Locative Markers in Kinyarwanda as Determiners
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ABSTRACT

Kinyarwanda has three locative markers (ku, mu, and i), which belong to classes 17, 18, and 19 respectively, and one locative noun prefix ha- of class 16. Semantically the locative markers ku, mu, and i refer to places and seem to perform the function of prepositions found in languages such as English as they are often used with verbs of position such as -iicara 'sit', -hágara 'stand' or movement such as -za 'come' or -jya 'go'. Syntactically they precede noun class prefixes and are in complementary distribution with augment stems and demonstratives. The aim of this paper is to show that unlike ha- of class 16, the locative markers ku, mu, and i are not noun class prefixes. It is also shown that they are not prepositions; although they have semantic properties of prepositions, syntactically they are determiners on a par with augment stems and demonstratives.

Keywords: locative marker, determiners, demonstrative, noun class prefix.

1. INTRODUCTION

Kinyarwanda has four locative classes, classes 16, 17, 18, and 19, as illustrated by (1):

(1)  

a. ahaantu
    a-ha-ntu
    AUG-16-place
    'a place'

b. ku
    mu-sózi
    LOC17 3-hill
    'on a/the hill'

c. mu
    ryíinyo
    mu  ri-íinyo
    LOC18 5-tooth
    'in a/the tooth'

d. i
    Buraayi
    i  Buraayi
    LOC19 14.Europe
    'in Europe'

Kinyarwanda examples are presented in four lines. Line 1 represents vowel lengthening, surface tone, and phonologically conditioned sound changes. Line 2 presents the underlying morphemes and lexical tone while lines 3 and 4 represent the interlinear glosses and a translation. Glosses are marked as follows: 1,2 S/P = first, second person singular/plural; ASS = associative; AUG = augment; DEM = demonstrative; DJ = disjoint verb form; FV = final vowel; LOC = locative; NEG = negative marker; OM = object marker; PASS = passive; PERF = perfective; PRES = present progressive; PST = recent past tense; REL = relative marker; REM = remote past tense; REV = reversive; SM = subject marker.
From the examples above, the following can be noted. The class 16 noun *ahaantu* 'place' is a canonical noun with an augment (*a*-), a noun class prefix (*ha*-), and a stem (*ntu*). The examples in (1b) and (1c) show that the locative markers (*ku, mu*) precede a noun class prefix while the example in (1d) shows that *i* is placed before a proper name of a place. Also, the nouns *umusózi* 'hill' in (1b), *iryíinyo* 'tooth' in (1c), and *u Buraayi* 'Europe' in (1d) have lost their augments after the locatives *ku, mu* and *i*. In other words, the locative markers in Kinyarwanda delete the augment, i.e. a noun cannot be marked as a locative and have an augment.

It should be noted here that the majority of nouns in Kinyarwanda have an augment, a prefix, and a root, as in (1a), except in class 5 in which nouns do not have a noun prefix but have an augment, and classes 1/2 and 9/10, in which there can be found nouns that lack an augment or a noun prefix or both. Also, while in some languages, a noun can have two noun prefixes, in Kinyarwanda only one prefix is permitted (see an exception in section 4, (34)).

The paper will focus on the examples in (1b–d). The issue to be investigated is whether locative markers are noun class prefixes, prepositions, or determiners. I show that they are not noun prefixes or prepositions despite the fact that they exhibit semantic properties of the latter. Rather, I suggest that syntactically they are determiners similarly to augments.

Section 2 gives an overview of locative markers in Bantu. Section 3 provides a description of locative markers in Kinyarwanda. Section 4 is a syntactic analysis of locative markers in relation to prepositions and augments, and it is concluded that they are determiners heading locative DPs. Section 5 proposes a syntactic representation of a locative DP in Kinyarwanda. Section 6 is a conclusion.

### 2. LOCATIVE MARKERS IN BANTU

Many Bantu languages have locative markers that belong to classes 16, 17, and 18, with the prefixes *pa-* , *ku-* , and *mu-* , respectively (Marten, 2010). In some languages, there are three locative markers, as illustrated by the following examples from Chichewa, (2), (Bresnan & Kanerva, 1989), and Otjiherero, (3), (Marten, 2006).

Chichewa:

(2) a. **Pa-m-sikā-pa** pá-bádw-a nkhonya.  
16-3-market-16.DEM 16.sm-be.born-FV 10.fist  
'At this market a fight is going to break out.'

b. **Ku-mu-dzi** ku-na-bwér-á a-lēndo.  
17-3-village 17.sm-PST-come-FV 2-visitor  
'To the village came visitors.'
In the forest have remained lions.' [Bresnan & Kanerva, 1989: 9]

Otjiherero:
(3) a. Pò-ndjúwó p-á-rárá é-rúngá.
   16-9.house 16.SM-PAST-sleep 5-thief
   'At the house slept a/the thief.'

b. Kò-mù-tí kw-á-pósé òzó-ndjímá
   17-3-tree 17.SM-PAST-make.noise 10-baboons
   'In the tree made noise (the) baboons.'

   18-9.mountain 18.SM-PAST-find-PASS-FV 1-child
   'On the mountain was found a/the child.' [Marten, 2006: 113]

In other languages, one locative marker is used. This is the case for Sesotho, in which the locative is formed by adding the suffix -ng to the noun (Zerbian, 2006).2 Here are examples from Demuth (1990) (adapted):

(4) a. Nokáné-ng hó-fúmán-w-é li-pólí ké mo-lísána. [Sesotho]
   9.river-LOC 17.SM-find-PASS-PERF/M 10-goats by 1-herder
   'At/in the river there were found goats by the herder.'

b. Ma-símó-ng hó-lélék-is-w-a li-nonyana ké ba-lemi.
   6-fields-LOC 17.SM-follow-CAUS-PASS-M 10-birds by 2-farmers
   'In the fields there are birds being chased by the farmers.' [Demuth, 1990: 237]

Languages such as Kiswahili do not have locative markers for classes 16, 17, and 18, but they have locative subject markers that correspond to those classes:

(5) a. Nyumba-ni hapa pa-na baridi. [Kiswahili]
   9.house-LOC 16DEM 16-have 9.cold
   'This home is cold.'

b. Nyumba-ni huku ku-na baridi.
   9.house-LOC 17DEM 17-have 9.cold
   'This home is cold.'

c. Nyumba-ni humu m-na baridi.
   9.house-LOC 18DEM 18-have cold
   'It is cold inside this home.' [Ngoboka, 2016: 70-71]

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2 Note, however, that in Sesotho, some nouns take the prepositions ka- and ha- besides the locative -eng, but their use is restricted (see Demuth, 1990). The prefix ho- also functions as a locative verb prefix in this language.
Note also that Kiswahili behaves like Sesotho in that a noun belonging to a non-locative class can be turned into a locative noun by adding a locative suffix (compare -ni for Kiswahili and -ng for Sesotho).

(6)  
   a. *soko 'market' → soko-ni 'in the market'  [Kiswahili]
   b. *nyumba 'home' → nyumba-ni 'at home'

Note also that there are cases in Kiswahili in which a noun may have a locative interpretation without bearing a locative marker (Amidu, 2007), be it a prefix or a suffix. Despite the absence of a locative marker, the noun still agrees with the verb in different locative classes. Consider the examples below from Ngoboka (2016).

(7)  
   a. Hospitali hapa pa-na baridi.  [Kiswahili]
       9.hospital 16.DE 16-have 9.cold
       'It is cold at this hospital.'

   b. Hospitali huku ku-na baridi.  [Kiswahili]
       9.hospital 17.DE 17-have 9.cold
       'It is cold at this hospital.'

   c. Hospitali humu m-na baridi.  [Kiswahili]
       9.hospital 18.DE 18-have cold
       'It is cold inside this hospital.'  [Ngoboka, 2016: 71]

Finally, some Bantu languages have at the same time a locative marker (so-called prefix) and a locative suffix. This is illustrated by the examples below from Zulu, (8) (Buell, 2005) and Setswana, (9), (Demuth & Mmusi, 1997).³

(8)  
   e-sikole-ni [Zulu]
       LOC-7.school-LOC
       'at the school'

(9)  
   mó-le-fátshé-ng [Setswana]
       18-5-country-LOC
       'in the country'

In short, locatives are marked in the following ways: by a locative marker (prefix), a locative suffix, or both a locative prefix and a locative suffix. Also, in some cases, an unmarked noun may have a locative interpretation. In the

³ In addition to the prefix e- and the suffix -ni, Zulu has other ways of expressing location: *ku- as in *ku bantu 'to people', o- as in o-nyaweni 'on the foot', and *kwa as in *KwaMkhize 'at Mkhize's house' (see Van der Spuy, 2014).
following section, I provide a brief description of locative markers in Kinyarwanda before I proceed with their analysis in sections 4 and 5.

3. LOCATIVE MARKERS IN KINYARWANDA

As we can see from the example in (1), Kinyarwanda has 4 locative classes with four locative markers: class 16: ha-, class 17: ku-, class 18: mu-, and class 19: i-.

Class 16: ha-: Class 16 comprises of only one noun ahaantu (a-ha-ntu) 'place'. This noun has an augment, a- (which some authors call initial vowel or preprefix), a noun prefix, ha-, and a root, -ntu. The noun ahaantu of class 16 behaves exactly like nouns in non-locative classes in the following ways. The prefix ha- follows the augment and attaches to the root. In terms of agreement and concord, the prefix ha- can be marked on the verb if the noun ahaantu is the subject of the sentence; it can also agree with adjectives, determiners, and associatives. This is illustrated by (10).

(10) Háriия haantu háanyu heezá harúuzuye.
    ha-ríiya ha-ntu ha-nyu ha-iizá ha-ra-úuzur-ye
    'That nice place of yours is full.'

We see from the example above that the class 16 locative prefix ha- is marked on the demonstrative -riiya, the associative -a, the adjective -iizá, and the verb -úuzura as a subject marker. In addition to being marked on the verb as a subject marker, the noun ahaantu also agrees with the verb as an object marker ha-:

(11) Háno haantu siimpakúunda.
    ha-no ha-ntu si-n-ha-kùund-a
    16-DEM 16-place NEG-1S-16.OM-like-FV
    'This place, I don’t like it.'

From the examples (10) and (11), it is clear that there is no distinction between the locative class 16 marker ha- and non-locative prefixes. Because class 16 differs from other locative classes in Kinyarwanda, it will not be discussed in the analysis I provide in sections 4 and 5.

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4 The Kinyarwanda locative marker ha- corresponds to pa- in many Bantu languages. This could be because typical Kinyarwanda words do not include the sound /p/, which must have evolved into /h/. Note that when /h/ follows the nasal /m/, it is spelt as /p/ (see (11) below), but the cluster is pronounced, not as [mp] but as [mph].
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**Class 17: ku-**: class 17 refers to places, small or large, as in the examples below:

(12)   a. **kuu nzu** 'on/at the house'
       b. **ku rutoki** 'on the finger'

Whereas *ku rutoki* clearly means 'on the finger', *kuu nzu* can mean 'on the house', 'at the house', or even 'the area around the house'.

*Kwa* is another locative marker derived from *ku-*, used to indicate somebody's house. The expression *kwa Mugabo* means 'at Mugabo's place/house'. As can be seen in this example, *kwa* is used with the names of people referring to their house. Although *kwa* is synchronically felt to be monomorphemic, its morphology suggests that it is derived from the combination of the locative *ku* and the associative *-á* (i.e. *ku-a*).

**Class 18: mu-**: This locative means 'in' in English and refers to a location inside a place such as in *mu ishuúri* 'in a/the classroom', *mu kibúga* 'in a/the field' *mu kiráhuré* 'in a/the glass'. The locative *mwa* is the equivalent of *kwa* of class 17 derived by combining the locative *mu-* with the associative *-á* (i.e. *mu-a*) as in the expression *mwaa nyoko* 'in your mother's (house)', *mwáanyu* 'in your house' (Bizimana, 1998; Coupez, 1980). Note, however, that these expressions have become obsolete. Apart from these two expressions, I am not aware of any construction in which *mwa* appears.

**Class 19: i-**: This locative is used before proper names of places, whether big or small, and can be translated as 'in' or 'at'.

(13)   a. **i Kigáli** 'in Kigáli',
       b. **i Buruúndi** 'in Burundi'
       c. **i Nyamiraambo** 'at Nyamirambo'

The class 19 locative marker *i-* corresponds to the prefix *e-* of the locative class 25 found in many Bantu languages (Grégoire, 1975). This prefix is found in the following words, all of which mean 'at home': *e-kaa* in Luganda, *ee-ka* in Shi and *e-khaya* in Swati and Ndebele (Grégoire, 1975). These locative nouns correspond to *i-múhirá* in Kinyarwanda. Languages like Zulu also have this prefix as in the word *e-sikoléni* 'at school'. This is an indication that the locative prefixes *i-* in Kinyarwanda and *e-* in those other languages are the same syntactic element realized by two different but phonetically close vowels in different Bantu languages.

The following must be highlighted about the locative class 16 and other locative classes: locative marker 16 is a genuine noun prefix but the other three locatives are not. As mentioned above, the class 16 prefix differs from the other locative markers in the following ways. First, as I have shown, it appears
between the augment and the root; it triggers agreement of the verb as a subject marker and an object marker; and it can agree with adjectives, pronouns, associative, etc. (see examples in (10) and (11)).

As far as the locative markers of classes 17-19 are concerned, they differ from noun class prefixes in important ways. To begin with, the locative markers of classes 17-19 co-occur with noun class prefixes. All the examples in (1) shows this, where we observe the patterns mu-ku-; ku-ri- (the first morpheme is the locative while the second is a normal noun prefix). This is not something we expect to see in Kinyarwanda nouns. In Kinyarwanda, a noun has one augment, one prefix, and a root, contrary to what might be observed in a few Bantu languages. In Chichewa, for example, a diminutive prefix may be added to another prefix as is shown below, and the construction remains grammatical (example adapted from Bresnan & Mchombo, 1995).

\[ \text{(14) ka-mu-nda } \text{ k-anga} \quad \text{[Chichewa]} \\
\text{12-3-field } \text{ 12-my} \\
\text{‘my small field’} \quad \text{[Bresnan & Mchombo, 1995:198]} \]

This is not an isolated case. There are similar examples in Congo Copperbelt Swahili, a language spoken in the Democratic Republic of Congo. In this language, for example, the plural markers ma- and ba- alternate (Kabuya, 1999), and a prefix can be added to another prefix:

\[ \text{(15) a. ma-ma-tafwadi } \text{ y-a } \text{ ivi} \quad \text{[Congo Copperbelt Swahili]} \\
\text{6-6-bricks } \text{ 6-ASS} \quad \text{like.this} \\
\text{‘bricks of this sort’} \\
\text{b. ba-mi-longe } \text{ ba-nene} \\
\text{2-4-herring } \text{ 2-big} \\
\text{‘big herring’} \quad \text{[Kabuya, 1999:99]} \]

In contrast to (15), the example in Kinyarwanda in (16b) below is ungrammatical because a diminutive prefix has been added to another prefix. The grammatical form is shown in (16c), in which the diminutive prefix ka-replaces the class 1 prefix in (16a).

\[ \text{(16) a. umusóre} \\
\text{u-mu-sóre} \\
\text{AUG-1-young.man} \\
\text{‘a young man’} \]
b. *akamusóre  
a-ka-mu-sóre  
AUG-12-1-young.man  
'a small young man'

c. agasóre  
a-ka-sóre  
AUG-12-young.man  
'a small young man'

This suggests that locatives in Kinyarwanda cannot be noun prefixes since this language does not allow a noun to have more than one prefix.

Another difference between the locative prefix *ha*- and other noun prefixes on the one hand, and locative markers of classes 17–19 on the other hand, has to do with the agreement and concord system. We have seen that the prefix *ha*- of class 16 is marked on the verb, adjectives, and determiners. This does not happen with the locatives *ku-, mu-, and i*. Compare (10) above (repeated here as (17)) and (18) with (19):

(17)  
*Ha*riíya  
*ha*antu  
*ha*anyu  
*heezá*  
*harúuzuye.*  
*ha*-riíya  
ha-ntu  
ha-nyu  
ha-iizá  
ha-ra-úuzur-ye  
'That nice place of yours is full.'

(18)  
Inzu  
*ya*anyu  
nziizá  
irúuzuye.  
i-n-zu  
i-a-nyu  
n-iizá  
i-ra-úuzur-ye  
'Your nice house is full.'

(19)  
*Ku*u  
nzu  
*kw*anyu  
kw*iza  
kurúuzuye.  
Ku  
n-zu  
ku-a-nyu  
kuiizá  
ku-ra-úuzur-ye  
LOC17 9-house 17-ASS-2P 17-nice LOC17-DJ-be.full-PERF  
Intended: 'It is full at your nice house.'

In (17) the noun *ahaantu* 'place' is marked on the verb in its specific class, class 16, as the noun *inzu* is in (18), and the sentence is grammatical. In contrast, in the example (19), the locative expression *kuu nzu* is marked on the verb in its specific class (i.e. class 17) and the sentence becomes ungrammatical. Also, while pronouns and adjectives can agree with the nouns in (17) and (18), this is not possible in (19) with the locative. This differs from what we see in Otjiherero and Chichewa (examples (2) and (3)), in which locative prefixes can agree with the verb.
Instead of being marked on the verb in their specific classes, all the locative markers trigger the subject marker ha- of class 16 on the verb. Compare the ungrammatical example in (19) with those in (20).

(20) a. *Ahaantu hóose haaséenyutse.
a-ha-ntu ha-óose ha-a-séeny-uk-ye
AUG-16-place 16-all 16.SM-PST-destroy-REV-PERF
'Every place has been destroyed'
b. *Muu nzu hóose haaséenyutse.
mu n-zu ha-óose ha-a-séeny-uk-ye
LOC18 9-house 16-all 16.SM-PST-destroy-REV-PERF
'The entire inside of the house has been destroyed.'
c. *Ku išhuúri hóose haaséenyutse.
k u i-shuúri ha-óose ha-a-séeny-uk-ye
LOC17 AUG-5.school 16-all 16.SM-PST-destroy-REV-PERF
'The entire school and its surroundings have been destroyed.'
d. *I Byuumba hóose haaséenyutse.
i Byuumba ha-óose ha-a-séeny-uk-ye
'The entire city of Byumba has been destroyed.'

The fact that all the three locative class expressions trigger the class 16 prefix on the verb as a subject marker makes Kinyarwanda look like some other Bantu languages such as Setswana. In Setswana, all the locative markers can trigger the prefix go- of class 17 on the verb as the subject marker (Demuth & Mmusi, 1997) regardless of the locative class of the preverbal locative expression.

(21) a. *Fá-se-tlaré-ng gó-émé ba-símané. [Setswana]
16-7-tree-LOC 17.SM-stand.PRF 2-boys
'By the tree stand the boys'
17-Maung 17.SM-FUT-go 1P.DM winter
'To Maung we shall go in winter'
18-5-country 17.SM-graze 10-cattle
'In the country are grazing the cattle' [Demuth & Mmusi, 1997: 5]

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5 Notice that in Kinyarwanda, the locative noun ahaantu 'place' is incompatible with locative markers. For example, while it is possible for the noun indawo 'place' in Zulu to bear a locative prefix (i.e. e-ndaweni (Buell, 2012)), there is no locative expression like *ku haantu 'at a place' in Kinyarwanda.
However, while the Setswana examples in (21) are impersonal constructions with a preposed locative expression (Creissels, 2011), it is not always the case for Kinyarwanda because in this language the locative expression may sometimes function, not as a preposed locative adjunct, but as a thematic subject. This is shown in (20) where the locative is the Theme in an accusative construction. See Zeller and Ngoboka (in preparation) for details on the subject status of locatives in Kinyarwanda.

I conclude this section by proposing that locative markers in Kinyarwanda are not noun prefixes. The first reason is that they co-occur with other prefixes, which is not the case with prefixes in other noun classes. The second reason is based on their agreement system; unlike the other noun prefixes, they are not marked on the verb or modifiers such as demonstratives, possessives, and associatives. I suggest that instead of being noun prefixes, they rather replace augments and perform the same function as them.

4. LOCATIVE MARKERS IN KYNYARWANDA ARE DETERMINERS

My analysis will be based on examples with the locative markers *ku-* and *mu-*, excluding the locative marker *i-*, since its use is restricted: apart from a few exceptions, it is used only before proper names of places.6 I argue that locative markers are determiners on a par with augments. Before providing evidence, I address the question of whether they could also be treated as prepositions, a view that I will ultimately reject.

The definitions of prepositions provided below seem to suggest that locative markers in Kinyarwanda are prepositions. Indeed, according to Crystal (1997), a preposition is an item that typically precedes a noun phrase, often a single noun or pronoun, to form a single constituent; and the noun and the preposition form a single phrase comprising of the noun and its modifiers. A preposition is also defined as a word or a syntactic element that precedes a noun phrase and indicates spatial as well as temporal relations (Matthews, 1997). Saint-Dizier (2006) notes that a preposition expresses a wide range of semantic relations between its complements and the rest of the context: spatial relations (including direction, origin, path, end point), temporal, comparison, agent, instruments, means, manner, cause, purpose, etc. The examples below illustrate cases where the locative marker *ku-* expresses different relations between it and its complements, i.e. spatial (position, source), temporal, and manner, which is consistent with the view expressed by Saint-Dizier (2006).

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6 There are a few expressions in which the locative *i-* appears, which are not proper names of places. These expressions indicate direction (e.g. *i-.mbere* 'in front of/the front', *i-nyuma* 'behind/(at) the back', *i-ruhadende* 'on the side' *i-bumoso* 'on the left', *i-buryo* 'on the right', *i-burasirazuba* 'in the east', *i-bureengerazuba* 'in the west').
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(22) a. Ndi kw’ iisokó. (position)
n-rí ku i-sokó
1S.SM-be LOC17 AUG-5.market
'I am at the market.'

b. Mvuuye kw’ iisokó. (source)
n-vu-ye ku i-sokó
1S.SM-come-PERF LOC17 AUG-5.market
'I’m coming from the market.'

c. Baagiiye ku mugórooba. (temporal)
ba-a-gi-ye ku mu-górooba
2.SM-PST-go-PERF LOC17 3-evening
'They left in the evening'.

d. Baabikoze kuu mpaámvu zinyúranye. (reason)
ba-a-bi-kór-ye ku n-haámvu zi-nyúran-ye
2.SM-PST-8.OM-do-PERF LOC17 10-reason 10.SM-be.different-PERF
'They did for different reasons.'

Considered along these lines, Kinyarwanda locative markers could be treated as prepositions. However, the similarities between locative markers and prepositions are only apparent. Syntactically, locative markers in Kinyarwanda are determiners: they exhibit the same behaviors as augments.

The fact that augments in Bantu languages are determiners has been established by a number of scholars (see Meeussen (1959) and Ndayiragije, Nikiema, and Bhatt (2012) for Kirundi, Taraldsen (2010) and Van der Spuy (2014) for Zulu). These authors suggest that augments are determiners like those in English as well as French. The major argument is that augments may be absent. The evidence provided is that they can be dropped in certain contexts (Caha and Pantcheva (2015) are also of the same view). For example, Taraldsen mentions the fact that in Zulu, augments are dropped in vocative case and in negative sentences, and, following Visser (2008) and Taraldsen (2010), Van der Spuy (2014: 65) suggests that in Zulu, an augment ‘may be a kind of article, as it corresponds to both the definite and indefinite English articles’. The same argument has been presented for Kirundi (Ndayiragije et al., 2012). Ndayiragije et al. also argue that the augment is unspecified in terms of definiteness, meaning that it has both a definite and an indefinite reading. They provide several different contexts besides vocative and negative cases in which the augment is dropped. Such other contexts include the following: in compound nouns, after locative markers, and in proper names of persons. I put forward the same arguments to argue that augments in Kinyarwanda are determiners. The

7 Some authors (Creissels, 2004; Taylor, 2007) are of the view that locatives in Bantu do not specify direction or source of movement. According to them, the meanings conveyed by prepositions such as 'in', 'at', 'from', 'to', etc. in English, are expressed by the verb in Bantu.
following are the context in which the augment in Kinyarwanda is deleted (see also Nkusi, 1983):

Vocative case:
(23)  Murashaaka ikí, (*a)bagábo?  
mu-ra-shaak-a ikí, (*a)-ba-gabo?  
2P.SM-PRES-want-FV what AUG-2-men  
'Men, what do you want?'

After the negative marker nta:
(24)  Ntaa (*u)muuntu n' úumwe uhári.  
nta (*u)-mu-ntu na u-mwé u-ha-ri  
NEG AUG-1-person even 1-one REL-16.OM-be  
Lit: 'There isn't even a single person who is there.'

In compound nouns:
(25)  Umugabo-(*i)mbwá aseka imbohé. (proverb)  
u-mu-gabo-(*i)-n-bwá a-sek-a i-n-bohé  
AUG-1-man-AUG-9-dog 1.SM-laugh-FV AUG-9-detainee  
'A coward laughs at a detainee.'

After locative markers:
(26)  mu (*i)gihúgu  
mu (*i)-ki-húgu  
LOC18 AUG-7-country  
'in a/the country'

In proper names of persons:
(27)  a.  Amahóro 'peace'  
b.  (*A)Mahóro  'Mr/Mrs Mahoro'

The examples in (23)–(27) show that augments in Kinyarwanda have similar properties to those in languages such as Kirundi and Zulu, in which the determiner status of the augment has been established. Now I demonstrate how Kinyarwanda locative markers behave like augments and conclude that they replace augments, hence they belong to the same category of determiners.

First of all, a locative marker performs the same syntactic function as an augment; they do not co-occur. In other words, the augment cannot follow or precede a locative, as shown in (28a,b). For a construction to be grammatical, the augment must be replaced by the locative marker, (28c).

There are exceptions, though. The augment in some nouns of classes 5 and 9/10 are not deleted. Compare (ia) and (ib), both of which correspond to mu izína 'in the name'.

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8 There are exceptions, though. The augment in some nouns of classes 5 and 9/10 are not deleted. Compare (ia) and (ib), both of which correspond to mu izína 'in the name'.
Similarly, locative markers and demonstratives (which are also determiners in Kinyarwanda) are incompatible; they do not co-occur as is shown by the ungrammatical example in (29) below.

(29) a. *ku báno bagabo
    ku báno ba-gabo
    LOC17 2.DEM 3-men
    'on these men'

b. *mu izi nzu
    mu izi n-zu
    LOC18 10.DEM 10-house
    'in these houses'

The locative's failure to head a DP headed by a demonstrative is an indication that the locative and the demonstrative perform the same function, that is, they are both determiners.\(^9\)

i. a. *muu zína
    mu zína
    LOC18 5.name
    'in a/the name'

b. mu izína (mwiizína)
    mu i-zína
    LOC18 AUG-5.name
    'in a/the name'

It has been suggested (Bizimana, 1998; Nkusi, 1983, 1995) that the augment is not deleted in these cases because it performs the function of the missing noun class prefix.

\(^9\) Like an augment, a demonstrative always precedes the noun it modifies; hence, it does not co-occur with the locative. However, there is one instance where it can follow a noun headed by a locative. Instead of saying the number of items, the speaker may display the number of fingers representing the number of those items. For example, instead of saying *abagabo bané* 'men four', or *inzu enyé* 'houses four', the speaker may say *abagabo abá* 'men these' or *inzu izí* 'houses these', displaying four fingers for the listener to see the number. In this case the demonstrative follows the noun and co-occurs with an augment. Similarly, in the case of a locative, the demonstrative would follow the noun headed by the locative and the speaker would display four fingers as in *mu bagabo abá* 'among men these', *mu nzu izí* 'in houses these'. In this regard, the demonstrative seem to behave like an adjective rather than a
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Also, being determiners, augments and locatives in Kinyarwanda are independent heads, in contrast to noun class prefixes. This can be seen in two ways:

Firstly, being independent heads, augments and locatives allow gapping. According to Bresnan & Mchombo (1995), gapping (also referred to as ellipsis) is applicable to syntactic, but not morphological constituents. If a constituent can be gapped, it means that it is syntactically an independent head. Because augments and locatives are independent heads, it is possible to gap their NP complements. This is what is shown in (30) for augments and (31) for locatives.

(30) uburásirázúuba bw’ ú-Rwaanda n’ ú bu-rásirázúuba bwaa Kénya
u-bu-rásirázúuba bwé u-Rwaanda ná u bu-rásirázúuba bwé Kenyá
‘the east of Rwanda and Kenya’

(31) Turaara mu nzu ya Yohaáni nó mu nzu
tu-raar-a mu nzu ya Yohaáni nó mu nzu
1P.SM-sleep-FV LOC18 9-house 9.ASS1.John and LOC18 9-house

ya Kagabo.
ya Kagabo
9.ASS 1.Kagabo
‘We sleep in John house and Kagabo’s.’

This also supports the claim made earlier, namely that locative markers cannot be noun prefixes; indeed, unlike augments and locatives, noun prefixes do not allow gapping.

Furthermore, being independent heads, which is not the case for prefixes, locatives allow alternative agreement. Alternative agreement consists in different agreement patterns as is shown in the following Chichewa example (Bresnan & Mchombo, 1995: 199)

(32) a. pa mu-dzi w-athu p-ǹsé
16 3-village 3-our 16-all
'at all of our village'

b. pa mu-dzi w-athu w-ǹsé
16 3-village 3-our 3-all
'at all of our village'

As we can see in (32a), a locative marker agrees with one of the modifiers (the outer) while the other modifier (the inner modifier) agrees with the NP headed by the locative marker in its specific noun class. It is also possible for both demonstrative as it follows the noun and agrees with it. The high tone that appears on the demonstratives aba and izi when they follow the noun seems to reflect this change of status because they are low when they precede the noun.
modifiers to agree only with the noun in its specific class as shown in (32b). A similar situation is observed in Kinyarwanda.

(33) a. `muu nzu yaange hóose
   mu n-zu i-a-nge ha-óose
   LOC18 9-house 9-ASS-1S 16-all
   'in my entire house'

b. `muu nzu yaange yóose
   mu n-zu i-a-nge i-óose
   LOC18 9-house 9-ASS-1S 9-all
   'in my entire house'

c. Muu nzu yaange hóose/yóose harava.
   mu n-zu i-a-nge ha-óose/i-óose ha-ra-vu-a
   LOC18 9-house 9-ASS-1S 16-all/9-all 16.SM-DJ-leak-FV
   'It is leaking in my entire house'

In (33a), one modifier agrees in class 9 while the other agrees in the locative class 16. In contrast, in (33b) both modifiers agree in the specific noun class of the noun headed by the locative marker. Note also that alternative agreement is also observed in (33c). While the inner modifier agrees in class 9, the outer modifier agrees in the locative class 16, but the verb always agrees in the locative class 16.

In contrast to locative markers, noun prefixes do not allow alternative agreement. This has been demonstrated for Chichewa and it is also true for Kinyarwanda. For example in Kinyarwanda, the diminutive prefix `bu- of class 12 can exceptionally precede another noun class prefix like `mu- as in the noun `umuuntu 'person', deriving a new noun `ubumuuntu 'humaneness'. Like in Chichewa, no alternative agreement is possible with a non-locative prefix. Witness the ungrammaticality of (34a) below.

(34) a. *`Ubumuuntu we mwiínshi bwaáragábanutse.
   u-bu-mu-ntu we mu-iínshi bu-á-ra-gabanuk-ye
   AUG-14-1-person 1.ASS 1-much 14.SM-REM-DJ-reduce-PERF
   'Much of his humaneness has decreased.'

b. `Ubumuuntu bwé bwiínshi bwaáragábanutse.
   u-bu-mu-ntu bwé bu-iínshi bu-a-ra-gabanuk-ye
   'Much of his humaneness has decreased.'

In (34a) the inner prefix `mu- of class 1 cannot trigger agreement on the verb, nor can it on the associative or the adjective; only the outer prefix `bu- of class 14 can, (34b). The fact that the locative allows alternative agreement while this is
not possible with other classes is another indication that locative markers and noun prefixes are syntactically two different elements, so locatives cannot be prefixes.

Locatives and augments also behave similarly in terms of conjoinability. Being independent heads, it is expected that augments and locative markers allow their complements to be conjoined. However, this is not what we see with augments (35) and locatives (36).

(35) *Twaáguze i- [nzu ná nká].
    tu-á-gur-ye i- [n-zu ná n-ká]
    IP-REM-buy-PERF AUG-[9-house and 9-cow]
    'We bought a house and a cow.'

(36) *Twaágeze muu [nzu ná cyúumba].
    Tu-á-ger-ye mu [n-zu ná ki-úumba]
    IP-REM-arrive-PERF LOC18 [9-house and 7-room]
    'We arrived in the house and the room.'

The fact that augments and locatives do not allow their complements to be conjoined does not imply that they are not independent heads. Rather, this is because NPs cannot be conjoined in Kinyarwanda. In order to have a grammatical sentence, both the augment and the locative have to be repeated on the second conjunct.

(37) Twaáguze [i-nzu] n’ [inká].
    tu-á-gur-ye [i- n-zu] ná [i-n-ká]
    IP-REM-buy-PERF AUG-9-house and AUG-9-cow]
    'We bought a house and a cow.'

(38) Twaágeze [muu nzu] nó [mu cyúumba].
    Tu-á-ger-ye [mu n-zu] nó [mu ki-úumba]
    IP-REM-arrive-PERF [LOC18 9-house] and [LOC18 7-room]
    'We arrived in the house and the room.'

Unlike locative markers, the preposition na 'with/by' allows its complements to be conjoined.

(39) a. Dukata impapuro n’ [i-cyúuma cyaangwá imákasi].
    tu-kat-a i-n-papuro n’ [i-ki-úuma cyaangwá i-mákasi]
    1P-cut-FV AUG-10-paper and [AUG-7-knife or AUG-9-scissors]
    'We cut paper with a knife or scissors.'
The examples in (39) illustrate the fact that locative markers and prepositions in Kinyarwanda have different syntactic properties. In other words, locatives cannot be treated as prepositions. In fact, while a locative selects an NP, a preposition like na selects a DP.10

Furthermore, like augments, locative markers in Kinyarwanda do not allow demonstratives to intervene between them and the noun they head.

(40)  a. *i iyi nzu
     i-iyi-n-zu
     AUG-9.DEM-9-house
     'this house'
b. *mu iyi nzu
     mu iyi n-zu
     LOC18 9.DEM 9-house
     'in this house'

This is further evidence that locatives are not prepositions. Unlike locative markers, the preposition na in Kinyarwanda allows some material (at least demonstratives) to intervene between it and its complements, regardless of whether the pronoun begins with a vowel (41) or a consonant (42).11

(41) Yafuunguuye icupá ná rwáa ru-fiuunguuzo.
    a-a-fuunguur-ye i-cupá ná rwa ru-fuunguuzo
    1S.SM-PST-open-PERF AUG-5.bottle with 11.DEM 11-opener
    'He opened the bottle with that/the opener.'
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(42) Mariyá yavuganye n' úuyu mugabo.
Mariyá a-á-vug-an-ye ná uyu mu-gabo
1.Mary 1.SM-REM-speak-ASS-PERF with 1.DEM 1-man
'Mary spoke with this man.'

Although a locative does not select a DP, a construction like (40b) can become grammatical if the morpheme -ri is inserted between the locative mu- and the DP iyi nzu 'this house' as shown in (43) below (for the syntactic status of the morpheme -ri, see section 5 below).

(43) murí iyi nzu
mu-ri iyi n-zu
LOC18-RI 9.DEM 9-house
'in this house'

Further evidence that locatives and augments perform the same syntactic function is that they both drop after the negative marker nta. Compare (44b) and (24) above repeated here as (45): 12

(44) a. Nagíye muu nzu.
   n-á-gi-ye mu n-zu
   1S.SM-REM-go-PERF LOC18 9-house
   'I went into a/the house.'

b. Nta (*muu) nzu nagíyémó.
   nta mu n-zu n-á-gi-ye-mó
   NEG LOC18 9-house 1S-REM-go-PERF-LOC18
   'I didn't go into any house.' (lit: 'There is no house I went into.')[12]

(45) Ntaa (*u)muuntu n’ úumwe uhári.
   nta (*u)-mu-ntu na u-mwé u-ha-ri
   NEG AUG-1-person even 1-one REL-16.OM-be
   Lit: 'There isn't even a single person who is there.'

It should be noted, however, that augments and locatives drop only after the negative marker nta and are maintained in negative sentences with other negative markers (nti-, si-, and ta-).

Finally, locatives pattern with augments in terms of licensing. In Kinyarwanda, some nouns do not license augments. If a particular NP does not

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11 In fact, this is because the preposition na, unlike locative markers, does not delete the augment. In other words, the preposition na is not in complementary distribution with augments as is the case for locatives.

12 This idea was added thanks to an anonymous reviewer who wondered whether, like an augment, a locative marker drops in a negative sentence.
license an augment, it cannot license the locative prefixes mu- and ku- either. Whatever prevents that NP from licensing an augment also does not allow it to take a locative marker. To be specific, some Kinyarwanda nouns do not have an augment as a D-head. Such nouns include those in classes 1/2 and 9/10, loan and foreign words, names of persons and places as is shown in (46).

(46)  
   a. Ø-kaminuúza cl.9 'a university'  
   b. Ø-telefoóne cl.9 'a phone'  
   d. Ø-Mariyá cl.1 'Mary'

Since nouns in (46) do not license augments, they cannot license locatives either. Compare (47) and (48) with (46).

(47)  
   a. *i-kaminuúza cl.9 'a university'  
   b. *i-telefoóne cl.9 'a phone'  
   d. *u-Mariyá cl.1 'Mary'

(48)  
   a. *ku-kaminuúza cl.17 'at a university'  
   b. *mu-telefoóne cl.19 'in a phone'  
   d. *ku-Mariyá cl.17 'on Mary'

I assume that augmentless nouns like those in (46) are DPs (by default) rather than NPs because, as we have seen above, a locative can select an NP, not a DP. In order for the locative constructions in (48) to be grammatical, the morpheme -ri must also intervene between the locative and its augmentless DP complement. This is shown in (49):

(49)  
   a. ku-rí kaminuúza 'at the university'  
   b. mu-rí telefoóne 'in the phone'  
   c. ku-rí Mariyá 'on/to Mary'

In short, locatives pattern with augments in many respects. As such they can be treated as determiners on a par with augments (as well as demonstratives). Below, I propose a syntactic representation of the locative DP.

5. SYNTACTIC REPRESENTATION OF LOCATIVE DPs IN KINYARWANDA

A DP in Kinyarwanda can be headed by an augment, a demonstrative, or a locative (as determiners):
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(50)  a. i-nzu 'a/the house'
     b. iyi nzu 'this house'
     c. mu nzu 'in a/the house'
     d. ku nzu 'at/on a/the house

A simplified syntactic representation of (50) would look as follows:

(51)  a. DP
      D  NP
       i /iyi nzu
       'a/the/this' 'house'

b. DP
   DLoc  NP (Locative NP)
   mu    nzu
   'in'   'house'

What (50) and (51) show is that a DP can be headed by an augment, a demonstrative or a locative. This means that, like augments and demonstratives, locative markers select an NP, not a DP, as shown in the ungrammaticality of the sentences in (52).

(52)  a. *mu iyi nzu 'in this house'
     b. *mu i-nzu 'in a house'

     c. * DP
       DLoc  DP
       mu
       D  NP
       iyi/i-  nzu

However, as suggested above, unlike augments and demonstratives, locative markers may select a DP on condition that the morpheme -ri is inserted between the locative marker and the DP it selects. The grammatical example in (53) corresponds to the ungrammatical example in (52a).

(53)  murí iyi nzu
     mu-ri  iyi  n-zu
     LOC18-RI 9.DEM 9-house
     'in this house'

The same phenomenon is observed with augmentless nouns, those nouns that do not bear augments. The morpheme -ri is required between them and the locative. (54) is repeated from (48a) and (49a) above.
What could be the nature of the morpheme -ri? As it can be observed in the example, this morpheme -ri appears attached to the locatives mu- and ku- when they head a DP (a noun phrase headed by an augment or demonstrative) or when they precede an augmentless noun. To the best of my knowledge, it does not appear in any other structure. However, it is homophonous with the copula -ri 'be'. Nonetheless, it is difficult to establish whether there is a relationship between this morpheme and the copula. I leave this for further research.

As suggested above, DPs headed by augments or demonstratives pattern together with augmentless nouns when they are preceded by a locative. I have suggested that augmentless nouns are default DPs, not NPs, which comprise a null D head that selects an NP. Thus, the representation of an augmentless noun like -kaminuúza 'university' is as follows:

(55)

```
DP
  D           NP
  (empty)    -kaminuúza
```

I analyze the morpheme ri- that attaches to the locative marker before DPs, including those like (55), as a functional head which mediates the relation between the D head and the DP. Therefore, the syntactic representations of (53) and (54b) are shown in (56a) and (56b), respectively:

(56)

```
56a. DP LOC
    D LOC   FP
    mu     -ri

56b. DP LOC
    D LOC   FP
    mu     -ri
    F       DP
    D       NP
    iyi     -nzu
```

A reviewer wonders what would prevent (56b) from being grammatical if D were not empty. If D were not empty, the resulting construction would be grammatical but it would
In fact the parallel between (56a) and (56b) is as follows. As can be seen in (56a), in order for a locative D head to select a DP (a noun headed by an augment or a demonstrative), the morpheme -ri must intervene between the locative determiner head and the noun. In other words, the locative head is incompatible with or, to put it differently, cannot select a DP. Similarly, a locative D head cannot select an augmentless noun, without the morpheme -ri intervening between the locative and the noun, hence the difference between the ungrammatical example (52c) and the grammatical one in (56b). The example in (56b) is grammatical because the default DP head is selected by the functional head F. The incompatibility between a locative and a full DP on the one hand and an augmentless noun on the other, explains the parallel between DPs and augmentless nouns. From this, it is assumed that the morpheme ri- is a functional head that mediates the relationship between the locative head and the DP. In other words, the functional head in (56) is required because a locative cannot select a full DP.

Based on the complexity of the structure in (56) and following Carstens (1997), I suggest that locative DPs are more complex than what is shown in (54b). My assumptions are as follows (based on Carstens): The locative expression is a locative DP contained inside a larger locative containing an empty place NP. It is this empty NP (place) which selects a DP\textsubscript{Loc} (equivalent to what Carstens calls KP). While the Chichewa empty N selects KP as a case marker, the Kinyarwanda empty N selects a locative DP. It can be assumed that in Chichewa, the KP level of representation is needed because DPs in Chichewa, unlike in Kinyarwanda, do not have augments. Hence, in Kinyarwanda the augment is the equivalent of a case maker, and so KP is not needed. Therefore the empty locative NP can select a DP, which can be headed by a locative or an augment. As such, the extended syntactic representation of the locative DP \textit{muu nzu} 'in a/the house' is as follows:

\begin{equation}
\text{(57)}
\end{equation}

\begin{center}
\begin{tikzpicture}
  \node {DP} [grow=up] child {node {D} child {node {N} child {node {surface}}} child {node {DP\textsubscript{Loc} [grow=right] child {node {D [grow=down]}}} child {node {NP [grow=left]}}} child {node {mu}}} child {node {nzu}} ;
\end{tikzpicture}
\end{center}

correspond to (56a). The point is, what prevents a noun like -kaminu\text{\textacute{u}za} in (56b) from taking an augment also prevents it from taking a locative. This explains the parallel between augmentless nouns and nouns headed by determiners in relation to the presence of the functional head -ri. What the examples in (56) show is that this functional head is required before a D head, whether realized by a determiner or empty.
The representation of a complex locative DP like *murí iyi nzu* 'in this house' would then look like this:

(58)  
```
   DP
  /    \\  
D     NP
   /\
  N   DP_Loc
 /\    \\
D  mu  F
  / \
D   ri  DP
   /\  \
D   iyi  NP
```

6. CONCLUSION

In this paper, I have argued that locative markers in Kinyarwanda are neither noun prefixes nor prepositions although they may have semantic properties of the latter. I have shown that they are in complementary distribution with determiners and that they exhibit the same syntactic properties as augments as well as demonstratives. Therefore, I have suggested that they are also determiners. Indeed, a locative cannot co-occur with an augment, nor can it replace a noun prefix to attach to the root. I have highlighted the fact that, in Kinyarwanda, a locative D selects an NP, not a DP. This distinguishes locatives from prepositions, which select DPs. However, this is subject to parametric variation since it cannot be generalized to all Bantu languages.

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