \***me-tse-ng hoho-ngata**

4-village-LOC 17.ADJ-many

‘in many villages’

[Southern Sotho; Machobane 1995: 119]

The data reveal that in Type 2-languages, modifiers generally agree with the noun class of the base noun, and that locative concord is not possible.

With respect to the availability of locative concord, Kinyarwanda clearly patterns with Type 1-languages. In contrast to Sotho-Tswana and Nguni, modifiers in Kinyarwanda show alternative concord; adjectives and possessors can agree with the base noun or with the locative:<sup>9</sup>

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<sup>9</sup> With possessors, noun concord is more common in Kinyarwanda, although locative concord is clearly possible, as shown for class 25 in example (35b) (see also the examples in Overdulve 1988: 19). With classes 17 and 18, locative concord with possessors is also possible, but it seems to be restricted to constructions expressing inalienable possession:

(i) **muu nda haawe**

**mu nda ha-a-we**

18 9.stomach 16-ASS-2S

‘(the area around) your stomach’

This restriction is not specific to Kinyarwanda. Caha and Pantcheva (2015) observe that locative concord with possessors in Shona is also limited to relations of inalienable possession. Note that Shona is a “regular” Type 1-language; as in Chichewa, locative concord in Shona reflects the noun class of the agreed-with locative.

(33) a. **ku ruhaánde runíni**  
**ku ru-haánde ru-níni**  
17 11-side 11-large  
‘on (the surface of) the large side’

b. **ku ruhaánde haníni**  
**ku ru-haánde ha-níni**  
17 11-side 16-large  
‘on the large (surface of the) side’

(34) a. **muu nzu nziizá**  
**mu n-zu n-iizá**  
18 9-house 9-beautiful  
‘inside the beautiful house’

b. **muu nzu heezá**  
**mu n-zu ha-iizá**  
18 9-house 16-beautiful  
‘the beautiful inside of the house’

(35) a. **inyuma y’-íimódoká**  
**i-nyuma y’-i-módoká**  
25-9.back 9.ASS-AUG-5.car  
‘behind the car’

- b. **inyuma h'-ímódoká**  
**i-nyuma h'-i-módoká**  
 25-9.back 16.ASS-AUG-5.car  
 '(at) the back of the car'

(33)-(35) demonstrate that locative modifiers in Kinyarwanda are possible with either locative or noun concord. The semantic differences between locative and noun concord illustrated by the translations in (33) and (34) are consistent with the view that the different agreement properties are the result of different attachment sites of the modifiers (cf. Carstens 1997; Marten 2012; Myers 1987). These data therefore constitute evidence that locatives in Kinyarwanda behave like locatives in Type 1-languages with respect to agreement with modifiers, which supports the view that they are DPs.

The above examples illustrate another important aspect of locative agreement in Kinyarwanda. Regardless of the particular type of locative, locative concord is always in class 16 in Kinyarwanda; agreement between locatives and internal modifiers does not reflect locative noun class. Recall that the same observation has been made with respect to “external” agreement between a preverbal locative and a predicate, which is always expressed by the invariant class 16 subject marker **ha-** in Kinyarwanda (see (21)-(23) above). In Type 2-languages, the use of an invariant locative subject marker with preverbal locatives follows from the complete absence of an agreement relation between the preverbal locative (analysed as a PP-adjunct) and the predicate. However, the fact that locative concord is possible in Kinyarwanda, but again only with class 16 morphology, points towards a different explanation for the occurrence of an invariant class 16 subject marker in this language. It suggests that locative agreement is possible in Kinyarwanda, but in



contrast to Type 1-languages like Chichewa, it is morphologically impoverished. Modifiers and predicates in Kinyarwanda do not agree in locative *noun class*, but they show a generic type of agreement with locatives, which is uniformly expressed by class 16 agreement morphology. In the next sub-section, we provide further support for this view by showing that locative DPs in Kinyarwanda can act as thematic and syntactic subjects.

### 3.2 Kinyarwanda locatives as subjects

As discussed above, preverbal locatives in Type 2-languages are generally analysed as adjuncts that combine with impersonal expletive constructions. This analysis is applicable not only to locative inversion constructions, but also to examples such as (36) and (37):

- (36) **thabe-ng hó-a-chés-a**  
 9.mountain-LOC 17.SM-PRES-burn-FV  
 ‘On the mountain it is hot.’

[Southern Sotho; Machobane 1995: 120]

- (37) **e-Thekw-ini ku-ya-shís-a**  
 LOC-bay-LOC 17.SM-DJ-heat-FV  
 ‘In Durban it is hot.’

[Zulu; Van der Spuy 2014: 64; translation adapted]

Expressions such as ‘hot’ belong to the class of predicates which can also appear in expletive constructions without thematic subjects, in which case they license

what Hazout (2010) calls an atmospheric interpretation ('It's hot.'). Therefore, the examples in (36) and (37) can indeed be construed as impersonal constructions with preposed locative adjuncts, and the translations reflect this interpretation.

Since the class 16 subject marker in Kinyarwanda can also be used as an expletive marker with atmospheric predicates (see (38a)), the same analysis in principle would also be available for Kinyarwanda examples such as (38b):

(38) a. **harakóonje**

***ha-ra-kóonj-ye***

16.SM-DJ-be.cold-ASP

'It's cold.'

b. **muu nzu harakóonje**

***mu n-zu ha-ra-kóonj-ye***

18 9-house 16.SM-DJ-be.cold-ASP

'(In) the house (it) is cold.'

However, an adjunct-analysis of preverbal locatives does not work in the following examples, in which the preverbal locatives are thematic subjects:

(39) **ku rukutá hasaduka buri muúnsi**

***ku ru-kutá ha-sáduk-a buri mu-nsi***

17 11-wall 16.SM-crack-FV every 3-day

'(The surface area) on the wall cracks every day.'

- (40) **mu kabáandé haashíze**  
**mu ka-báandé ha-a-a-shír-ye**  
 18 12-valley 16.SM-RECPST-DJ-finish-ASP  
 ‘(The area) in the valley is finished.’

- (41) **i Bagdad haanteera ubwóoba**  
**i Bagdad ha-n-téer-a u-bu-óoba**  
 25 9.Baghdad 16.SM-1S.OM-cause-FV AUG-14-fear  
 ‘(In) Baghdad scares me.’

An analysis of the preverbal locatives in (39)-(41) as adjuncts with an adverbial or frame-setting topic function is not possible here, because the locatives are clearly selected by their predicates. For example, the predicate in (41) assigns the thematic role of causer to the locative subject argument. Note that such an interpretation is not available for locatives in a Type 2-language such as Zulu:

- (42) a. \***e-thekw-ini ku-ya-ngi-sab-is-a**  
 LOC-bay-LOC 17.SM-DJ-1S.OM-fear-CAUS-FV  
 Intended: ‘(In) Durban scares me.’
- b. **í-thêku lí-ya-ngi-sab-ís-a**  
 AUG-5.bay 7.SM-DJ-1S.OM-fear-CAUS-FV  
 ‘Durban scares me.’

[Zulu; own data]

As (42) shows, if the place ‘Durban’ is to be interpreted as the logical subject of the causative predicate, it has to be expressed in its basic noun class 5 in Zulu, and cannot be realised as a locative.

That the locatives in (39)-(41) are thematically selected by their predicates is most clearly demonstrated by the interpretation of the corresponding null subject (pro-drop) constructions, in which the locatives have been omitted. As (43)-(45) show, these constructions cannot be interpreted as impersonal expletive constructions, but are only possible with anaphoric reference to a contextually salient, implicit location:

- (43)        **hasaduka        buri muúnsi**  
               **ha-sáduk-a    buri mu-nsi**  
               16.SM-crack-FV    every 3-day  
               ‘(The surface area) *there/it* cracks every day.’

- (44)        **haashíze**  
               **ha-a-a-shír-ye**  
               16.SM-RECPST-DJ-finish-ASP  
               ‘(The area inside) *there/it* is finished.’

- (45)        **haanteera        ubwóoba**  
               **ha-n-téer-a        u-bu-óoba**  
               16.SM-1S.OM-cause-FV    AUG-14-fear  
               ‘(The place) *there/it* scares me.’

The obligatory reference to an implicit locative argument in the examples in (43)-(45) determines that these predicates are incompatible with an atmospheric (expletive) interpretation; they obligatorily select referential arguments. In the examples in (39)-(41), this argument role is fulfilled by the preverbal locatives. From this we conclude that the locatives in these examples must be the grammatical subjects of their respective sentences, and that the class 16 subject marker expresses agreement with these locative subjects.

This conclusion is supported by evidence from subject relativisation and raising-to-subject constructions. In Kinyarwanda, (subject) relative clauses are not formed by means of relative pronouns; instead, relativisation is marked by a high tone on the verb, (46a). Lexical high tones sometimes shift to the right (Kimenyi 1976; 2002), (46b), but this shift does not occur in verbs with long vowels and object markers, (46c). The relative verb agrees with the subject head noun:

- (46) a.   **abaantu      bashaaká      kugura      ibitabo**  
           **a-ba-ntu      ba-shaaka-a      ku-gur-a      i-bi-tabo**  
           AUG-2-people    2.SM-want-FV    15-buy-FV      AUG-8-book  
           ‘people who want to buy books’
- b.   **abaantu      bakuundá      kugura      ibitabo**  
           **a-ba-ntu      ba-kúund-a      ku-gur-a      i-bi-tabo**  
           AUG-2-people    2.SM-like-FV    15-buy-FV      AUG-8-book  
           ‘people who like to buy books’
- c.   **abaantu      baampéemba      amapáwundi**  
           **a-ba-ntu      ba-n-héemb-a      a-ma-páwundi**  
           AUG-2-people    2.SM-1S.OM-pay-FV    AUG-6-pound  
           ‘people who pay me pounds’

In contrast, a relativised adjunct has to be linked to a resumptive pronoun inside the relative clause:

- (47)      **ni inshutí yé yajyaanyé                      nayó mu kabari.**  
              **ni i-n-shutí yé a-a-gi-an-ye                      na-yó mu ka-bari**  
 COP   AUG-9-friend 9.his 1.SM-RECPST-go-RECP-ASP with-9 18 12-pub  
 Lit.: ‘It is his friend he went with him into the pub.’  
 ‘It is his friend with whom he went into the pub.’

(48)-(50) show that the locative subjects in (43)-(45) are relativised like ordinary subjects:

- (48)      **ni ku rukutá hasadúka      buri muúnsi**  
              **ni ku ru-kutá ha-sáduk-a      buri mu-nsi**  
 COP 17 11-wall 16.SM-crack-FV every 3-day  
 ‘It is (the surface area) on the wall that cracks every day.’

- (49)      **ni mu kabáandé      haashizé**  
              **ni mu ka-báandé      ha-a- shír-ye**  
 COP 18 12-valley 16.SM-RECPST-finish-ASP  
 ‘It is (the area) in the valley that is finished.’

- (50)      **ni i Baghdad haantéera                      ubwóoba**  
             **ni i Baghdad ha-n-téer-a                      u-bu-óoba**  
 COP 25 9.Baghdad 16.SM-1S.OM-cause-FV AUG-14-fear  
 ‘It is (in) Baghdad that scares me.’

The well-formedness of the examples in (48)-(50) follows from the subject status of the locatives, but would be unexpected if these locatives were adjuncts.

The locatives in (43)-(45) can also undergo subject-to-subject raising in Kinyarwanda. (51b)-(53b) illustrate this with the verbs **-shoboka**, ‘be possible’, and **-kwíira** ‘to fit/to be right’, which are classified as raising verbs in Kimenyi (1976). Notice that in the following (a)-examples, where the locative is inside the embedded clause, the raising verb takes the class 8 subject marker, which functions as an expletive. However, when raising has taken place, the raising verb bears the class 16 subject marker:

- (51) a.    **birashoboka              kó ku rukutá hasadúka              buri muúnsi**  
             **bi-ra-shobok-a              kó ku ru-kutá ha-sáduk-a              buri mu-nsi**  
             8.SM-DJ-be.possible-FV that 17 11-wall 16.SM-crack-FV every 3-day  
             ‘It is possible that (the surface area) on the wall cracks every day.’
- b.    **kurukutá hashobora                      kubá hásaduka              buri muúnsi**  
             **ku ru-kutá ha-shobor-a                      ku-bá ha-sáduk-a              buri mu-nsi**  
             17 11-wall 16.SM-be.possible-FV 15-be 16.SM-crack-FV every 3-day  
             ‘(The surface area) on the wall may crack every day.’

- (52) a. **birashoboka kó mu kabáandé haashizé**  
**bi-ra-shobok-a kó mu ka-báandé ha-a-shír-ye**  
8.SM-DJ-be.possible-FV that 18 12-valley 16.SM-RECPST-finish-ASP  
‘It is possible that (the area) in the valley is finished.’
- b. **mu kabáandé hashobora kubá háashíze**  
**mu ka-báandé ha-shobor-a ku-bá ha-a-a-shír-ye**  
18 12-valley 16.SM-be.possible-FV 15-be 16.SM-RECPST-DJ-finish-ASP  
‘(The area) in the valley may be finished.’
- (53) a. **birakwíye kó i Baghdad haantéera ubwóoba**  
**bi-ra-kwíir-ye kó i Baghdad ha-n-téer-a u-bu-óoba**  
8.SM-DJ-be.right-ASP that 25 9.Baghdad 16.SM-1S.OM-cause-FV AUG-14-fear  
‘It is right that (in) Baghdad scares me.’
- b. **i Bagdad hakwíye kúunteera ubwóoba**  
**i Bagdad ha-kwíir-ye ku-n-téer-a u-bu-óoba**  
25 9.Baghdad 16.SM-be.right-ASP INF-1S.OM-cause-FV AUG-14-fear  
‘(In) Bagdad should scare me.’

The fact that the raising verbs in the (b)-examples are prefixed with the class 16 prefix **ha-**, and not with the class 8 expletive marker **bi-** that appears in the (a)-examples, shows unambiguously that the locatives in these examples have not simply been dislocated, but have undergone raising to the matrix subject position from where they trigger locative agreement with the raising verb.

Additional evidence for the fact that locatives in Kinyarwanda can function as grammatical subjects is provided by the data in (54) and (55), which show that



even non-specific locatives of class 17 and 18 can appear in preverbal position (class 25 locatives quite generally resist a non-specific interpretation):

- (54) **kuu nkutá hamwé na hámwe hakuunda kwaandura**  
**ku nkutá ha-mwé na ha-mwé ha-kúund-a ku-aandur-a**  
 17 10.wall 16-some and 16-some 16.like-FV 15-be.dirty-FV  
 Lit.: ‘On some surfaces/parts of walls like to be dirty.’  
 ‘Some surfaces of walls are often dirty.’

- (55) **mu mugí wóose wiicirwamó abaantu**  
**mu mu-gí wóose u-úic-ir-w-a=mo a-ba-ntu**  
 18 3-city 3.all 3.SM-kill-APPL-PASS-FV=18.LOC AUG-2-people  
**haanteera ubwóoba**  
**ha-n-téer-a u-bu-óoba**  
 16.SM-1S.OM-cause-FV AUG-14-fear  
 ‘(In) any city where people are murdered scares me.’

As non-specific constituents do not make good topics, the preverbal locatives in (54) and (55) must be analysed as grammatical subjects.

We now return to null subject constructions with locative subject markers. Interestingly, it has been suggested in the literature that Bantu languages with only one invariant locative subject marker may never license anaphoric reference under pro-drop (see Demuth and Mmusi 1997: 15; Salzmann 2011: 5). However, the examples in (43)-(45) have already shown that this assumption cannot be maintained. Even though there is only one locative subject marker in Kinyarwanda, an anaphoric locative reading is licensed in null subject

constructions. Moreover, this possibility not only exists with predicates which select locatives as thematic subjects, but also in locative inversion constructions:

- (56) a. **ku rubárazá hazaakorera abakené**  
**ku ru-bárazá ha-za-kór-ir-a a-ba-kené**  
 17 11.SM-veranda 16.SM-FUT-work-APPL-FV AUG-2-poor.people  
 ‘It is poor people who will work on the veranda.’
- b. **hazaakorera abakené**  
**ha-za-kór-ir-a a-ba-kené**  
 16.SM-FUT-work-APPL-FV AUG-2-poor.people  
 ‘It is poor people who will work *there* (e.g. on a surface area we’ve talked about).’
- (57) a. **mu mugí haageze abajuura**  
**mu mu-gí ha-a-ger-ye a-ba-juura**  
 18 3-town 16.SM-RECPST-arrive-ASP AUG-2-thieves  
 ‘Thieves have arrived in town.’
- b. **haageze abajuura**  
**ha-a-ger-ye a-ba-juura**  
 16.SM-RECPST-arrive-ASP AUG-2-thieves  
 ‘Thieves have arrived *there* (e.g. in a place we’ve talked about).’
- (58) a. **i Buraayi hagura imódoká abíishoboye**  
**i Buraayi ha-gur-a i-módoká a-ba-íishobor-ye**  
 25 14.Buraayi 16.SM-buy-FV AUG-10.cars AUG-2-be.wealthy-ASP  
 ‘It’s wealthy people who buy cars in Europe.’

- b. **hagura imódoká abíishoboye**  
**ha-gur-a i-módoká a-ba-íishobor-ye**  
 16.SM-buy-FV AUG-10.cars AUG-2-be.wealthy-ASP

‘It’s wealthy people who buy cars (*there*, e.g. somewhere just discussed).’

The translations show that in (56b) and (57b), reference to an implicit location is obligatory when the inverted locatives of the (a)-examples are omitted. (58b) is ambiguous; the sentence can be interpreted as an impersonal expletive construction, but crucially, an interpretation with anaphoric reference to a location is possible here as well. (We have indicated this ambiguity by putting the pronoun **there**, which refers to the implicit location, inside the brackets in our translations in (58b).)<sup>10</sup>

With respect to the interpretation of examples such as (56b)-(58b), Kinyarwanda again behaves like a typical Type 1-language. As shown in Bresnan and Kanerva (1989), locative inversion constructions in Chichewa are also interpreted with anaphoric reference to an implicit location when their locative subjects are omitted. (59)-(61) are null subject constructions corresponding to the examples in (8)-(10) in Section 2:

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<sup>10</sup> Whether or not a null subject construction based on locative inversion in Kinyarwanda can, or must be, interpreted with locative reference depends on a variety of factors, such as the lexical semantics of the verb and whether the verb is modified with an applicative marker or a locative clitic (see Ngoboka 2016, chapter 6, for detailed analysis). Since we are not concerned with the syntax of locative inversion in this paper, we do not discuss these details here. What is important for us is that a locative interpretation is possible under pro-drop in Kinyarwanda, even in sentences based on locative inversion constructions.

(59) ***pá-bádwa-a nkhonya***  
16.SM-be.born-FV 10.fist  
‘There (at some place) will break out a fight.’

(60) ***ku-na-bwér-á a-lěndo***  
17.SM-PST-come-FV 2-visitor  
‘There (in/to some place) came visitors.’

(61) ***mw-a-khal-á mí-kângo***  
18.SM-PERF-remain-FV 4-lion  
‘There (inside some place) have remained lions.’

[Chichewa; Bresnan and Kanerva 1989: 11]

The anaphoric interpretation of the sentences in (59)-(61) is one of the main arguments put forward by Bresnan and Kanerva (1989) in support of the view that locatives in Chichewa locative inversion constructions are true subjects and that the verbal prefixes in (8)-(10) are agreement markers. Based on the interpretation of the (b)-examples in (56)-(58), this analysis can be adopted for Kinyarwanda.

As expected, no anaphoric locative interpretation under pro-drop is possible with locative inversion constructions in Type 2-languages. Only an expletive reading is available here, which is the main reason for why locative constructions with preverbal locatives in Sotho-Tswana and Nguni are analysed as impersonal constructions with locative adjuncts (see Creissels 2011; Demuth and Mmusi 1997 for Tswana; Demuth 1990 for Southern Sotho; Marten 2010 for Swati; Buell 2007, 2012 for Zulu):

(62) **ku-dlál-a í-zin-káwu**  
17.SM-play-FV AUG-10-monkey  
'There are monkeys playing.'

(63) **kú-lw-a á-bá-ntu**  
17.SM-fight-FV AUG-2-person  
'There are people fighting.'

[Zulu; own data]

(64) **gó-émé ba-símané**  
17.SM-stand:ASP 2-boys  
'It's the boys that stood up.'

(65) **gó-fúla di-kgomó**  
17.SM-graze 10-cattle  
'It's the cattle that are grazing.'

[Tswana; Demuth and Mmusi 1997: 9]

The parallel between Kinyarwanda and Type 1-languages such as Chichewa extends to constructions in which the anaphoric reference is to a location explicitly mentioned in the same sentence. Bresnan and Kanerva (1989) show that in Chichewa, a locative subject can be left-dislocated from an embedded clause if the embedded verb is prefixed with a locative subject marker:

- (66) **ku-mu-dzi mu-ku-gáníz-a kutí ku-na-bwér-á a-lěndo**  
 17-3-village 2P-PROG-think-FV that 17.SM-RECPST-come-FV 2-visitor  
 Lit.: ‘To the village, you think that there came visitors.’

[Chichewa; Bresnan and Kanerva 1989: 12]

The grammaticality of (66) demonstrates that the locative subject marker in Chichewa licenses an anaphoric link between the embedded clause and the dislocated locative topic. In contrast, since locative subject markers in Type 2- languages only have expletive functions, constructions such as (66) are barred in these languages, as witnessed by the ungrammatical example in (67), from Southern Sotho:

- (67) **\*ma-simo-ng, o-nahan-a hore ho-ile ba-eti teng?**  
 6-fields-LOC 2S.SM-believe-FV that 17.SM-go.ASP 2-visitors there  
 ‘To the fields, do you think that the visitors went there?’

[Southern Sotho; Demuth 1990: 243]

Kinyarwanda again patterns with Chichewa. The following examples show that locative subjects can be dislocated from embedded clauses and are resumed by the class 16 subject marker:

- (68) **ku mirimá, uratéekereza kó haágiye abashyitsi?**  
**ku mi-rimá u-ra-téekerez-a kó ha-á-gi-ye a-ba-shyitsi**  
 17 4-field 2S-PROG-think-FV that 16.SM-REM-go-ASP AUG-2-visitors  
 ‘To the fields, do you think that the visitors went there?’

- (69) **mu kabáandé, ndéemera kó haashizé**  
**mu ka-báandé n-ra-éemer-a kó ha-a-shír-ye**  
 18 12-valley 1S-PROG-believe-FV that 16.SM-RECPST-finish-ASP  
 ‘(The area) in the valley, I believe that it is finished.’

- (70) **i Pretoria, ndéemera kó hakoonjá**  
**i Pretoria n-ra-éemer-a kó ha-kóonj-a**  
 25 9.Pretoria 1S-PROG-believe-FV that 16.SM-be.cold-FV  
 ‘In Pretoria, I believe that it is cold there.’

The subject marker **ha-** in the examples in (68)-(70) licenses an anaphoric link to the dislocated locatives, exactly like locative subject markers in Type 1-languages.<sup>11</sup>

To summarise the results of this section, we compare some of the key properties of locatives in Kinyarwanda, Chichewa and Zulu in Table 1:

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<sup>11</sup> Note that dislocated locatives in Kinyarwanda can also be resumed by an invariant class 16 locative object marker. We illustrate this in (i) with a class 18 locative; corresponding examples with dislocated locatives from the other locative classes, all anaphorically linked to a class 16 object marker, are discussed in Zeller and Ngoboka (2015):

- (i) **mu ka-báandé, ndéemera kó baahamazé**  
**mu ka-báandé n-ra-éemer-a kó ba-a-ha-mar-ye**  
 18 12-valley 1S-PROG-believe-FV that 2.SM-RECPST-16.OM-finish-ASP  
 ‘In the valley, I believe they finished there/it.’

**Table 1. Properties of the Kinyarwanda locative system in relation to Type 1 and Type 2 languages**

	<b>Chichewa (Type 1)</b>	<b>Kinyarwanda</b>	<b>Zulu (Type 2)</b>
Categorial status of locative phrase	DP	DP	PP
Locative agreement with predicates	Yes	Yes	No
Locative concord with modifiers	Yes	Yes	No
Locative as thematic subject	Yes	Yes	No
Locative subject marker with anaphoric reference to a location	Yes	Yes	No
Locative agreement reflects locative noun class distinctions	Yes	No	No

As can be seen in Table 1, Kinyarwanda behaves in most respects like a Type 1-language: locatives are DPs that belong to different locative noun classes and can function as subjects, they show locative agreement with both DP-internal modifiers and DP-external predicates, and locative subject markers license anaphoric reference to implicit locations in null subject constructions. However, locative agreement relations can only be expressed by class 16 locative morphology in Kinyarwanda; even though locative noun classes are distinguished by different locative noun class prefixes, this distinction is never reflected by the agreeing element. As Table 1 shows, the use of an invariant locative agreement marker is the only property that Kinyarwanda has in common with Type 2-languages such as Zulu; it constitutes the main difference between the locative system of Kinyarwanda and that of “regular” Type 1-languages such as Chichewa. In the next section, we offer an account of this difference.



#### 4. Locative agreement

It was shown in Section 3 that locative agreement in Kinyarwanda is exclusively realised by class 16 agreement morphology in Kinyarwanda. This is surprising: as we have seen, when it comes to marking the locative itself, Kinyarwanda distinguishes morphologically between four different locative noun classes.

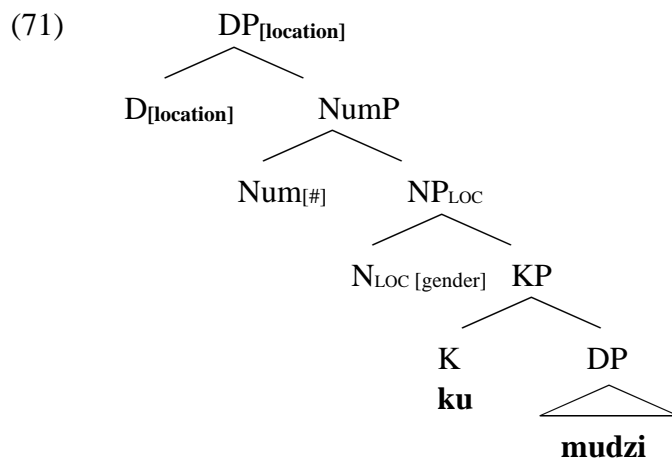
Therefore, the obvious question that arises from the preceding discussion is why agreement between a locative subject of class 17, 18 or 25 and a predicate or a modifier is not expressed by means of an agreement marker corresponding to each of these noun classes.

Our answer is based on the following idea. We suggest that in Kinyarwanda, the noun class feature of a locative is simply not “visible” to the agreement process between a locative and a predicate or modifier. Rather, for reasons discussed below, the only grammatical feature that enters into agreement relations is the generic locative feature [location], which we assume is associated with every locative DP, regardless of the specific noun class of the locative. When a locative agrees with a verb or a modifier, it is only this feature which can be transferred to, and realised on, the dependent element. We suggest that the locative agreement markers of class 16 in Kinyarwanda are the morphological realisation of agreement with the [location]-feature. They express agreement with any locative, but do not reflect a specific locative noun class.

In the following sub-sections, we make this idea more concrete.

#### 4.1 Locative DPs in Bantu and the feature [location]

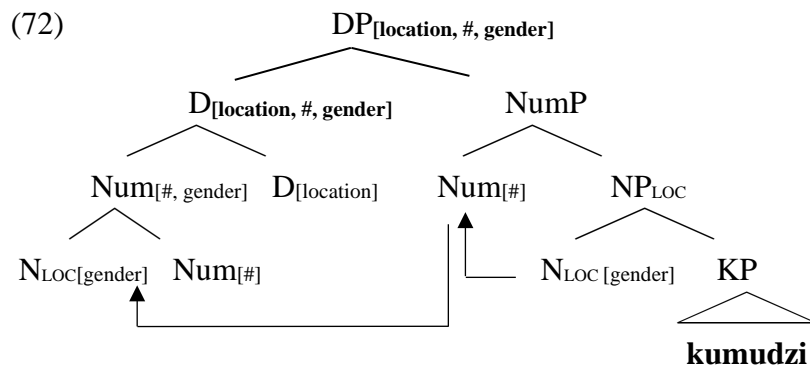
The starting point of our analysis is the theory of Bantu DPs articulated in Carstens (1993, 1997, 2008, 2011). Carstens assumes that the DP in Bantu consists of a lexical N-head and (at least) two layers of functional structure, namely Num(ber) (Ritter 1991) and D. According to Carstens, each of these heads hosts a particular grammatical feature: the lexical N-head has a [gender]-feature, and Num a number feature [#]; together, [gender] and [#] determine the noun class of the DP. While D has a [person]-feature in ordinary DPs (Carstens 2011; Longobardi 2008), the D-head of a locative DP is equipped with the abstract feature [location] (see Carstens 1997, note 28):



(71) is the representation of locative DPs based on Carstens (1997). As in the accounts discussed in Section 2.1, Carstens assumes that the locative DP in Type 1-languages is a projection of a locative noun  $N_{\text{LOC}}$ , which in turn selects the highest projection of the base noun as its complement. However, Carstens (1997) does not assume that  $N_{\text{LOC}}$  is pronounced as the locative noun class prefix. Rather, according to Carstens (1997), the locative noun is phonetically null, and the

locative prefix is analysed as a Case marker, i.e. as the head of a functional projection K(ase) which links the base DP to the locative noun.<sup>12</sup> In what follows, we adopt Carstens' representation in (71), but we point out that the choice between her analysis and the traditional view discussed in Section 2.1 above, which treats the locative prefixes as exponents of the locative noun, is immaterial for the proposal we make in this section.

Importantly, Carstens (1993, 1997, 2008, 2011) suggests that in Bantu DPs, the N-head successive-cyclically moves to D via Num. As a result, all grammatical features end up in D, from where they project to the DP (see especially Carstens 2011). In locatives in Type 1-languages, the features [location], [#] and [gender] are therefore all realised on the root node of the locative DP:



As a result of the operation depicted in (72), the information about a particular locative noun class is represented at the DP-level. Therefore, when the locative is a subject and enters into an agreement relation with a predicate, these features

<sup>12</sup> For theory-internal reasons, Carstens (1997) assumes that the KP moves to the specifier of the locative D. We ignore this additional aspect here, as it does not affect the key points of our analysis.

participate in the agreement relation, and the verb's subject marker will reflect the specific noun class of the locative DP. Similarly, a locative D c-commands modifiers, which are adjoined to the locative-NP. Since agreement in Bantu is "upwards" (i.e. the agreed-with element must c-command the agreeing element; Baker 2008), the presence of the [#] and [gender]-features in D explains why modifiers show locative noun class agreement in Chichewa and similar Type 1-languages.

Carstens (1997) does not discuss the semantic function of the grammatical feature [location] in detail, but we can understand its role by comparing it to the grammatical feature [person], which is associated with the functional D-head in the extended projection of non-locative nouns. According to Longobardi (2008), the feature [person] licenses nominal reference to an individual-type entity. While a bare noun or NP denotes properties, the denotation of a DP as referring to an individual is achieved through the [person]-feature in D, which can be regarded as a function that maps properties to entities. The feature [location] is the equivalent of [person] in the domain of locatives; it maps properties (denoted by the locative noun) to places.

Lyons (1977: 475) observes that in languages such as English, certain nominal expressions may refer to either an entity or a place. For example, the DP *the house* designates an entity in (73a), but a location in (73b) (see also Taylor 1996, 2007):

- (73) a. The house is huge.  
b. The house is cold.

The difference between (73a) and (73b) can be captured in terms of different features associated with the head of the DP *the house*. In (73a), D has a [person]-feature, and the subject-DP denotes an entity, but the DP in (73b) is headed by a D with the feature [location], and therefore refers to a place.

While the D-head of the extended projection of a noun such as *house* in (73) can host either the [person]- or the [location]-feature in languages such as English, the distribution of the feature [location] is more restricted in Bantu languages. Reference to a location is commonly established via locative marking in most Bantu languages (Taylor 2007), which means that a D-head with the feature [location] is by default part of the functional projection of N<sub>LOC</sub>. However, it is worth noting that some Type 2 Bantu languages pattern with English in that the feature [location] can be associated with the functional projection of regular nouns in particular syntactic contexts. In a construction known as *semantic locative inversion*, which exists in the Nguni languages, a DP not formally marked as a locative appears in the grammatical subject position, and the thematic subject appears postverbally. What is important is that in this construction, the subject denotes a place, provided its nominal semantics is compatible with this interpretation (Buell 2007; Zeller 2013):

- (74)      **lezi      zi-ndlu zi-hlal-a      a-ba-ntu      aba-khubazekile**  
             10.DEM   10-house 10.SM-live-FV    AUG-2-person 2.ADJ-handicapped  
             Lit.: ‘These houses live handicapped people.’  
             ‘Handicapped people live in these houses.’

[Zulu; Buell 2007: 111]

The fact that the DP **lezi zindlu**, ‘these houses’, in (74) can refer to a location means that its D-head hosts the feature [location]. This shows that some Bantu languages pattern with English in allowing the [person]-feature of a regular noun’s extended projection to be replaced with the feature [location].<sup>13</sup>

As we have seen, modifiers and predicates in Kinyarwanda always show locative agreement in class 16, regardless of the specific locative noun class of the locative itself. We now suggest that the class 16 agreement markers in Kinyarwanda are overt realisations of an agreement relation between a modifier or predicate and the [location]-feature of the locative’s D-projection. This means that the label “class 16 agreement marker” is actually a misnomer; morphemes such as the subject marker **ha-**, which spell-out locative agreement in Kinyarwanda, are in fact not specified for a particular locative noun class. Rather, these agreement markers realise the feature [location] on an agreeing predicate or modifier; the morphological condition for their selection is fulfilled whenever a modifier or predicate agrees with a D or DP which hosts this feature. Henceforth, we refer to locative agreement with the feature [location], which is expressed by the (former) class 16 agreement markers in Kinyarwanda, as “generic” locative agreement.

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<sup>13</sup> Note that the feature [location] can only appear on a DP which is not formally marked as a locative when this DP occurs in the subject position of an inversion construction such as (74). This suggests that the [location]-feature of such DPs has to be licensed in a specifier-head relation with a head that introduces the subject in these constructions. In Zeller (2013), it is proposed that this head is the functional head Pr (for predication), which introduces the locative subject in its specifier. In languages such as Zulu, which do not have N<sub>LOC</sub>, licensing via Pr may be the only way in which the feature [location] can be realised on DPs not selected by locative prepositions.

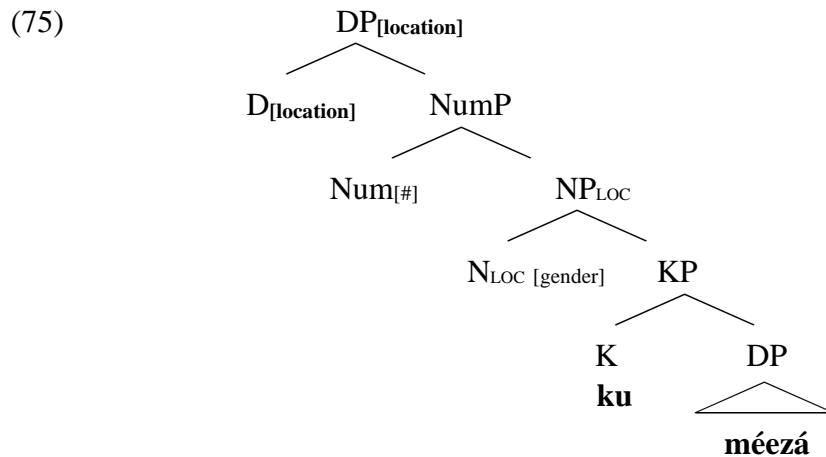
## 4.2 Head movement in DP and the $N_{\text{LOC}}$ -to-D parameter

We now turn to the question of why locative noun class is not reflected in locative agreement in Kinyarwanda. Our answer to this question is simple. We argue that locative agreement is only with the feature [location] in Kinyarwanda, because the locative noun class features (i.e. locative [gender] and [#]) are systematically absent from D in this language. The only feature of locative D that participates in agreement in Kinyarwanda is the feature [location].

Recall that the [gender]- and [#]-features associated with N and Num are realized on D as a result of N-to-Num-to-D-movement in Bantu (Carstens 2011). To explain the Kinyarwanda pattern, we now suggest that null locative nouns in Kinyarwanda do not undergo head movement. As a result,  $N_{\text{LOC}}$  and Num in the projection of the locative DP remain in their base positions. (75) is our representation of the Kinyarwanda class 17 locative **ku méezá**, ‘on the table’:<sup>14</sup>

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<sup>14</sup> The locative noun class prefix in Kinyarwanda is in complementary distribution with the so-called augment (the initial vowel) of the base noun (compare class 6 **a-méezá**, ‘table’). Following Halpert’s (2015) analysis of the augment in Zulu, we assume that the augment in Kinyarwanda is a realisation of K; consequently, the locative noun class prefix replaces the augment in this position (cf. Ngoboka 2016, who argues that the augment and the locative prefix are both of category D).



In (75), the locative noun has not moved to D. Therefore, the [gender]- and [#]-features do not appear on D or DP, and as a result, noun class information is not accessible to agreement relations with predicates or modifiers in Kinyarwanda. The only accessible feature is the abstract feature [location], which is inherently associated with the head of the locative DP and which projects to the DP-level. Predicates and modifiers in Kinyarwanda can agree with this feature, resulting in generic locative agreement, but locative noun classes are not distinguished in the expression of locative agreement relation.

This analysis allows us to reduce the main difference in locative agreement between Kinyarwanda and other Type 1-languages to a simple parameter. This parameter can be stated in the following way:

(76) *The  $N_{LOC}$ -to-D parameter*

In language X, D with the feature [location]	(i)	<b>does</b>	attract $N_{LOC}$ .
	(ii)	<b>does not</b>	

While languages of the Chichewa-type have the parameter in (76) set to (i), the parameter is set to (ii) in Kinyarwanda.



The parameter setting (76ii) is the exception rather than the rule among Bantu languages, and seems to be characteristic of a particular geographical area (Northeastern Bantu (Zone J); see Grégoire 1975). It is therefore likely that it reflects a later development in Bantu, and that earlier stages of Kinyarwanda had  $N_{\text{Loc-to-D}}$  movement in locatives, and full locative noun class agreement. We do not know what caused the change of the parameter in Kinyarwanda from (76i) to (76ii), or why it is the feature [location] (as opposed to any other grammatical feature) that is involved in this change, but we suggest that, as a consequence, three of the four existing sets of locative agreement markers became obsolete and disappeared from the lexicon, while class 16 was generalised as an agreement marker realising only the feature [location].<sup>15</sup>

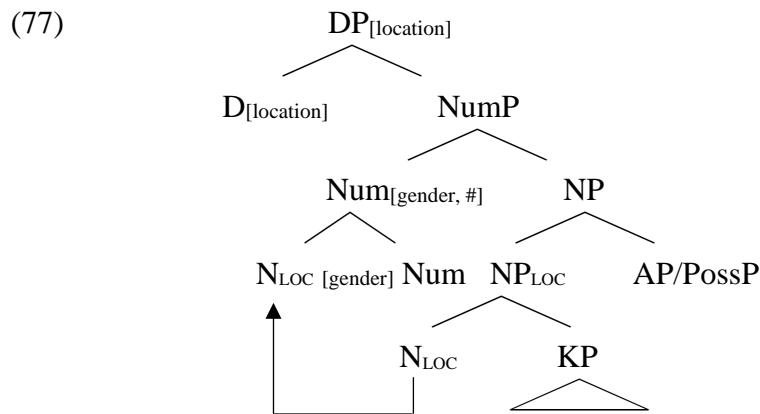
According to (76), generic locative agreement in Kinyarwanda is a consequence of a particular setting of a binary syntactic parameter. It is important to emphasise that (76) is not simply a restatement of the difference between Kinyarwanda and other Type 1-languages in technical terms. Rather, as we demonstrate now, there are clear predictions that follow from our proposal, and these predictions lead to interesting observations and generalisations about the kind of variation we find (and do not find) in Bantu languages.

The first observation derives from the fact that the parameter in (76) is formulated in terms of syntactic head movement. In languages with parameter setting (76ii),  $N_{\text{Loc}}$  does not move to D. As a result, noun class features do not

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<sup>15</sup> The fact that it is the markers of class 16 that survived as locative agreement markers in Kinyarwanda may be related to the fact that only class 16 includes a non-derived locative noun referring to a location (i.e. **ahaantu**, ‘place’; see Section 3). No comparable locative nouns exist in classes 17, 18 or 25 in Kinyarwanda.

percolate to the level of DP, and are therefore inaccessible for the agreement relation between locative subject-DPs and predicates. But recall that  $N_{LOC}$  moves to D via Num. This means that, in principle, it would be possible that there are languages with parameter setting (76ii) in which  $N_{LOC}$  still moves up to Num, even though it does not move all the way up to D:



Importantly,  $N_{LOC}$ -to-Num-movement has implications for locative agreement with modifiers. Since modifiers are adjoined to NP (see (77), and (29) in Section 3.1), they are c-commanded by Num.  $N_{LOC}$ -to-Num movement therefore produces a configuration in which locative noun class features can participate in agreement with modifiers. At the same time, locative noun class features are still not realised on D and therefore cannot project to the DP-level. Therefore, in a language in which  $N_{LOC}$  moves to Num but not further, we expect full locative noun class agreement with modifiers, while agreement with predicates is predicted to be generic.

At least one language from Zone J seems to exhibit exactly this pattern of locative agreement. Trithart (1977) shows that in Haya (JE22), locative subject-predicate agreement with class 16, 18 and 25 locatives is uniformly expressed by

the (former) class 16 subject agreement marker (note that class 17 is no longer productive as a secondary locative prefix in Haya). This shows that the  $N_{\text{Loc-to-D}}$  parameter is set to (76ii) in Haya:

(78)     ***aha-kitooke***     ***há-ka-bá***     ***ha-li***     ***ha-lúŋgi***  
           16-7.banana       16.SM-PST-be     16-be     16-good  
           ‘On the banana was good.’

(79)     ***omu-kyaalo***     ***há-ka-bá***     ***ha-li***     ***ha-lúŋgi***  
           18-village       16.SM-PST-be     16-be     16-good  
           ‘In the village was good.’

(80)     ***enja***       ***y’énjú***     ***há-ka-bá***     ***ha-li***     ***ha-lúŋgi***  
           25.outside     25.ASS.house     16.SM-PST-be     16-be     16-good  
           ‘Outside of the house was good.’

[Haya; Trithart 1977: 95; our glosses]

Possessor modifiers allow alternative agreement in Haya with locatives of class 16 and 18, and class 25 seems to license only locative concord. Crucially, locative concord reflects the noun class of the locative:<sup>16</sup>

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<sup>16</sup> A caveat: Our discussion of the Haya data in the text is based on Trithart’s (1977: 93) claim that “[i]n possessive adjectives the locative markers **omu** and **aha**, like the locative marker **e-**, are able to control concord”. However, he translates (81b) and (82b) as if they were sentences; if these are DPs, a more adequate translation of e.g. (81b) should have been ‘my area around the village’. We are not sure whether Trithart’s translation is meant to indicate that (81b) and (82b) have a clausal syntax and whether the tonal difference between the locatives in the (a)- and (b)-examples is

- (81) a. **aha-kyaaló kya-ηge**  
 16-7.village 7.ASS-1s  
 ‘at my village’
- b. **aha-kyaalo ha-ηge**  
 16-7.village 16.ASS-1s  
 ‘The area around the village is mine.’
- (82) a. **omu-kyaaló kya-ηge**  
 18-7.village 7.ASS-1s  
 ‘in my village’
- b. **omu-kyaalo mwa-ηge**  
 18-7.village 18.ASS-1s  
 ‘In the village is mine.’
- (83) **e-igulu y’ékitooke**  
 25-5.sky 25.ASS-7.banana  
 ‘on top of the banana’

[Haya; Trithart 1977: 91; 93; our glosses]

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relevant here. Unfortunately, Trithart’s (1977: 93) comments about (81) and (82) are not quite clear in this respect (“Structurally, [...] concord with the locative marker indicates that it is to be interpreted as a sentence”). Furthermore, Trithart suggests that agreement in (83) is with the locative, because inner concord with the class 5 base noun would require the associative marker **ly-**. However, it is also possible that the marker **y-** signals default agreement in class 9, which is attested in many Bantu languages in constructions such as (83). Trithart’s (1977) claim therefore needs to be treated with some caution.

The Haya data suggest that the languages which have the  $N_{\text{LOC-to-D}}$  parameter set to (76ii) can be further distinguished with respect to whether or not  $N_{\text{LOC}}$  moves to Num. In one group of languages, which includes Kinyarwanda, locative nouns do not move at all. Locative noun class features are therefore generally inaccessible for agreement, and we find that both predicates and locative modifiers show generic locative agreement. In the second group of languages, however, locative nouns move to Num, as shown in (77), but still not all the way up to D, since the feature [location] does not attract locative nouns, according to (76ii). In languages of this group, which seems to include Haya, predicates still only show generic locative agreement, but agreement on locative modifiers distinguishes different locative noun classes morphologically, because the [gender]-feature is realised on Num.

The “mixed” locative agreement attested in Haya is therefore accommodated by our analysis and straightforwardly explained in terms of  $N_{\text{LOC}}$ -movement to Num. But more importantly, our analysis makes a strong prediction about what pattern of locative agreement we do *not* expect to find. It is clear that, given our account, there can be no Bantu language which shows the opposite behaviour to Haya, reflecting full locative noun class distinctions with predicate agreement, but only showing generic locative agreement with modifiers.<sup>17</sup> This is because, for locative

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<sup>17</sup> We hasten to add that our analysis does not rule out the existence of languages which show locative noun class agreement with predicates, but only allow *inner concord* with modifiers (modifiers may be banned from adjoining to the locative NP for independent reasons in such a language). Our generalisation applies to languages which have locative concord: if locative

noun class to be realised on predicates, the [gender] and [#] features must be located on D and DP. But this necessarily implies that they will also c-command any modifier inside the locative DP, which in turn means that modifiers would also agree in locative noun class. As far as we could establish, this prediction is indeed realised: we do not know of any Bantu language which is the mirror image of Haya with respect to locative agreement. The generalisation that emerges is that, if “mixed” agreement with locatives exists in a Bantu language, it must always be of the Haya type. This generalisation follows directly from, and therefore constitutes an argument for, our analysis.

A second generalisation concerns locative predicate agreement. (76) is a binary parameter; it is either set to (76i), and predicates in the language will show full locative noun class agreement, or it is set to (76ii), and there will only be generic agreement on predicates. Assuming that generic locative agreement is always expressed by only one invariant former locative noun class (e.g. class 16, as in Kinyarwanda and Haya), this predicts that locative agreement on predicates in most, if not all, Bantu languages can only be expressed in one of two possible ways. Either a language has locative subject markers that distinguish *all* of the locative noun classes that can be expressed at the level of DP in the language, or the language has *exactly one* locative subject marker. In contrast, what is expected to be very rare (or non-existent) are Bantu languages with a locative agreement system somewhere between these two options. We can call such a hypothetical language a “Y>X>1”-language, where “Y” designates the number of noun class distinctions expressed by locative noun class prefixes in the DP, and “X” is the

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agreement with modifiers in these languages is generic, then locative agreement with predicates will also be generic.

number of noun class distinctions that can be expressed through predicate agreement. The  $Y > X > 1$ -scenario would be realised in a language which distinguishes, say, four locative noun classes at the level of DP ( $Y = 4$ ), but which has two locative noun class agreement markers ( $Y = 2$ ) (e.g. subject markers of class 16 and 18, of which one might be used only for agreement with one locative noun class, and the other one, as the “elsewhere” case, for the other three). However, according to our proposal, in which the options of locative agreement are restricted by a binary parameter, such a “ $Y > X > 1$ ”-language would be an exception, and may not even exist at all.

In light of this prediction, it is interesting that the Bantu languages of Zone J discussed in Grégoire (1975) seem to fall into exactly two groups. In the first group, predicates show full noun class agreement with all types of locatives that are distinguished in the relevant language at the level of DP, so  $Y = X$  in these languages (Grégoire (1975: 76) lists Shi, Kinande, Luganda and Luya as exhibiting this pattern). In the second group of languages (Kinyarwanda, Kirundi, Ha, Nkore and Haya), predicates show generic locative agreement expressed by only one single locative subject marker, namely the (former) class 16 marker *ha-* ( $X = 1$ ). This dichotomy is exactly what is predicted by our analysis; the agreement patterns of these two groups of Zone J-languages are consequences of the two parameter settings in (76). The locative agreement patterns attested among the Zone J-languages thus provide further support for our analysis.

This generalisation regarding locative agreement in Zone J-languages is even more striking in light of the fact that an impoverished locative system of the form  $Y > X > 1$  is indeed found in Kinyarwanda, namely with pronominal clitics. Although Kinyarwanda has four locative noun classes, there are only three

different locative clitics, namely *-mó* (for class 18), *-yó* (for class 25), and *-hó* (for both class 16 and 17). The class 17 clitic *-kó*, which still exists in the neighbouring language Kirundi (Meeussen 1959; Devos et al. to appear), has disappeared from the Kinyarwanda lexicon, and its role has been taken over by the class 16 clitic (Ngoboka 2016). This is the kind of idiosyncratic property we expect as a result of arbitrary lexical loss. It is hence significant that no comparable pattern seems to be attested in the domain of locative agreement in the Zone J-languages.

We conclude from this discussion that the morphology of locative agreement in Bantu is indeed determined by a syntactic parameter that regulates head movement in locative DPs. The fact that locative agreement in Kinyarwanda is only with the feature [location] is not the result of an accidental reduction of the lexical inventory of locative agreement markers. Rather, these agreement markers disappeared because, as a result of a small parametric switch from (76i) to (76ii), the grammatical features that express the respective locative noun class distinctions no longer participate in locative agreement relations in this Type 1-language.

## **5. Conclusion**

Recent research recognises the existence of two different locative systems in Bantu languages. On the one hand, in languages such as Chichewa or Herero (which we have called “Type 1”-languages in this paper), locatives behave like ordinary DPs and show noun class agreement with both DP-internal and DP-external elements. On the other hand, locatives in Sotho-Tswana and Nguni (“Type 2”-languages) are prepositional and therefore do not trigger locative agreement with modifiers or



verbs. In the preceding sections, we compared locatives in Kinyarwanda to those of Type 1- and Type 2-languages, and we concluded that Kinyarwanda is in all crucial respects a Type 1-language. Locatives in Kinyarwanda are DPs, and these DPs can function as thematic and syntactic subjects and trigger locative agreement. However, as we have shown, locative agreement in Kinyarwanda can only be expressed by class 16 locative morphology; even though different locative noun classes are distinguished by locative noun class markers, these distinctions are not mirrored by the agreement morphology.

We argued that this difference between Kinyarwanda and prototypical Type 1-languages like Chichewa can be reduced to a single, parameterised property of locative D-heads in Bantu. Following Carstens (1993, 1997, 2008, 2011), we adopted the view that in the latter languages, the locative noun  $N_{\text{Loc}}$  carrying the locative gender feature undergoes head movement to D. As a result, locative noun class features are represented at the DP-level, and agreement with locatives in Type 1-languages reflects the distinction between different locative noun classes. In contrast, we suggested that in Kinyarwanda,  $N_{\text{Loc}}$  is not attracted by the locative D-head. Locative noun class is therefore not represented as a feature of locative D or DP in Kinyarwanda. Consequently, only the feature [location] (an inherent feature of locative D) participates in agreement in Kinyarwanda locatives, and this agreement is expressed by class 16 morphology.

Our analysis therefore provides an explanation for a curious synchronic difference between locatives in Type 1 Bantu languages. But in addition, we believe that it may also offer some insights into the diachrony of locative systems in Bantu. The difference between Type 1- and Type 2-languages is sometimes interpreted in terms of a historical path, such that a formerly nominal locative

system becomes reanalysed as prepositional (see Marten 2010). We consider it possible that the locative system of a language like Kinyarwanda reflects an intermediate stage of this historical process. More specifically, we suggest that one step in the development of prepositional locative markers in a language may have been a change of the setting of the parameter in (76), which determines whether or not locative noun class features are realised on a locative D-head. As we discussed in Section 4, a change from (76i) to (76ii) would have had important consequences for the surface realisation of locative agreement; in a language with parameter setting (76ii), locative noun class distinctions would no longer be reflected in the corresponding agreement markers. It is plausible that over time, the speakers of a language with parameter setting (76ii) may have begun to interpret the absence of agreement with locative noun class features as the absence of the locative noun that *hosts* these features. This interpretation in turn may have expedited, or contributed to, the reanalysis of nominal locatives as prepositional. The locative semantics formerly expressed by the locative noun is maintained, but it had to be linked to a different element inside the locative phrase (a locative noun class prefix, a demonstrative etc.), which over time became reanalysed as the head of the construction, i.e. as a preposition. We believe that this scenario adds to the narrative that has become known as the “Great locative shift” (Marten 2010) in the literature, and that it can shed more light on the historical relation between the different locative systems found in the Bantu languages.

## **Abbreviations**

1/2S/P = first/second person singular/plural; ADJ = adjective marker; APPL = applicative; ASP = aspect; ASS = associative; AUG = augment; CAUS = causative; COP = copula; DEM = demonstrative; DJ = disjoint verb form; FUT = future tense; FV = final vowel; INF = infinitive; LOC = locative marker; NEUT = neuter; OM = object marker; PASS = passive; PERF = present perfect; PRES = present tense; PROG = progressive; PST = past tense; RECP = reciprocal; RECPST = recent past; REM = remote past; SM = subject marker. Numbers represent noun class.

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