

Syntactic properties of infinitives in Ikalanga

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The infinitive has been quite topical in recent Bantu literature. The majority of Bantuists who have written on this topic sweepingly refer to all *ku-* forms as the ‘infinitive’ and contend that the infinitive has dual characteristics – clausal and nominal. This paper aims to investigate the types of *ku-*categories in Ikalanga and to determine whether they all display the same syntactic properties. Using tests from the literature, the paper established that *ku-*categories which are sweepingly termed ‘infinitives’ actually belong to different categories – nominal, poss-ing, and infinitives themselves. The paper also determined that while all three categories identified in Ikalanga display clausal properties, only nominal and poss-ing types display nominal properties. In addition, the paper also demonstrated that while both nominal and poss-ing display nominal properties, they differ in some ways. The findings in this paper suggest that to refer to all *ku-*categories sweepingly as infinitives is misleading.

Keywords: infinitives, syntactic properties, nominal properties, clausal properties, categorial status.

1. Introduction

The categories loosely classified as ‘infinitive’ are generally an understudied phenomenon in Bantu languages and that in itself calls for immediate attention. The current debate is that the ‘infinitive’ in Bantu has dual characteristics, namely, that it displays verbal as well as nominal properties (Schaderberg, 2006; Riedel and De Vos, 2017; Gromova, 2017; Creissels and Godard, 2005, Makeeva and Ryabova, 2020 and du Plessis, 1982a). Others, for example, Visser (1989), have posited that there are three types of categories which are infinitival: a) S’clausal complement of the verb, b) NP nominal infinitive, and c) N: infinitival class 15 nouns. While the syntactic properties of the ‘infinitive’ have been investigated in some Bantu languages, no such investigation has been undertaken in Ikalanga. This paper questions the classification of *ku-*categories as ‘infinitives’. Using tests suggested in the literature, the paper demonstrates although *ku-*categories found in Ikalanga display some commonalities, they nevertheless also display differences which warrant that they are categorised differently. The paper contributes to the understanding of *ku-*categories loosely classified as ‘infinitives’ by bringing new data from Ikalanga, a relatively understudied minority language spoken in Botswana.

The infinitive is defined in Crystal (1991) as a traditional term for the non-finite form of the verb usually cited as its unmarked or base form, e.g. ‘go’, or ‘walk’ preceded by ‘to’. A typical infinitive in Ikalanga is formed from *ku* + V as shown in (1).

- (1) Ndo-shaka ku-tola ngw’ana.
1stP.SM-want INF-take 1.child.
‘I want to take the child’.

While example (1) is a typical infinitive in Ikalanga, the language has other structures that use the *ku-*form to express meanings other than the infinitive. Consider examples (2) and (3) below.

- (2) Ku-langwa ko-lakidz-a butjetjana.
 15-sulk 15.SM-show-FV 14.immaturity
 ‘Sulking is a sign of immaturity’.
- (3) Ku-shinga Ipelegeng ko-bat-is-a shoni.
 15-work I Ipelegeng 15.SM-hold-CAUS-FV embarrassment
 ‘Working for Ipelegeng is embarrassing’.
- (4) Ku-enda kwa Ndibo k-waka- thus-a.
 15-leave 15-POSS 1a.Ndibo 15.SM-help-FV
 ‘Ndibo’s leaving was helpful’.

In light of the existence of structures such as examples (2-4), I will assume that while the infinitive in Ikalanga is expressed through the *ku*-form, this is a homophonous form that is also used to express other categories that are not necessarily an expression of the infinitive. Against this background, the paper aims to provide a systematic descriptive characterization of Ikalanga *ku*-forms by investigating the types of *ku*-categories found in Ikalanga and determining what their syntactic properties are. Specifically, the paper sets out to address the following questions: 1) Are all *ku*-categories in Ikalanga infinitives or are there different types? 2) What clausal characteristics do they display? 3) What nominal properties do they display? 4) In what ways do Ikalanga *ku*-categories differ?

No study on Ikalanga has investigated the infinitive and other *ku*-categories and therefore this paper aims to fill this gap. The paper is organized as follows: section 2 provides background information on the Ikalanga language while section 3 is the literature review against which the description in this paper leans, Section 4 is the discussion of the data with section 5 concluding the paper.

2. Background

According to Maho’s (2009) classification of Bantu languages, Ikalanga is classified as S16. It falls under the same language category as the Shona cluster of languages and is spoken in several countries including Zimbabwe where it is used in schools and broadcasting and in Botswana, where it is regarded as a minority language with no official status. Ikalanga is agglutinative, that is, the verbal roots consist of a root and several affixes exemplified in (5).

- (5) NEG+SM+TAM+OM+Vroot+(APPL)+ (CAUS) + (INT) +(PASS)+FV

The word order is SVO with variations permitted depending on discourse intentions such as focus. Like other Bantu languages, the hallmark of the Ikalanga language is the noun class system. Each noun is marked for singular and plural and the noun classes usually go in pairs with noun class 1 for example being singular while class 2 is the plural of class 1 as shown in Table 1. Each noun class is identified by the noun class number, which noun class controls the agreement on the verb as well as the noun modifiers including adjectives, quantifiers, and demonstratives.

Table 1: Noun class prefixes

Class	Noun prefix	SM	OM	Example	gloss
1 st P. SG	n-	nd-	ndi-		
1 st P. PL	b-	t-	ti-		
2ndP. SG	n-	u-	ku-		
2ndP.PL	b-	m-	mu-		
1a.	-	b-	ba-	mme	mother
2a.	bo-	b-	ba-	bomme	mothers
1.	n-	u-	n/m	nthu	person
2.	ba-	b-	ba-	bathu	people
3.	n-	u-	u-	nti	tree
4.	mi-	y-	yi-	miti	trees
5.	∅	l-	l-	zhani	leaf
6.	ma-	a-	a	mazhani	leaves
7.	chi-/i-	ch-	chi-	tjibululu	lizard
8.	zwi-	zw-	zwi-	zwibululu	lizards
9.	N/ ∅	y-	i-	mbgwa	dog
10.	N/dzi-/ ∅	dz-	dzi-	mbgwa	dogs
11.	li-	g-	gu-	likuni	log
14.	bu-	g-	gu-	bushwa	grass
15.	ku-	k-	ku-	ku izela	to sleep/sleeping
16.	pa-	pa-/k-	-	pa danga	by the kraal
17.	ku-	k-	-	ku minda	at the farm
18.	mu-	k-	-	mu ngw'ina	in the hole
21.	zh-	l-	li-	zhingw'ana	enormous child

3. Situating the topic

In many Bantu languages, noun classes 15 and 17 take the *prefix *ku-*. This has caused many Bantuists to wonder if these two noun classes have the same origin. Noun class 15 is termed the infinitive class while class 17 is the locative. Blommaert (1986) investigated whether NC 15 and NC 17 both have the same origin in Proto Bantu concluding that the two classes evolved from the same ground. He notes that their differences are a result of adaptation to gaps in the grammar. Although his focus is more on the historical development of the infinitive, he acknowledges briefly that infinitives in Bantu are verbo-nominal. He explains that a verbo-nominal form is semantically verbal in form but displays nominal surface behaviour. Visser (1989) questions the general view that the infinitive constitutes a class 15 noun. She argues that the infinitive in Bantu is clausal in most of its occurrences and that it can be divided into three categories: a) S'clausal complement of the verb, b) NP (dominating S'): nominal infinitive, and c) N: infinitival class 15 noun. This classification contradicts du Plessis (1982a); Carstens (1991) Creissels and Goddard (2005) and Makeeva and Ryabova (2020) who conceive of the infinitive as having dual properties: nominal and verbal.

Carstens (1991) classifies *ku*-categories in Swahili into four classes namely *ku*-nominals, *poss-ing* gerunds, *acc-ing* gerunds, and infinitives. She demonstrates that Swahili gerunds (both *poss-ing* and *acc-ing*) and infinitives share some clausal properties but differ in some nominal features such as the use of modification among others. Carstens' (1991) characterization of *ku*-categories is relevant to the current paper as the characterization of Ikalanga infinitives will largely rely on her work.

Lindfors (2003) investigates the origins of the various functions of the *ku*-marker in Swahili. Relevant to this paper is Lindfors' discussion of the nominal properties of Swahili's NC 15 derived nouns. Lindfors (2003) points out that NC 15 derived nouns in Swahili exhibit structural features of prototypical nouns in that they take the locative suffix but that they mainly display features of non-prototypical nouns in that they can be negativized and cannot be pluralized like prototypical nouns. Lindfors goes further to show that NC 15 nouns display prototypical noun behaviour in terms of distribution since they can function as heads of NPs, subjects as well as objects in clauses; all characteristics that are investigated in this paper.

Creissels and Godard (2005) argue that infinitives in Setswana are a mixed category that displays both verbal and nominal properties. Using the Head-Driven Phrase Structure Grammar (HPSG), they demonstrate that infinitives in Setswana can be nominal in that they can be modified by adjectives, relative clauses, and demonstratives, and can function as heads of genitives just like prototypical nouns. On the other hand, they carry similar morphology (*go*) to verbs; can function as complement clauses of verbs, and may not be represented by object affixes on verbs. Thus, instead of these characteristics, the authors conclude that Setswana infinitives are best analysed as a mixed category. Makeeva and Ryabova (2020) also discuss the dual nature of infinitives in Dabida demonstrating that like Swahili ones discussed in Lindfors (2003), they can take the locative suffix (*ji*), occur as heads of nominals, can be modified by adjectives, possessives, and demonstrative pronouns. On their verbal characteristics, Makeeva and Ryabova (2020) show that infinitives can incorporate objects and reflexive markers and take NP complements and adverbs as modifiers. These discussions are relevant for comparative purposes with characteristics of infinitives in Ikalanga.

4. Syntactic characteristics of Ikalanga *ku*-categories

4.1. Types of *ku*- forms in Ikalanga. As already pointed out in the introduction, one of the questions that we would like to address in this paper is 'What are the types of *ku*-categories in Ikalanga?' We will provide evidence that there are various *ku*-categories in this language but that the *ku*- which attaches to infinitives is homophonous with the *ku*- of nominal categories in the language. Following convention, we classify the *ku*- categories in Ikalanga as a) *ku*-nominals; b) the *poss-ing* gerund type; and c) the infinitive.

Ku-nominals

- | | | | |
|-----|-------------------------|--------|--------------|
| (6) | Ku-khuruth-a | (i) | bugwele. |
| | 15.snore-FV | COP | 14.disease |
| | ‘Snoring is a disease’. | | |
| (7) | Ku-bhik-a | nyama | k-waka-sima. |
| | 15.-cook-FV | 9.meat | 15-PST-hard |
| | ‘Cooking meat is hard’. | | |

Poss-ing

- (8) Ku-mb-a k-wa Ludo k-o khatisa.
 15-sing-FV 15-POSS 1a.Ludo 15.SM-PRS-please
 ‘Ludo’s singing is pleasant’.

Acc-ing

- (9) *Ludo ku-mb-a k-o-khatisa
 1a.Ludo 15-sing-FV 15.SM-PRS-please
 ‘Ludo singing is pleasant’.

Infinitive

- (10) Nchidzi w-aka-kulumbidz-a Ndiye_i
 1a.Nchidzi SM.1-PST-persuade-FV 1a. Ndiye
 ku-mila dzi-thopho.
 INF-stand 10.election
 ‘Nchidzi persuaded Ndiye to stand for elections’.

From the examples provided above, we conclude that Ikalanga has *ku*-nominals illustrated in (6 & 7), *poss-ing* gerund illustrated in (8), and infinitives illustrated in (10), but disallows gerunds of the *acc-ing* type evident from the ungrammatical (9). The discussion that follows therefore will say nothing more about *acc-ing* gerunds since they do not exist in the language. We begin by investigating the common features that are found in the *ku*-categories identified in the language. We demonstrate below (section 4.2) that all *ku*- categories identified in this paper exhibit clausal categories.

4.2 Clausal properties of *ku*- categories in Ikalanga. Ikalanga *ku*-categories display quite several common characteristics, particularly clause-level characteristics. For example, they trigger subject agreement, take VP adverbs, and reflexives, and allow the use of object markers in place of lexical objects and negation.

Bantu nouns are divided into classes based on their prefixal morphology and agreement. Specific noun classes trigger specific agreement forms on the verb when those nouns occur in the subject position. For example, based on its *tj-* prefix, the noun *tjibululu* ‘lizard’ aligns with nouns of class 7 as shown in example (11).

- (11) Tjibululu tj-aka-seng-a bombo.
 7.lizard SM.7-PST-carry-FV 5.grasshopper
 ‘The lizard is carrying a grasshopper’.

Similarly, the *ku*-categories in Ikalanga trigger subject agreement *k-* on the verb if they occur in the subject position. The examples in (12) (13), (14), and (15) all display the *k-* agreement morpheme on the verb in the same way that the agreement morpheme *tj-* is triggered on the verb in (11); this phenomenon has been observed in other Bantu languages (Halpert, 2022), Ikalanga included.

Nominal *ku-*

- (12) Ku-zan-a k-o-zipa.
 15-dance-FV 15.SM-enjoy
 ‘Dancing is enjoyable’.

- (13) Ku-mb-a lumbo i-goguje k-waka-ba-tshusa
 15-sing-FV 11.song 11-that 15.SM-PST-2.OM-help
 ‘Singing that song helped them’.

Poss-ing gerund

- (14) Ku-bhik-a ku-kwe k-waka-ndi shath-is-a.
 15-cook-FV 15.POSS 15-PST-1.OM-CAUS-happy-FV
 ‘His/her cooking pleased me’.

Infinitives

- (15) Ku-pas-a dzi-thathubo k-we bana ko-buzil-a.
 INF-pass-FV 10-exam 15.ASSC 2.child 15.SM-reward-FV
 ‘For children to pass exams is rewarding’.

It is a characteristic of verbs that they are modified by adverbs. Consider the finite example (16) where the verb *lima* is modified by the manner adverb *ngebunya* ‘slowly’.

- (16) Nchidzi u-no-lim-a ngebunya
 1. Nchidzi SM.1-PRS-plough-FV slowly
 ‘Nchidzi is ploughing slowly’.

Now compare the finite example (16) with the *ku-* sentences in (17, 18 & 19). In all these examples, VP adverbs are allowed; *ku-*nominals (17), *poss-ing* gerunds (18), and the infinitive (19). The use of VP adverbs is a phenomenon associated with clause-level structure and therefore the fact that these examples are grammatical with VP modifiers suggests that they have clause structure.

Ku-nominal

- (17) Ku-zan-a ngebunya k-waka-feil-isa Mpaphi
 15-dance-FV slowly 15.SM-PST-fail-CAUS-FV 1a.Mpaphi
 ‘Dancing slowly made Mpaphi fail’.

Poss-ing

- (18) Ku-bal-a ngebunya k-wa Ludo
 15-read-FV slowly 15.POSS 1a.Ludo
 ha-ku-to-shath-is-a
 NEG.-15.SM-PRS-please-CAUS-FV
 ‘Ludo’s reading slowly doesn’t please anyone’.

Infinitive

- (19) U-no-d-a [ku-bal-a ngebunya]
 1.SM-PRS-like-FV INF-read-FV slowly
 ‘He/she likes to read slowly’.

The fact that *ku-*categories can be modified by adverbs makes them significantly different from Ikalanga nouns which cannot be modified by adverbs. Consider example (20).

- (20) *Guendo g-wa Nchidzi chinyolocho
 14.Trip 14.ASSC 1a. Nchidzi quickly
 g-waka-chenamis-a ba-thu
 14.SM-PST-surprise-FV 2.person
 ‘Nchidzi’s quickly trip surprised people’.

This varied behaviour that distinguishes *ku*-nominals, gerunds, and infinitives from DPs has been observed in other languages. For example, Pires (2007) observes that *V-ing* in English can be modified by adverbs but not DPs.

Another characteristic of VPs is that they allow anaphoric object clitics such as *-zwi-* ‘oneself’ or *-an-* ‘each other’ and object markers. This phenomenon is observed in Ikalanga finite clauses illustrated in (21).

- (21) Ludo w-aka-zwi-chek-a madekwe busiku.
 1a.Ludo 1.SM-PST-RFLX-cut-FV yesterday 14.night
 ‘Ludo cut herself last night’.

Ikalanga *ku*-categories, like finite ones, take the anaphoric *zwi-* as illustrated in the examples below.

Ku-nominal

- (22) Ku-zwi-ker-a k-waka-shath-is-a Mpaphi
 15-RFLX-shave-FV 15.SM-PST-please-CAUS-FV 1a. Mpaphi
 ‘Shaving himself pleased Mpaphi’.

Poss-ing

- (23) Ku-zwi-d-a k-wa Ludo k-waka-
 15-RFLX-like-FV 15-ASSC 1a.Ludo 15-PST-
 n-tobok-es-a ba-thu.
 1.OM-lose confidence-CAUS-FV 2.person
 ‘Ludo’s liking herself (that is, her pride) has made people lose confidence in her’.

Infinitives

- (24) U-no-shak-a ku zwi-bon-a mu iponi.
 1.SM-PRS-want-FV INF-RFLX-see-FV in 7.mirror
 ‘He/she wants to see herself in a mirror’.

In all *ku*-categories in the examples above, the *ku*-nominal (22), *poss-ing* gerund example (23), and the infinitive example (24), the use of the anaphoric *zwi-* is allowed, attesting to the verbal properties of these categories.

In addition, VPs in Ikalanga finite clauses allow empty objects which are however identifiable through the use of OMs. This is illustrated in (25b).

- (25) a. Nchidzi w-aka-teng-a mbgwa.
 1a. Nchidzi 1.SM-PST-buy-FV 9.dog
 ‘Nchidzi bought a dog’.
 b. Nchidzi w-aka-i-teng-a
 1a. Nchidzi 1.SM-PST-9.OM-buy-FV
 ‘Nchidzi bought it’.

Similarly, objects of verbs within *ku*-nominals, gerunds and infinitives may be identified in the form of OMs as illustrated in (26) (*ku*-nominal), (27) (*poss-ing*) and (28) (infinitives). This attests to the clausal property of gerunds and infinitives.

- (26) a. Ku-mba lumbo g-we itjaba k-waka-
 15-sing 11.song 11.ASSC 7.nation 15-PST
 shathis-a bana.
 please-FV 2.child
 ‘Singing the national anthem (song) pleased the children’.
- b. Ku-gu-mba k-waka- shathis-a bana
 15-11.OM-sing 15-PST- please-FV 2.child
 ‘Singing it pleased the children’.
- (27) Ku-*ti*-kumbuludz-a k-wa Ludo k-waka-bhatsh-a.
 15-2.OM-remind-FV 15.ASSC 1a.Ludo 15-PST-help
 ‘Ludo’s reminding us helped’.
- (28) Nchidzi u-no-shak-a ku-*ndi*-kok-a
 1a. nchidzi 1.SM-PRS-want-FV 15-1.OM-invite-FV
 ‘Nchidzi wants to invite me’.

Another characteristic associated with clause-level structure is negation. Negation is considered to be a feature that applies at the clause level (Zanutini,1994). For example, Ikalanga finite clauses take negation as evident from (29b) below.

- (29) a. Mpaphi w-aka-phaph-a hwuni.
 1a. Mpaphi 1.SM-PST-cut-FV 10.firewood
 ‘Mpaphi cut the firewood’.
- b. Mpaphi ha-a-zo-phaph-a hwuni.
 1a. Mpaphi NEG-1.SM-PST-cut-FV 10.firewood
 ‘Mpaphi did not cut the firewood’.

Similarly, all three *ku*-categories identified in Ikalanga allow negation as shown in the *ku*-nominal examples (30), the *Poss-ing* (example 31), and the infinitive example (32). The fact that these categories allow negation suggests that they have clausal properties.

Ku-nominal

- (30) Ku-sa-ker-a k-waka-shath-is-a Mpaphi
 15-NEG-shave-FV 15-PST-happy-CAUS-FV 1a.Mpaphi
 ‘Not shaving made Mpaphi happy’.

Poss-ing

- (31) Ku-sa-mb-a ku-kwe k-waka-ti-gwa-dz-a.
 15-NEG-sing-FV 15.POSS 15-PST-2.OM-pain-CAUS-FV
 ‘His/her not singing pained us’.

Infinitives

- | | | | | |
|------|----------------------------------|----------------|----------------|---------|
| (32) | Shatho | w-aka-duma | ku-sa-bon-a | Ludo. |
| | 1a.Shatho | 1.SM-PST-agree | INF-NEG-see-FV | 1a.Ludo |
| | ‘Shatho agreed not to see Ludo’. | | | |

The discussion above has demonstrated that the *ku*-categories identified in Ikalanga all display similar clausal characteristics: they all trigger subject agreement, take VP adverbs, reflexivise, and allow OMs and negation. This finding is consistent with other findings on Bantu languages in the literature (du Plessis, 1982a; Lindfors, 2003; Creissels and Goddard, 2005; Makeeva and Ryabova, 2020). However, from this discussion, it is not clear whether *ku*- forms in Ikalanga belong to the same category as ‘infinitive’ or not. Instead of this, we carry out a further investigation in section 4.3 to determine what nominal features each of the *ku*-categories display.

4.3 Nominal properties in *ku*-categories. In the discussion above (section 4.2), we demonstrated that the three *ku*-categories identified in Ikalanga have clausal characteristics. In this section, we want to establish whether the three *ku*-categories identified in Ikalanga have nominal properties. Specifically, we investigate whether these *ku*-forms can become OMs in the main verb, take modifiers, and demonstratives, can be relativized, can be introduced by an associative, and whether they are passivisable.

The object of a verb in Ikalanga may be a lexical NP as shown in (33a) below or it may be an anaphor in the form of an object marker (OM) as shown in (33b).

- | | | | | |
|------|----|----------------------------|-------------------|------------|
| (33) | a. | Wedu | wa-ka-bona | tjibululu. |
| | | 1a.Wedu | 1.SM-PST-see | 7.lizard |
| | | ‘Wedu saw a lizard’. | | |
| | b. | Wedu | wa-ka-tji-bona | tjibululu. |
| | | 1a.Wedu | 1.SM-PST-7.OM-see | 7.lizard |
| | | ‘Wedu saw it, the lizard’. | | |

Unlike subject agreement which is obligatory in Ikalanga finite sentences, OM is not obligatory. However, OM tends to be used to indicate definiteness in the language given that the language does not have articles. This type of OM use is also observable in Ikalanga *ku*- categories (34), (35) and (36). In (34b), (35b), and (36b), the *ku*-categories pronominalize and incorporate onto the verb just as happens to the object NP in (34b).

Ku-nominal

- | | | | | | |
|------|----|--|------------------------|-------------------|---------|
| (34) | a. | Nchidzi | u-no-d-a | ku-shath-is-a | b-ana |
| | | 1a.Nchidzi | 1.SM-PRS-like-FV | 15-please-CAUS-FV | 2-child |
| | | ‘Nchidzi likes making children happy’. | | | |
| | b. | Nchidzi | u-no-ku-d-a | ku-shath-is-a | |
| | | 1a.Nchidzi | 1.SM-PRS-15.OM-like-FV | 15-happy-CAUS-FV | |
| | | bana | | | |
| | | 2.child | | | |
| | | ‘Nchidzi likes it, pleasing the children’. | | | |

Poss-ing

- (35) a. Nd-o-d-a ku-pharel-a ku-kwe ku-buyanana
 1.SM-like-FV 15-plaster-FV 15-POSS 15-good
 ‘I like his/her good plastering’.
- b. Nd-o-ku-d-a ku-pharel-a ku-kwe ku-buyanana
 1.SM-15.OM-like-FV 15-plaster-FV 15-POS 15-good
 ‘I like it his/her good plastering’.

Infinitive

- (36) a. Ludo u-no-shak-a ku-bhat-a hwobe.
 1a.Ludo 1.SM -PRS-want-FV INF-catch 9.fish
 ‘Ludo wants to catch fish’.
- b. Ludo u-no-ku-shak-a ku-bhat-a hwobe.
 1a.Ludo 1.SM-PRS-15.OM-want-FV INF-catch-FV 9.fish
 ‘Ludo wants it, to catch fish’.

Being an anaphor is a nominal property and the infinitive in (36b) seems to have this property.

It is the property of Bantu languages that when nominals are left dislocated, an OM is attached to the main verb (example 37b) (Halpert, 2022). Leaving out the OM while left dislocating the object results in ungrammaticality as seen in (37c) below.

- (37) a. Ndibo w-aka-tenga ngumba.
 1a.Ndibo 1.SM-PST-buy 9.house
 ‘Ndibo bought a house’.
- b. Ngumba Ndibo w-aka-i-tenga
 9.house 1a.Ndibo 1.SM-PST-9.OM-buy
 ‘ ‘The house, Ndibo bought it’.
- c. *Ngumba Ndibo w-aka-tenga
 9.house 1a.Ndibo 1.SM-PST-buy
 ‘Ndibo bought a house’.

Consider the *ku*-categories in the sentences below:

Ku-nominal

- (38) a. Nd-o-tja ku-bulaya bathu
 1.SM-PRS-afraid 15-kill 2.person
 ‘I am afraid of killing people’.
- b. Ku-bulaya ba-thu nd-o-ku-tja.
 15-kill 2.person 1.SM-PRS-15.OM-afraid
 ‘Killing people, I am afraid of it’.
- c. *Ku-bulaya ba-thu nd-o-tja.
 15-kill 2.person 1.SM-PRS-afraid
 ‘Killing people, I am afraid of it’.

Poss-ing

- (39) a. Ndo-shath-il-a ku-bhika k-wa Ludo
 1.SM-happy-APPL-FV 15-cook 15.POSS 1a.Ludo
 ‘I am happy with Ludo’s cooking’.
- b. Ku-bhik-a k-wa Ludo
 15-cook-FV 15.ASSC 1a.Ludo
 nd-o-ku-shath-il-a
 1.SM-PRS-15.OM-happy-APPL-FV
 ‘Ludo’s cooking, I like it’.
- c. *Ku-bhika k-wa Ludo nd-o-shath-il-a
 15-cook 15.ASSC 1a.Ludo 1.SM-PRS-happy
 ‘Ludo’s cooking, I like’.

Infinitive

- (40) a. Mpaphi u-no-shaka ku-tenga lori.
 1a.Mpaphi 1.SM-PRS-want INF-buy 9.car
 ‘Mpaphi wants to buy a car’.
- b. Ku-tenga lori Mpaphi u-no-ku-shaka
 INF-buy-FV 9.car 1a.Mpaphi 1.SM-PRS-INF-want
 ‘To buy a car, Mpaphi wants it’.

The (b) examples in (38-40) show that when the *ku*-categories are left dislocated, an OM is used. The ungrammaticality of the (c) examples in (38-40) is an indication that left dislocating a *ku*-category without using the anaphoric OM results in ungrammaticality. This is evidence that OM is obligatory when left dislocation is invoked. The fact that Ikalanga allows the use of the anaphoric OM even in infinitives is quite different from Swahili where infinitives do not allow OM in similar structures (Carstens, 1991).

Another characteristic of nominals in languages of the world is that they take modifiers such as adjectives. In Ikalanga, nominal modifiers take the inflection associated with the class of the noun they modify. Consider example (41).

- (41) Nkadzi n-kodu wa-dzimila
 1.woman 1.fat 1.SM-lost
 ‘The fat woman is lost’.

In example (41), the prefix *n-* attached to the adjective *-kodu* ‘fat’ is the *n-* of noun class 1 to which *nkadzi* ‘woman’ belongs. Similarly, in the *ku*-nominal (42) and the *poss-ing* example (43), the possessive determiner *kukwe* and the adjective *ku-buyanana* are both prefixed with the *ku-* of class 15 nominals.

- (42) Ku-mba njimbo dz-e ludo ku-buyanana
 15-sing 10.song 10.ASSC 11.love 15-good
 kwa-ka –ba-shathis-a
 15.SM-PST-2.OM-please-CAUS-FV
 ‘Singing good love songs pleased them’.

- (43) Ku-mba kukwe ku-buyanana kwa-ka –ndi-.
 15.-sing 15.POSS 15.-good 15.SM-PST-1.OM-
 shath-is-a
 please-CAUS-FV
 ‘His/her good singing pleased me’.
- (44) *Ba-no-shaka ku-mba ku-buyanana
 2.SM-PRS-want INF-sing 15-good
 ‘They want to sing good’.

In the examples above, (42) and (43) are grammatical with both the *ku*-nominal and the *poss-ing* gerund modified by the adjective *ku-buyanana* while (44) with the infinitive modified by the adjective *kubuyanana* is not grammatical. Notice, however, that (44) could be grammatical under the interpretation ‘They want good singing’, with *ku-mba* being a *ku*-nominal.

Next, we want to determine whether the *ku*-categories in Ikalanga take demonstratives like other nominals. Example (45) shows the use of demonstratives in an Ikalanga noun phrase.

- (45) Mpaphi wa-ka-tuma mbisana u-wowuje.
 1a.Mpaphi 1.SM-PST-send 1.boy 1-that
 ‘Mpaphi sent that boy’.

Similarly, class 15 nominals take demonstratives as modifiers as examples (46 & 47) illustrate.

- (46) Ku-mba njimbo dz-e ludo ikoku kwa-ka –ba-
 15-sing 10.song 1.ASSC love 15.this 15.SM-PST-2.OM-
 shath-is-a
 please-CAUS-FV
 ‘This singing of love songs pleased them’.
- (47) I-koku ku-shinga ku-kwe ha-ku-zo-lulam-a
 DEM-15 15.-work 15-POSS NEG-SM.15-PRS-good-FV
 ‘This working of his is not good’.

In both (46&47), the demonstrative *ikoku* ‘this’ modifies the class 15 nominal *ku-mba njimbo dze ludo* and the *poss-ing* nominal *ku-shinga*. To further attest to the nominal nature of class 15 *ku*-formed nominals, the demonstrative is itself inflected for class 15.

Now consider example (48).

- (48) *Ba-no-shaka ku-mba ikoku
 2.SM-PRS-want INF-sing 15.this
 ‘They want to sing this’.

Example (48) is ungrammatical with the infinitive reading. However, if *ku-mba* is interpreted as a *ku*-nominal resulting in the interpretation ‘They want this singing’, then the sentence is grammatical.

Nominals can also be modified through relativization. Like some Bantu languages, however, Ikalanga does not have a relative pronoun. Relativization is achieved by placing a low tone on the

SM of a given verbal element to change it from an ordinary SM into a relativizer (Letsholo, 2009). Consider example (49) below.

- (49) a. Nlume ù-àkà-lobol-a Ludo
 1.man 1.REL-PST-marry-FV 1a.Ludo
 ‘The man who is married to Ludo’.
- b. Nlume ú-ákà-lobol-a Ludo
 1.man 1.SM-PST-marry-FV 1.Ludo
 ‘The man is married to Ludo’.

In example (49a) the SM *u-* takes a low tone thus turning the clause into a relative clause while in (49b) the high tone on the SM makes (49b) a simple declarative. In example (50) below, the *ku-* takes a low tone marker hence relativising the class 15 gerund.

Ku-nominal

- (50) Kù-lébéś-án-á kù-bîbî
 15.-talk-REC.-FV 15. REL-ugly
 hà-kú-zò-lùlám-à
 NEG-15-PRS-good-FV
 ‘Talking which is unpleasant is not good’.

Poss-ing

- (51) Kù-lébéś-án-á kù-kwé kù-bîbî
 15.-talk-REC.-FV 15.POSS 15.REL-ugly
 à-kú-zò-lùlám-à
 NEG-15.SM-PRS-good-FV
 ‘His/her talking (to other people) which is unpleasant is not good’.

Infinitive

- (52) Ha- bá-tó-émul-a ku-lébéś-áná kù-bîbî
 NEG 2.SM-PRS-desire-FV INF-talk-REC-FV 15.REL-ugly
 ‘They do not desire *to talk/talking which is unpleasant’.

Notice that in both examples (50) (the *ku-nominal*) and (51) (the *poss-ing*), relativization is possible. However, in (52) with the infinitive reading, relativization is not possible. However, if the *ku-* category is interpreted as a nominal, then relativization is possible.

Subjects of nominals in Ikalanga and other Bantu languages are introduced by the associative marker. Example (53) illustrates.

- (53) Shangu dz-a Nchidzi dz-o-mana.
 10.shoe 10-ASSC 1a.Nchidzi 10.SM-PRS-tight
 ‘Nchidzi’s shoes are tight’.

Similarly, subjects of class 15 *ku-nominals* take the associative marker as illustrated in (54) and (55). However, this is not possible with infinitives as evident from the ungrammaticality of (56).

- (54) Ku-ja katsi k-wa Chipo k-o
 15-eat 7.cat 15.ASSC 1a.Chipo 15-PRS
 hwis-a mme-abe zogwadz-a
 feel-FV mother-POSS pain-FV
 ‘Chipo’s eating of cat (meat) frustrates his/her mother’.
- (55) Ku-mba k-wa Nchidzi k-o-ndi-hw-is-a
 15-sing 15.ASSC 1a.Nchidzi 15.SM-PRS-1.OM-feel-CAUS
 ngoni
 pity
 ‘Nchidzi’s singing makes me pity him’.
- (56) Ndo emula ku-mba k-wa Nchidzi.
 1.SM-envy INF-sing 15.ASSC 1a.Nchidzi
 ‘*I envy to sing of Nchidzi/ I envy Nchidzi’s singing’.

Again, (56) makes sense only if it is interpreted to mean ‘I envy Nchidzi’s singing’.

Another characteristic associated with nominals is the passivization of complements of the verb. Passivization of nominals in Ikalanga is achieved through introducing *-w/iw* in the verb form. This is illustrated in (57b).

- (57) a. Mpaphi wa-tenga lori.
 1a. Mpaphi 1.SM-buy 9.car
 ‘Mpaphi bought a car’.
- b. Lori ya teng-w-a ndi Mpaphi.
 9.car 9.SM buy-PASS-FV by 1a.Mpaphi
 ‘The car was bought by Mpaphi’.

In example (57b) where passivisation has occurred, the verb *tenga* becomes *tengwa*. Similarly, in example (58b) passivisation is possible but only if *ku-bhika* is interpreted as a *ku-* nominal and not an infinitive. *Poss-ing* nominal is also passivisable as evident from the grammaticality of (59b).

- (58) a. Ba-no-d-a ku-bhika.
 2.SM-PRS-like-FV 15-cook-FV
 ‘They like cooking/to cook’.
- b. Ku-bhik-a k-o-di-w-a ndi-bo
 15-cook-FV SM.15-PRS-like-PASS-FV by them
 ‘*To cook/Cooking is liked by them’.
- (59) a. Mme ba-no-da ku-bhika k-wa Ludo.
 Mother 2.SM-PRS-like 15-cook 15.ASSC 1a. Ludo
 ‘Mother likes Ludo’s cooking’.

- b. Ku-bhika k-wa Ludo ko-d-iw-a
 15-cook 15.ASSC 1a.Ludo 15.SM-PRS-like-PSS-FV
 ndi mme.
 by mother
 ‘Ludo’s cooking is liked by mother’.

The question is, can infinitives be passivized? An anonymous reviewer points out that infinitives can be passivized in English as in example (60) below.

- (60) To conceal weapons within public buildings has been outlawed.

A similar construction in Ikalanga is (61).

- (61) Ku-seng-a zw-ithu zwi-no-zh-isa hubadzi
 INF-carry-FV 8.gadgets 8.-PRS-bring-CAUS-FV danger
 mu zwikwele k-wa-ka-lamb-igw-a
 In 8-school 15.SM-PST-prohibit-PASS-FV
 ‘?To carry/Carrying dangerous gadgets to schools has been prohibited’.

While in Ikalanga the infinitive reading is possible in (61), it is not at all clear what the active form of such a sentence would be. Consider example (62).

- (62) Bazwadzi b-aka-lamba ku-seng-a zwithu
 2.parent 2.SM-PST-refuse INF-carry-FV 8.gadget
 zwi-no-zh-is-a hubadzi mu zwikwele
 8.SM-PRS-bring-CAUS-FV 10.danger in 8.school
 ‘?The parents prohibited to carry/carrying dangerous gadgets to schools’.

In both (61) and (62) the nominal reading is better while the infinitive reading sounds unnatural. In addition, the active sentence (62) from which (61) is supposed to be derived, does not sound natural with the infinitive reading. From this, we conclude that the passivization of infinitives is not possible in Ikalanga.

In summary, in this section, we demonstrated that while the *ku*-categories in Ikalanga have some commonalities, they nevertheless have some distinguishing properties. For example, we showed that all three categories- *ku*-nominals, gerunds, and infinitives – can pronominalize. However, in terms of nominal features, this is as far as the similarities go. In this regard, Ikalanga differs from Swahili where according to Carstens (1991) object agreement is disallowed in infinitives. We showed that the nominals (*ku*-nominals and gerunds) differ from infinitives in all other nominal properties. For example, while the nominal can be modified by adjectives, take demonstratives, and can be relativized, infinitives do not allow any of these. We showed that passivization is marginally accepted in infinitives with the nominal reading preferred whenever an infinitive is passivized. From the discussion in the section, it is clear that there are at least two broad *ku*-category types – nominal types and infinitive.

4.3 Differences among *ku*-categories. In previous sections (section 4.) we showed that the *ku*-categories in Ikalanga have common characteristics associated with clausal structure and in section 4.3 we demonstrated that they differ mainly concerning nominal properties. In this section,

we investigate whether these three categories differ in any other ways. We argue that these categories differ from one another in the following ways: semantically; in how they introduce complements; and in terms of allowing post-verbal subjects.

We follow arguments presented in the literature (Stowell, 1981; Carstens 1991) that infinitives refer to unrealized time while gerunds lack a time reference. While time versus lack of time reference may be observable in languages like English, this is not the case in Bantu languages like Ikalanga and Kiswahili where the infinitive and the gerund forms are homophonous, that is, they are both presented in the form of *ku-*. Although this is the case, an example such as Ikalanga (63) provides two interpretations where one reading is gerundive while the other is infinitive (see Carstens, 1991 for a similar observation in Kiswahili).

- (63) Nda-ka-alakan-a ku-bhik-a nyama
 1.SM-PST-think-FV INF-cook-FV 9.meat
 ‘I remembered cooking meat/to cook the meat’.

We can only explain the presence of the different interpretations if we assume with Carstens (1991), that some *ku-* forms are tenseless hence the gerundive reading while some are + Tense hence the infinitive reading.

Another distinction between *poss-ing* and other nominals comes from how complements in these structures are introduced. For example, complements in Ikalanga gerunds (*poss-ing*) are not introduced by the associative *-a* while in nominals *-a* is required to introduce them. Consider (64).

- (64) a. Nd-aka-alakan-a ku-bes-a moto kukwe
 1.SM-PST-remember-FV 15-make-FV 3.fire 15-POSS
 ‘I remembered his/her making fire’.
- b. ??Nd-aka-alakan-a ku-besa ku-kwe moto
 1.SM-PST-remember- 15-make 15-POSS 3.fire
 ‘I remembered his/her making fire’.

Notice that in the examples in (64), the complement of *ku-besa* is not introduced by the associative *-a/-e*. It is rather a bare direct object. In this way, the *poss-ing* is similar to the infinitive (65) but different from other nominals.

- (65) Nchidzi u-no-shak-a ku-teng-a bhadza.
 1a.Nchidzi 1.SM-PRS-want-FV 15-buy-FV 5.plough
 ‘Nchidzi wants to buy a plough’.

Other nominals, for example, the derived nominal in (66b) and the *ku-*nominal in (67b) can only take a complement if it is introduced by the associative, *-a/e* (66a and 67a) depending on the noun class of the head noun. Without the use of the associative, the nominal cannot take a complement as seen from the ungrammaticality of (66b) and (67b) (the *ku-*nominal).

- (66) a. B-aka-ti-lakidz-a jinyo l-e vula
 2.SM-PST-2.OM-show-FV 14.destruction 14.ASSC 9.rain
 ‘They showed us the rain’s destruction’.
- b. *B-aka-ti-lakidz-a jinyo vula
 2.SM-PST-2.OM-show-FV 14.destruction 9.rain
 ‘They showed us the rain destruction’.
- (67) a. Nd-aka-hw-a ku-mba k-wa Ndibo.
 1.SM-PST-hear-FV 15.sing 15.ASSC 1a.Ndibo
 ‘I heard Ndibo’s singing’.
- b. *Nd-aka-hw-a ku-mba Ndibo.
 1.SM-PST-hear-FV 15.sing 1a.Ndibo
 ‘I heard Ndibo’s singing’.

In addition, the gerund in (68a) has a lexical subject NP *Ndibo* which is introduced by the associative *kwa*. Nominals such as (66a) do not host a lexical subject. Similarly, infinitives do not host lexical subjects as seen in the ungrammaticality of (69).

- (68) a. Nd-aka-alakan-a ku-besa moto k-wa
 1.SM-PST-remember-FV 15-make 3.fire 15-ASSC
 Ndibo
 1a.Ndibo
 ‘I remembered Ndibo’s making fire’.
- b. ??Nd-aka-alakana ku-besa k-wa Ndibo moto
 1.SM-PST-remember 15-make 15-ASSC 1a.Ndibo 3.fire
 ‘I remembered Ndibo’s making fire’.
- (69) *Nchidzi u-no-emul-a ku-teng-a ngumba
 1a.Nchidzi SM.1-PRS-desire-FV INF-buy-FV 9.house
 k-wa Ludo
 15-ASSC 1a.Ludo
 ‘Nchidzi desires to buy a house of Ludo’.

(69) is ungrammatical under the infinitive reading but is grammatical with the interpretation ‘Nchidzi is envious of Ludo’s house buying’.

That *poss-ing* nominal in Ikalanga is different from other nominals and *ku*-categories in taking a lexical subject makes it similar to the same construction in Kiswahili (Carstens, 1991). However, Ikalanga (64a) differs from its Swahili and Zulu counterparts (Halpert 2022) in terms of the preferred word order in such constructions. For example, while the preferred word order in Ikalanga is *ku + V-O-S*, Carstens (1991) observes that in Kiswahili the preferred word order is *ku+V-S-O*. This raises questions regarding how the case of the internal subject in (64a) is licensed. We leave this question for future investigation.

In this section, we demonstrated that infinitives differ from nominals in that they have a tense interpretation while gerunds do not. We also showed that although gerunds and *ku*-nominals are both nominal, they nevertheless differ in some ways. For example, we showed that *ku*-nominals require the use of the associative to introduce complements while gerunds do not. Secondly, we

showed that gerunds host lexical subjects while *ku*-nominals and infinitives do not. In this section, we have further demonstrated the need to distinguish nominal, *poss-ing*, and infinitive *ku*-types.

5. Conclusion

This paper set out to determine whether Ikalanga *ku*-forms form a single category or whether they are of different types. The paper found that Ikalanga has three different types of *ku*-categories – two nominal types (*ku*-nominals and *poss-ing* gerunds) and the infinitive. The paper also investigated the clausal properties that these *ku*-categories share and concluded that the *ku*-categories identified in Ikalanga all display similar clausal characteristics in that they all trigger subject agreement, take VP adverbs, reflexivise, allow OMs and negation. Further, the paper investigated what nominal categories the *ku*-categories have. The paper determined that all three categories (*ku*-nominals, gerunds, and infinitives) can pronominalize. However, the paper then showed that the Ikalanga *ku*-categories differ in terms of other nominal features. We showed that the nominal (*ku*-nominals and gerunds) differ from infinitives in that while the nominals can be modified by adjectives, take demonstratives, and can be relativized, infinitives do not allow any of these. We showed that passivization is marginally accepted in infinitives with the nominal reading preferred whenever an infinitive is passivized. In terms of other distinguishing features, we demonstrated that infinitives differ from nominals in that they have a tense interpretation while gerunds do not. We also showed that although gerunds and *ku*-nominals are both nominal, they nevertheless differ in some ways. For example, we showed that *ku*-nominals require the use of the associative to introduce complements while gerunds do not. Secondly, we showed that gerunds host lexical subjects while infinitives do not. In conclusion, this paper has demonstrated that while, Ikalanga *ku*-categories display clausal properties as argued for other Bantu languages (Carstens, 1991; Schaderberg, 2006; Gromova, 2017 and others), there is a case to argue for distinguishing between infinitives and nominals rather than classifying all *ku*-categories under the ‘infinitive’ umbrella. This paper concerned itself only with characterising the *ku*-categories found in Ikalanga; however, a future investigation might look into case licensing in Ikalanga *ku*-constructions.

Abbreviations

APPL	Applicative
ASSC	Associative
DEM	Demonstrative
FV	Final vowel
INF	Infinitive
NEG	Negation
OM	Object marker
PRF	Perfective
PRS	Present
REC	Reciprocal
REL	Relativiser
RFLX	Reflexive
SG	Singular
SM	Subject marker
SUBJ	Subjunctive

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