

# An Investigation of Compound Words in Kisukuma

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## Authors' contributions

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## ABSTRACT

This study presents an analysis of the types and formation of compound words in Kisukuma. The study used word-structure theory and the compositionality principle in a descriptive research design to analyse the types and formation of compound words in Kisukuma. A purposive sampling method was used in getting competent native speakers. The data was obtained through a documentary review and focus group discussion whereby 8 respondents were involved. The validity and reliability of the instruments were checked through the triangulation method whereby two native speakers of Sukuma were interviewed. The findings show that Kisukuma has one functional type of compound words, namely, compound nouns. In most cases, compound nouns in Kisukuma are formed by the combination of noun + noun, noun + verb, nominalized-verb + noun, and nominalized-verb + adjective. In addition, both endocentric and exocentric compounds were found to occur in the language; however, copulative compounds were not.

*Keywords: Kisukuma compounds; endocentric compounds; exocentric compounds; compound formation rules.*

## 1. INTRODUCTION AND BACKGROUND TO THE STUDY

Kisukuma is a western Tanzania Bantu language belonging to the Niger-Congo language family

[1]. It is the largest language in terms of the number of speakers in Tanzania [2]. In Guthrie's [3] classification of Bantu languages, Kisukuma belongs to group 20 of zone F of the Bantu languages and is classified as F21 along with

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Kinyamwezi (F22), Kisumbwa (F23), Kimbu (F24) and Bungu (F25).

According to Mradi wa Lugha za Tanzania [2], the Kisukuma speakers represent the largest Bantu ethnic group in Tanzania which is estimated to be more than 5.1 million. Kisukuma is primarily spoken in the south and southeast of Lake Victoria in Mwanza, Mara, Simiyu, Shinyanga, Kagera, Tabora, and in some parts of the Mbeya and Rukwa regions. Bantuists such as Batibo [1] and Matondo [4] have posited four major dialects for Kisukuma, spoken in different geographical locations. Such dialects include Kimunasukuma (Northern dialect), Kimunangweli (Western dialect), Kimunakiiya (Eastern dialect) and Kimunadakama (Southern dialect). The four Kisukuma dialects mentioned above are mutually intelligible. Kimunasukuma is primarily spoken in Mwanza region and is considered to be a standard dialect. It is this dialect from which the data on compounding in Kisukuma were collected.

Scholars agree that compounding (or composition) is a morphological process whereby two (or more) bases or lexemes are combined to form one word [5-9]. For example, the compound word 'greenhouse' contains the bases 'green' and 'house' which can occur separately as words in English.

Research on compounding has generally focused on the structures and types of compounds, but also on compounding as an interfacial process between syntax and morphology. As to types, compound words are categorised into endocentric, exocentric and copulative compounds [5]. Endocentric compounds are headed compounds where one component is a head that determines the word category of the compound and its basic meaning with the second component being a modifier. However, exocentric compounds are headless compounds which do not contain a constituent that function as a head, as illustrated in examples (3) and (4) from English:

### 3) Endocentric compounds

- a. Bedroom
- b. Teapot
- c. Nightdress

### 4) Exocentric compounds

- a. bluebottle
- b. bluenose
- c. butterfingers

Source: *Katamba and Stonham, ([5] p. 317, 332)*

The endocentric compound words in 3) have heads that determine the word category of the compound. For example, in 3a), 'bedroom' has a base 'room' which is the head and 'bed' which is a modifier. Therefore, the rightmost word (room) is the one which determines the type of a word class of the compound word. Each of the exocentric compound words in 4) does not have a head that determines the grammatical category of the compound. For example, in 4a), 'bluebottle' does not mean that the bottle is blue but it rather means a kind of insect. Thus, the meaning of a compound is external, it is not predictable from its constituents.

Research on Bantu compounding has also focused on the structures and types of compounds [8,10,11]. Katikiro [10] and Lusekelo [11] have focused on Kiswahili, while two scholars, Batibo [1:303-6] and Luhende 10:: 41 ff] have provided brief descriptions of Kisukuma compounds. It is, however, to be noted that many of the descriptive statements made on Bantu compounding are still tentative and preliminary, and require further investigation. For instance, there is no in-depth investigation of the structures and types of compounds, specifically with respect to Kisukuma. Furthermore, statements such as "Sukuma is an endocentric language" [12:41] need further investigation. Here a question arises: how is "Kisukuma endocentric" while Kiswahili, a fellow Bantu language, is both endocentric and exocentric [11]? Thus this study was partly motivated by a desire to investigate whether Kisukuma compound words are exclusively endocentric or not. This was in addition to the fact that compounding is an aspect of Kisukuma morphology whose description is still more or less incomplete.

## 2. STATEMENT OF THE PROBLEM

Compounding is a common word formation process in many different languages. Research on compounding in Bantu languages is still in its preliminary stages, i.e. only a few studies have been done, most of which are partial. There are only a few descriptions of Kisukuma compounds, which are also partial. Some of the statements made in regard to Kisukuma compounds are controversial, e.g. "Sukuma is endocentric". Thus there is need for a more thorough investigation of Kisukuma compounds.

## 3. SPECIFIC OBJECTIVES

This study was guided by two specific objectives:

- i. To investigate types of compound words in Kisukuma.
- ii. To analyse the formation of compounds in Kisukuma.

#### 4. SIGNIFICANCE OF THE STUDY

This study contributes to the existing knowledge as regards Bantu language compounding.

#### 5. LITERATURE REVIEW

Compounding has been observed, described and discussed by linguists since the dawn of modern linguistics (e.g. Whitney [13: 43-45] who describes English compounds as a word formation strategy; de Saussure [14] (passim) who relates compounding to syntagmatic relations; Bloomfield [15, 227-237], who focuses on the formation and types of compounds. In the current period, compounding has been investigated using various perspectives [5, 304-337]; Libber and Stekauer [16], inter alia). In the investigations of compounding, some of the basic issues include:

1. How are compounds distinct from phrases?
2. What are the types of compounds? (cf. Katamba & Stonham [5]).
3. What are the formation rules for compounds?

##### 5.1 How are Compounds Distinct from Phrases?

In the current investigation of Kisukuma compounds, we have followed Katamba and Stonham's theory of lexical morphology; this is a word-structure approach which strictly distinguishes compounds as products of word formation rules (which belong to the lexicon) while phrases are syntactic constructs; moreover, compounds function as "single-word" units in syntax whereas phrases function as syntactic combinations of two or more words. These criteria were used in the collection of compounds in the study.

##### 5.2 Types of Compound Words

The most discussed classifications are two: a semantically-based classification, distinguishing between endocentric, exocentric and copulative compounds (cf. Katamba and Stonham) and a

word-category based classification, distinguishing among compound nouns, compound adjectives, compound verbs, etc. A nominal compound is a compound that has a noun as its head combined with either a noun, a verb, an adjective, or a preposition as its modifier. The adjectival compound is a type of compound word having an adjective as its head. However, there are scholars who discussed neo-classical compounds among types of compounds in English. For instance, Yanti [17] examines compound words in "Gray's Basic Anatomy" a medical textbook. Yanti analyses three types of compound words including nominal, adjectival, and neoclassical compounds. The neoclassical compound is a special type of compound word formed by combining forms derived from the Greek or Latin origin, e.g. microscope, megastore, bibliography, etc.

##### 5.2.1 Types of compound words based on semantics

###### 5.2.1.1 Endocentric compound

The endocentric compound is the headed compound. According to Katamba and Stonham [5], endocentric compounds are headed, where the headword of an endocentric compound determines the grammatical category of the compound. Similarly, Selkirk [18] comments that the head is the dominant part of the endocentric compound. Also, in most cases; it determines the lexical category of the entire compound. Supporting the idea, Snyder [19] asserts that a compound word will be called 'endocentric' if it contains a head morpheme that determines its morphosyntactic features and general semantic type. For instance, in a compound 'flowerbook', the head is the book. Hence, the compound is a noun (like a book) and names a type of book.

Various studies have made an attempt in identifying endocentric compounds. The studies reveal that most compound nouns are endocentric and the identification of endocentric compounds is as simple as their meanings are explicit. Scholars such as Christiano [20], Jameson [21], Lusekelo [11] & Milaku [22] agree that endocentric compounds have modifiers that modify the heads. Whereas English compounds predominantly uses the Right-Headed-Rule in forming compounds, other languages such as French predominantly used the Left-Headed-Rule in compounding. The Left-Headed-Rule has also been found to operate in Bantu languages. This was revealed by Jameson [21] (who

investigated Bisa, a Bantu language) and Lusekelo [11] (who investigated Kiswahili). In Bisa, Jameson [21] found that the majority of compound nouns are endocentric. Jameson presents some examples to illustrate this:

- (11) a. *bátá-mwáicé* 'father child'(literal translation) 'paternal uncle'  
 b. *mwáná-wánsiwá* 'baby left' (literal translation) 'orphan'  
 c. *bémbá-wásyétá* 'sea red' (literal translation) 'red sea'

**Source:** Jameson [21, 58]

The data in 11 indicate that endocentric compounds in Bisa have heads *báta-*, *mwáná-* and *bémbá-* which occur to the left of the modifiers *mwáicé*, *wánsiwá* and *wásyétá*; they also determine the meaning of the compound, while the modifiers provide extra information.

In a similar vein, Lusekelo [11] investigates endocentric and exocentric compounds in Kiswahili focusing on compound nouns. The findings of Lusekelo's study are interesting; they indicate that endocentric compounds in Kiswahili split into left-headed, double-headed and right-headed structures. For example, noun + noun (N+N) as in *gari-moshi* 'train' is left-headed.

### 5.2.1.2 Exocentric compounds

In addition to endocentric compounds, there are also exocentric compounds. Katamba and Stonham [5] define an exocentric compound as a headless compound which does not contain an element that functions as the semantic head which is modified by the non-head element. This means that the meaning of the compounds is not determinable from the head. Studies which have been referred to above (e.g. Jameson; Lusekelo; & Milaku; Katamba and Stonham; Libber and Stauker) have also discussed exocentric compounds in various languages.

Milaku [22] notes that exocentric compounds found in Albanian and English do not consist of heads and their meanings cannot be transparently predicted from their component parts. He adds that in an exocentric compound, the word class is determined lexically regardless of the class of the constituents. For example, a 'must-have' is not a verb but a noun. Also, 'white-collar' is neither a kind of collar nor a white thing. Similarly, Jameson [21] illustrates some

exocentric compounds from Bisa. He gives some interesting examples that include *mpángá-yásápá* 'bush dirt' 'a person found in the bush'. This compound is exocentric as its referent is not the referent of the head. Similarly, Lusekelo [11] finds that exocentric compounds have metaphoric interpretations of combined words. Thus, they need special consideration in that the head of the compound is expected from the semantic-pragmatic context in the speaker community. Examples in 12 illustrate some Kiswahili exocentric compounds.

12)

- a. *mlalahoi* "proletariat, labourer"  
*lala* "sleep"  
*hoi* "exhausted"  
 b. *mvujajasho* "day worker"  
*vuja* "leak"  
*jasho* "sweat"  
 d. *kirukanjia* "prostitute"  
*ruka* "jump"  
*njia* "path"

**Source:** Lusekelo, [11, 36]

The compound *mlalahoi* 'proletariat' represent poor labourers. These are people who sleep exhausted due to hard work. Therefore, the verb *lala* 'sleep' and *hoi* 'exhausted' are combined to infer to the poor labourers. Likewise, *wavujajasho* 'day-workers' represent a class of people who have no permanent jobs and keep looking for jobs daily. The verb *vuja* 'leak' and the noun *jasho* 'sweat' combine together to infer the continued status of the day worker. On the other hand, *kirukanjia* 'a sex commercial woman or prostitute' created from the verb *ruka* 'jump' is used to mean the proper custom of the community and *njia* 'path'. The name is used figuratively to avoid a bad face in society. As observed in the example from Kiswahili, the exocentric compounds have no head and modifiers that could add meanings to the head. Thus, the meaning of the exocentric compound is external.

The findings from studies on endocentric and exocentric compounds above have helped the investigation of Kisukuma compounds. Specifically, in addition to alerting us to the distinction between endocentric and exocentric compounds, the findings are useful to our investigation of the claim by Luhende [12] that "Sukuma is an endocentric language".

### 5.2.1.3 Copulative compound words

Several scholars such as Olsen [23], Katamba and Stonham [5] & Joseph [24] discuss copulative compound words in different languages. For instance, Katamba and Stonham [5] assert that copulative compounds are compounds that have two words which are coupled or conjoined. They have the following structure:

- 13)  
 a) north (N) + west (N) = north-west (N)  
 b) Bitter (Adj) + sweet (N) = bitter-sweet (Adj).  
**Source:** *Katamba and Stonham [5, 333]*

Semantically, copulative compounds have components with equal status as observed in examples 13a) and b) in the copulative compound words 'north-west' and 'bitter-sweet', there is no component between them that is considered as the head that dominates the compound. In the compound 'north-west' for instance, both words are equally important as they indicate different directions. Olsen [23] states that copulative compounds encompass a coordinative relationship between the two constituents such that both concepts are attributed simultaneously to one individual. For example, a 'Poet-doctor' is someone who is both a 'poet' and a 'doctor'.

In our study, we have also attempted to look for copulative compounds in the collected data.

### 5.2.2 Types of compound words based on word categories

One of the issues that has been addressed by scholars has to do with the word categories that are involved in the formation of compounds. Research on this issue has revealed the following findings:

1. Languages like English which form nominal, verbal, adjectival and prepositional compound words [25,5,26];
2. Languages like Dawan (cf. Budiarta [27]), Dangme (cf. Lawyer [6]) and Kihehe [28] which form nominal, verbal and adjectival compound words;
3. Languages like Kiswahili [11] which form nominal compound words only.

The present study on Kisukuma compounds is interested in finding out whether Kisukuma belongs with languages in 1 or 2 or 3 above.

## 5.3 The Formation of Compound Words

The formation of compound words follows specific context-free rules of the type: X-----> XY where X and Y are components of the compound word. Katamba and Stonham [5:318-334] present some of the formation rules for English compound words, as follows:

Nouns:

1. NN, e.g. motorcar
2. AN, e.g. high-court
3. PrepN, e.g. undergraduate

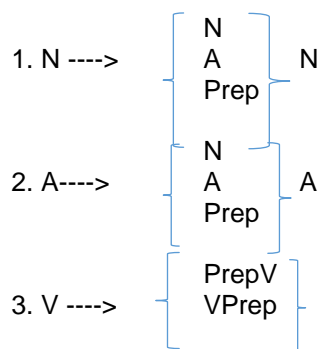
Adjectives:

4. NA, e.g. world-wide
5. AA, e.g. short-lived
6. PA, e.g. out-spoken

Verbs:

7. PrepV, e.g. upload, download
8. Vprep, e.g. take away, catch up

The formation rules are usually written as re-write rules, such as:



In the present study we investigate the compound formation rules which are active in Kisukuma.

## 6. METHODOLOGY

The researcher used a purposive sampling technique to select eight (8) participants. These people were selected because they are not likely to be influenced by other language contact and are proficient in Kisukuma. The field research was done in the Kasungamile village in Sengerema district, in Mwanza, Tanzania. The target population of the study were adult native speakers aged from 35 to 70 years from the Sukuma tribe. The study used interviews, focus group discussions and documentation to get the required information about compound words and their meanings. Moreover, descriptive research

design was employed which enabled the researcher to identify the types and analyse the formation of compound words in Kisukuma. Also, the collected data were analyzed using morphological analysis presented in the usual morphology textbooks (e.g. Katamba and Stonham or McCarthy). The classification of data into word categories assisted the researcher to identify types and formation rules as stated in the objectives of the study.

## 7. RESULTS AND DISCUSSION

The section presents results and discussion on compound words in Kisukuma following the specific objectives.

### 7.1 Types of Compound Words Based on the Semantics

Semantic compounds are endocentric, exocentric and copulative compounds. The findings found from documents indicate that semantically, both endocentric and exocentric compounds are demonstrated in Kisukuma. We did not find copulative compounds in the collected data.

#### 7.1.1 Endocentric compounds in Kisukuma

Through documentation review, the findings of the study indicate that Kisukuma has some endocentric compounds. As stated earlier, an endocentric compound is a compound word that comprises of two words of which one is the head that determines the meaning of the entire compound; and the other one becomes the modifier. Thus, the headword determines the word category of the entire compound and the modifier provides extra information to the compound word. Some endocentric compounds found in Kisukuma are presented in Table 1.

It is noticeable from the data in Table 1 that all compound words presented in the table are left-

headed compound words. This simply means that most endocentric compounds in Kisukuma are left-headed. For example, during the interview an interviewee explained that the word “bhabhabhuko” originated from two words “father such as *bhabha* ‘father’ and *bhuko* ‘in law’. From the finding, the word *bhabha* is the head and it is on the left-hand side of the compound. On the other hand, the word *bhuko* “in law” is the modifier which gives extra information about the compound. This is also observed in the compound *mayubhuko* ‘mother in law’. This compound word generated from noun *mayu* “mother” which is the head of the compound and it is on the left side of the compound. The second part of the compound has the noun *bhuko* ‘in law’ which modifies the compound as it gives extra information of the compound.

Data in Table 1 also indicate that in Kisukuma the leftmost component of the compound determines the word category of the compound. For instance, the compound noun *nokobhuko* ‘your mother-in-law’ is generated from the word *noko* ‘mother’ which is the head which determines the word category of the compound and is modified by the word *bhuko* ‘in law’.

The same relationship applies to the word *ninabhuko* ‘his/ her mother-in law’ generated from *nina* ‘his/her mother’ and *bhuko* ‘in law’. The word *nina* is the head of the compound that determines the word category of the compound. Thus, endocentric compounds in Kisukuma have heads which determine the word category of the compound. The same applies to the compound word *busigabulala* ‘fermented sorghum’ which is created from the noun *busiga* ‘sorghum’ and nominalized verb *bulala* ‘kept in water overnight’. The first part of the compound is the head and the modifier is on the second part. Hence, the combination of the two elements that build up the compound word contributes to the meaning of the entire compound.

**Table 1. Some endocentric compound words in Kisukuma**

Words forming a compound	Word 1 meaning	Word 2 meaning	Compound formed	Compound meaning
bhabha + bhuko	Father	in law	bhabhabhuko	father in law
mayo + bhuko	Mother	in law	mayobhuko	mother in law
noko + bhuko	Mother	in law	nokobhuko	your mother in law
nina + bhuko	Mother	in law	ninabhuko	his/her mather in law
Busiga + bulala	sorghum	kept in water overnight	busigabulala	fermented sorghum

Source: Field Work (2022)

**Table 2. Exocentric compound words in Kisukuma**

Words forming a compound	Word 1 meaning	Word 2 meaning	Compound formed	Compound meaning
<i>Kishimbe + nzobe</i>	Despise	Donkey	<i>kishimbenzobe</i>	proud
<i>Kitanga + fugo</i>	early	cooking pot	<i>kitangafugo</i>	early evening star
<i>Nyango + nkoma</i>	Door	Stick	<i>nyangonkoma</i>	Traditional medicine
<i>Shilungu + ming'hwa</i>	Chief's decoration	Thorn	<i>Shilunguming'hwa</i>	An animal
<i>Nzoka + ihenge</i>	Snake	Squinting	<i>nzokaihenge</i>	Arrogance
<i>Ishisha + ng'holo</i>	Reach	Heart	<i>Ishishang'holo</i>	Fearless
<i>Inya + mlwizwi</i>	Shit	In well	<i>inyamlwinzi</i>	Dangerous situation
<i>Igonda + nkila</i>	Fold	Tail	<i>igondankila</i>	Worry
<i>Igwa + lemi</i>	Fall	Sun	<i>Igwalemi</i>	heavy task
<i>Ngaya + bula</i>	Lack of	Intestine	<i>Ngayabula</i>	Small stomach
<i>Makono + hasi</i>	Hands	Down	<i>Makonohasi</i>	Cultivation season
<i>Ndola + lemi</i>	who looks	Sun	<i>Ndolalemi</i>	lazy person
<i>Nkongga + lyochi</i>	Waylay	Smoke	<i>Nkongalyochi</i>	lazy person

Source: Field Work (2022)

These findings agree with Lusekelo's [11] findings in relation to compound words in Kiswahili. He notes that Kiswahili has endocentric compounds which have heads that determine the word category of the compound. These findings are also in line with Jameson's [21] findings which reveal that in Bisa, the endocentric compounds identified are left-headed. Other studies that support the findings in our study are those on Kihehe [28] and Ruhaya Ilonga, [29].

### 7.1.2 Exocentric compounds in Kisukuma

Through the documentary review, the researcher found some exocentric compound words in Kisukuma. These are compound words which are headless. Exocentric compounds do not contain an element that functions as the semantic head which is modified by the non-head element. This means the meaning of a compound is external to its constituents and the compound does not contain a head and modifier. Some exocentric compounds found in Kisukuma are presented in Table 2.

The data in Table 2 indicate that in most cases exocentric compounds found in Kisukuma are names of things, behaviour or condition. The data in Table 2 reveals that when two words combine, a new word is formed with a new meaning which is not similar to the meanings of its constituents. The new meaning cannot be predicted from the two words forming the compound. Consequently, the exocentric compounds are headless, they do not have heads that dominate the whole compound. For

example, in the discussion, some participants argued, the word *makonohasi* 'cultivation period' is generated from *makono* 'hands' and *hasi* 'down'. Two things may be noted here: the word does not have a head that dominates the compound and the meaning can not be predicted from the two component parts.

Similarly, this is observed in the compound *ngayabula* 'small stomach'. This compound word is generated from the verb *ngaya* 'lack of' and the noun *bula* 'intestine'. The compound does not have a head that determines the word category of the compound and the meaning of it cannot be predicted from the component parts. The same also applies to the other examples: e.g. the compound noun *ndolalemi* "lazy person" is generated from the word *ndola* (N) 'who looks' and *lemi* (N) 'sun'. The same relationship applies to the word *ndolalemi* 'lazy person' generated from *ndola* (N) 'who looks' and *lemi* (N) 'sun'. These examples show that Kisukuma has quite a few exocentric compounds.

The findings from the study differs from what is discussed by Luhende [12: 41] who claims that Kisukuma is an endocentric language focusing only on noun + noun compound. The findings from the current study provide evidence of the presence of many exocentric compounds in Kisukuma. As already noted, the findings do not differ from what has been observed in other Bantu languages, e.g. by Ilonga [29] (in relation to Ruhaya); by Lusekelo [11] (in his study of endocentric and exocentric compound in Kiswahili), and by Kisoso [28], in his study of compounds in Kihehe.

### 7.1.3 Types of Kisukuma compound words based on word categories

This part presents types of Kisukuma compound words based on grammatical function. From the study, the findings revealed one functional type of compound words in Kisukuma which are compound nouns. The analysis of the said compound words comprises morphological and syntactical patterns. The morphological pattern includes a noun class system in which the compound noun belongs whereas the syntactical

pattern the sequential order of the words forming the compound. Table 3 illustrates some Kisukuma compound nouns under the noun class system.

The data in Table 3 indicate that in most cases compound nouns found in Kisukuma belong to noun classes 2, 5, 7, 9, 11 and 14. Moreover, the findings revealed that the compound nouns collected are names of things, behaviour and conditions.

**Table 3. Kisukuma compound nouns under noun class system**

Class	Pre-prefix	Prefix	Stem	Compound noun	Compound meaning	
2	a-	m-	lya	m:lyakado	Small stomach	
		βa-	Sinza	βa:sinzalugutu	witches	
		βa-	Tula	βa:tulabujiku	witches	
		βa-	Sha	βa:shamigelo	witches	
		βa-	tena	βa:tenamita	witches	
3	u-	βa-	konya	βa:konyalume	loiterers	
		m-	twe	m:twendimu	arrogant	
5	i-	li-	Pelanya	i:pelanyabanhu	Annoying	
			gonda	i:gondankila	Worrying	
			goba	i:gobanva	Hunger period	
			shisha	i:shishang'holo	fearless	
			sunga	i:sungang'olo	worrying	
			gwa	i:gwalemi	heavy task	
			mala	i:malandagu	incurable disease	
			bisa	i:bisabageni	place name	
6	a-	ma-	kono	ma:konohasi	cultivation period	
			ki-	lamba	ki:lambalume	loiterer
			ki-	tanga	ki:tangafugo	early evening star
			ki-	mila	ki:milanzoka	bird eating snakes
7	i-	ki-	byaja	ki:byajabhagumba	a man with strong sexual power	
			9	i-	n-	kanya
kunga	n:kungalyochi	Lazy person				
yangongo	n: yangonkoma	Traditional medicine				
dola	n:dolalemi	Lazy person				
11	u-	lu-	twe	n:twendimu	arrogant	
			pama	Lu:pamandogossa	A person who can do an impossible thing	
14	u-	βu-	kondwa	Lu:kondyanva	Harvesting period	
			hemeja	Lu:hemejanzengo	Something that frightening	
			sigajika	βu:sigabulala	Fermented sorghum	
			jiku	βu:jikung'waka	The night is unpredictable	

Source: Field Work (2022)



### 7.1.3.1 Class 1 and Class 2

The findings justify the presence of Kisukuma compound nouns under Class 1 and 2 that represent human beings having the noun class prefix *mu-* in noun class 1 and prefix *βa-* in noun class 2. For instance, during the interview, participants provided words such as *mtwendimu*, *'batulabujiku* and *βasinzalugutu*. The finding showed that the noun class 1 prefix *m-* can be attached to the noun *twe* combined with the adjective *ndimu* to form a compound noun *mtwendimu* 'arrogant'. On the other hand, the noun class 2 prefix - *βa-* with the augment -*a-* can be attached to the verb *sinza* to form a compound noun *βasinzalugutu* or *aβasinzalugutu* 'witches'. The researcher also went further into observing the syntactic function of compound nouns in sentences. A compound noun *'batulabujiku* 'witches' used as a subject in 28).

#### a. *Batulabujiku balibita.*

*Ba – tulabujiku- ba- li- bita*  
2PL-witches-AgrS-PRES- pass  
Witches are passing.

#### b. *aBashamigelo Batadimilwe.*

*a-Ba- shamigelo- Ba-ta- dimilwe.*  
Aug-2CL-witch-AgrS-NEG- caught.

The witches did not catch.

### 7.1.3.2 Class 5 and Class 6

The data in Table 3 revealed the occurrence of Kisukuma compound nouns under noun class 5 that represent augmentations and noun class 6 marking the plurality of the compound noun. For instance, the noun class 5 prefix *i-* attached to the verb *goba*'withhold' that combined with the noun *nva*'dog' to form the compound noun *igobanva* 'hunger period'.

### 7.1.3.3 Class 7

The noun class 7 denote objects such as inanimate, as well as the manner and style of something. The noun class 7 take the prefix *ki-* to indicate the singularity. From the study, the findings revealed that in Kisukuma there are some compound nouns that fall under this class. For instance, the verb *mila* 'swallow' nominalized with the noun class prefix *ki-* then combined with the noun *nzoka*'snake' to form a compound noun *kimilanzoka* 'a bird that swallows snakes'.

### 7.1.3.4 Class 9

Noun class 9 is based on the concepts of animals, people, body parts, tools, instruments and household effects. Thus, in Kisukuma compound nouns under this class attached with the prefix *n-* as in compound noun *nkanyabilu* 'seducing person', *nyangonkoma* 'traditional medicine' *ndolalemi* 'lazy person', *nzokaihenge* 'arrogant'. Some of the compounds are used as a subject in 30).

30).

#### a. *Unkanyabilu waajile.*

*U- n- kanyabilu – wa-a-jile Ng'wanza.*  
Aug-9SL-seducing person- AgrS-PAST- gone- Mwanza.

*Ukanyabilu* has gone to Mwanza.

#### b. *Unzongaihenge wazumalika*

*U- n- zokaihenge- wa- a- zumalik- a*  
Aug-9SL- arrogant person- AgrS- PRES- dead- FV

*Unzokaihenge* is dead.

It should be noted that *Unkanyabilu* and *Unzokaihenge* describe some behaviour; sometimes people with such behaviour may be referred to as *Nkanyabilu* and *Nzokaihenge*.

### 7.1.3.5 Class 11

The noun class 11 denotes objects or things which are long or thin, languages, body parts and others. The findings indicate some compound nouns that fall under this class include compound nouns *lupamandogosa* "a person who can do impossible things", *lukondyanva* 'harvesting period' and *luhemejanzengo* 'something that frightens'. All the three-compound nouns are attached with the noun class prefix *lu-*,

### 7.1.3.6 Class 14

This class denotes abstract nouns as well as mass nouns. The noun class prefix *-bu-* with the argument *-u-* belongs to this class. Kisukuma has compound nouns *βu:sigabulala* 'fermented sorghum' and *βu:jikung'waka* 'the night is predictable' that belong to this class.

## 7.2 The Formation of Compound Words in Kisukuma

To identify compound words in Kisukuma, the researcher employed two methods of collecting data. The methods included documentation review and focus group discussions with

Kisukuma native speakers in Sengerema district. The findings assisted the researcher to recognize the structure of Kisukuma compound words under word structure theory. Thus, the analysis of the structure of the elements forming compound words in Kisukuma follows the Context-Free Word Structure Rule under Word Structure Theory. The theory consists of a set of contexts-free rewriting rules in which Kisukuma has various formations of compound words. In Kisukuma, the researcher observed that compound words are formed from three different word categories including nouns, verbs and adjectives. However, compound words made of noun + noun and verb + noun are more productive in Kisukuma. This correlates with a

Context Free Word Structure Rule under Word Structure theory by Selkik [18].

### 7.2.1 Compound words from N + N combination

The researcher found that some compound words in Kisukuma are constructed by the combination of noun + noun. The result from the combination (noun + noun) generates compound nouns which are new words with new meanings. For example, participants provided words like *bujikung'waka*, *nyangonkoma*, and *ndolalemi*. The combination of noun + noun that generates compound nouns in Kisukuma is illustrated in 21).

- 21) a. *bujiku* (N) + *ng'waka* (N) → *bujikung'waka* 'the night is Unpredictable'  
*bujiku* 'night'  
*Ng'waka* 'a year'
- b. *nyango* (N) + *nkoma* (N) → *nyangonkoma* 'a traditional medicine'  
*nyango* 'door'  
*nkoma* 'stick'
- c. *ndola* (N) + *lemi* (N) → *ndolalemi* 'lazy person'  
*ndola* 'one who looks'  
*lemi* 'sun'
- d. *makono* (N) + *hasi* (P) → *makonohasi* 'cultivation period'

*makono* 'hands'

*hasi* (*ha-* class 16 locative prefix);

*-si* 'ground; down'.

The formation of compound words in 21 may be captured by the following formation rule:

$$N + N \longrightarrow \left\{ N \right\}$$

This is a general rule that does not capture the details of each of the compound noun formed. Specifically, in Kisukuma, as in Bantu languages generally, each noun belongs to a noun class; most noun classes are marked by prefixes. In Kisukuma, as shown in Table 3, noun stems may be preceded by two elements: preprefix (or augument) and prefix. It is therefore important to note that the structure of the compound is a combination of affixes and root/stem. For example, the compound noun *nyangonkoma* 'traditional medicine' (example 21b above) is in noun class 9. It takes the class prefix *n-*, and both stems *-yango* 'door' and *-koma* 'stick' have noun class 9 prefix *n-* attached to them *n-yango* and *n-koma*. The two fully-formed words forming compound noun *nyangonkoma* share the same noun class 9 prefix *n-* to which the resulting compound belongs. Another example, *makonohasi* 'cultivation period' is formed by *makono* and *hasi*. The prefixes here are *ma-* (class 6) and *ha-* (locative prefix not indicated in Table 3). The compound *makonohasi* is formed by combining two fully-formed words.

It should be noted that in all compound nouns identified in the data collected, a compound noun belongs to the noun class of the leftmost element.

### 7.2.2 A compound word from N + V combination

Through documentation review, the findings of the study indicate some compound words formed from a combination of a noun and a verb. The result from this combination generates compound nouns which create new words with new meanings. This is also evidenced with some participants in the discussion as they mentioned words like *ngakakubonwa*, *busigabulala*, and *makonomalonja* (**Group Discussion 2**). The combination of noun + verb that generate compound nouns in Kisukuma are illustrated in 22):

22) *ngaka* (N) + *kubonwa* (V) → *ngakakubonwa* 'pangolin'  
*n-gaka* 'frightening creature'  
*kubonwa* 'to be seen'

The formation rule for compound words in 22 is stated as follows:

N + V → { N }

The compound noun *ngakakubonwa* 'pangolin' is formed by the combination of two words from different word categories. The first is a noun and the second is an infinitival verbal form which is taken to be a nominalized verb in Bantu linguistics (it belongs to noun class 15, the class of infinitives). Each word carries its own meaning. However, the combination forms a new word with a new meaning.

### 7.2.3 Compound words from V + N with noun class 5 prefix i-

Through documentation review, the findings of the study indicate some compound words constructed by the combination of verbs and nouns. The result of the combination between verb and noun forms compound nouns which generate new words with new meanings from their constituents. The combinations of nouns and verbs that form compound nouns in Kisukuma are presented in example 23.

23) a. *i+ goba* (V) + *nva* (N) → *igobanva* 'hunger (a season)'  
*goba* 'withhold'  
*nva* 'dog'

b. *i+ pelanya* (V) + *banhu* (N) → *ipelanyabanhu* 'an annoying thing'  
*pelanya* 'annoy'  
*banhu* 'people'

c. *i+gonda* (V) + *nkila* (N) → *igongankila* 'worry'  
*gonda* 'fold'  
*nkila* 'tail'

d. *. i+ ngwa + lemi* → *ingwalemi* 'a heavy task'  
*ngwa* 'fall'  
*lemi* 'sun'

e. *i + mala* (V) + *ndagu* (N) → *imalandagu* 'incurable disease'  
*mala* 'finish'  
*ndagu* 'treatment by divination'

The examples in 23) above present compound words which are the results of the combination of words from two different word categories. A verb comes first in this combination. In example 23a), a compound noun *igobanva* 'hunger (season)' is the combination of the verb *goba* 'withhold' and the noun *nva* 'dog' resulting in a different meaning. Likewise, in the compound noun *igondankila* "worry", the compound is formed from the combination of the verb *gonda* 'fold' with the noun *nkila* "tail".

Let's consider the elements that create a compound in noun class 5. In each of the compound words in 23, there is a prefix *i-* attached to the initial position of each verb root that is combined with a noun to form a compound noun. The noun class 5 prefix *i-* is attached to the verb to nominalize it. The same prefix determines the noun class to which the whole compound word belongs.

In 23a), the verb *goba* 'withhold' is prefixed with the noun class 5 prefix *i-* to form a nominalized verb '*igoba*'. The nominalized verb *igoba* is then combined with the class 9 noun *nva* to form a compound noun *igobanva*. The two fully-formed words form a compound word whose head is a noun allowing the noun class 5 prefix *i-* to introduce the whole compound.

In example 23b), the compound noun *ipelanyabanhu* 'annoying thing' is constructed by the verb *pelanya* 'annoy' and the noun *banhu* 'people.' In this formation, the noun class 5 prefix *i-* attaches to the verb *pelanya* to form *ipelanya*. It then combines with the class 2 noun *ba-nhu* to form a class 5 compound noun *ipelanyabanhu* prefixed with the noun class 5 prefix *i-*. The same occurs in example 23c) with the compound noun

*igondankila* which is formed from the verb *gonda*. The verb *gonda* 'fold' combines with class 9 noun *nkila* 'tail' after it has been nominalized by the prefix *i* to form a compound noun *igondankila* 'annoying thing'. The two fully formed words form a compound word whose head is a nominalized verb allowing the derivational morpheme *i-* to introduce the whole compound in noun class 5. This implies that in Kisukuma, compound nouns are also formed from verbs and nouns. Also, in almost all cases of such a combination, the verbs are nominalized to fit into the compound word.

#### 7.2.4 Compound words from V + N with other noun class prefixes

Apart from the compound nouns with noun class 5 prefix *i-* which do not feature in the second element of the compound, the findings from the documentation review indicate that in Kisukuma, there are compound nouns of the same combination that have other nominal prefixes. During the focus group discussion, participants presented words like *batulabujiku*, *basinzalugutu*, *kibyajabagumba*, and *kimilanzoka*. These compound words are analyzed and presented in 24.

(24) a. *ba-tula* (V) + *bu-jiku* (N) → *batulabujiku* 'witches'

*batula* 'beaters'  
*bujiku* 'night'

b. *ba-sinza*(V) + *lu-gutu* (N) → *basinzalugutu* 'witches'

*basinza* 'Passersby'  
*lugutu* 'Fence'

d. *ki-byaja*(V) + *ba-gumba* (N) → *kibyajabagumba* 'a sexually strong man'

*kibyaja* 'who causes to deliver/impregnates'  
*bagumba* 'barren women'

e. *ki + mila* (V) + *nzoka* (N) → *kimilanzoka* 'a kind of bird'

*kimila* 'which swallows'  
*nzoka* 'snakes'

For instance, the compound word *batulabujiku* 'witches' is formed from the verb *tula* 'beat' that is nominalised with the noun class 2 prefix *ba-* which denotes the plural forms of human. Then the resulting noun is combined with the class 14 noun *bu-jiku* 'night' (with noun class 14 prefix *bu-*) to form a compound noun *batulabujiku* 'witches'. The same applies in the compound noun *basinzalugutu* 'witches' which is formed from the verb *sinza* 'pass' which is nominalised with the noun class 2 prefix *ba-* and combines with a class 11 noun *lu-gutu* 'fence' (with noun class 11 prefix *lu-*) to form a noun class 2 compound word.

Likewise, the compound word *kibyajabagumba* ‘a sexually strong male’ is formed from the verb *byaja* ‘cause to deliver/impregnate’ which is nominalised with the noun class 7 prefix *ki-*. Then the verb is combined with the class 2 noun *ba-gumba* (with noun class 2 prefix *ba-*) to form a compound word. This compound word belongs to noun class 7.

The same situation is observed by Kisoso [28]; in his study on Kihehe compound words, he identifies some Kihehe compounds formed from V+N combinations but lacking agreement on noun class prefixes. For example, Kihehe compound word *madindamtwe* ‘terminate’ formed from the verb *dinda* ‘close’ and the class 3 noun *mtwe* ‘head’ has a noun class 6 prefix *ma-* attaching to the verb and making it belong to class 6. The same holds for Kiswahili; Lusekelo [11], in his study, shows that there is no agreement between the nominalized-verb head and the noun modifier forming the compound noun like *mfanyabiashara* ‘trader’ from the verb *fanya* ‘do’ and the noun *biashara* ‘trade’. It can generally be argued that compound words formed from V+N lack agreement as differentiated from other compound nouns. This trait is therefore not unique to Kisukuma as it is found in other Bantu languages including Kiswahili and Kihehe.

### 7.2.5 A compound word from N + Adj combination

Through documentation review, the findings of the study indicate some compound words with adjectives. The findings identified a few Kisukuma compound words generated by the combination of noun + adjective the resultant is a compound noun. However, this formation is not very productive. The collected compounds are illustrated in 24);

- 24) a. *ntwe* (N) + *ndimu* (Adj) → *ntwendimu* ‘arrogant’  
*ntwe* ‘head’  
*ndimu* ‘hard’

In example 23 the structure of compound words is

$$N + \text{Adj} \longrightarrow \left\{ \begin{array}{c} N \end{array} \right\}$$

The data presented in section 4.2.4 provide evidence that in Kisukuma the formation of compound adjectives from the combination of nouns with adjectives is applicable. The compound adjective *ntwendimu* ‘arrogant’ is formed from the combination of the class 3 noun *ntwe* ‘head’ and the adjective *ndimu* ‘hard’ which agrees with the noun *ntwe* which is formed from the root *-twe* and noun class 3 prefix *m-* which assimilated to */t/* changing it into *n-*. The same happens with the adjective *dimu*. The agreement feature is reflected in this combination due to the inherent nature of the agreement between nouns and their modifiers including verbs and adjectives. The same situation is realized in the study of word formation in Kihehe done by Kisoso [28].

### 7.2.6 A compound word from Nominalized-V + Adj combination

Through documentation review, the findings of the study indicate that some Kisukuma compound words are formed by the combination of a nominalized verb + adjective. This formation of compound words is not as productive as the combination of noun + adjective. The result of combining nominalized verbs with adjectives creates new words and carries new meanings as illustrated in the examples in 25.

- 25) a. *m+ lya* (V) + *kado* (Adj) → *mlyakado* ‘small stomach’  
*mlya* ‘one who eats’  
*kado* ‘small’  
 b. *manyha* (V) + *kenda* (Adj) → *manyhakenda* ‘a ninth chief’s wife’  
*manyha* ‘meet’  
*kenda* ‘nine’

The structure of the compound in 25 is stated in the following formation rule:

$$V + Adj \left\{ \begin{array}{c} N \\ \end{array} \right\}$$

The compound words in 25b) present a unique trait in which a verb combines with an adjective to form a compound noun which is not either of the two. The resulting compound word in 25b) is a noun though none of the elements forming it is a noun. The verb receives a noun class 1 prefix *m-* in 25a) making it a noun which combines with an adjective to form a noun. In 25b) the verb stem does not receive any nominalizing morpheme but yet it forms a noun.

The other unique feature in the compound words in 25 is that the verb and an adjective do not agree even after the noun is nominalized in class one. For instance, the adjective in 25a) receives the noun class 12 prefix *ka-* (diminutive prefix)

which is different from the noun class 1 prefix *m-* which is attached to the verb *lya*.

The presented data provide evidence of the occurrence of compound nouns with the combination of noun + adjective and nominalized-verb + adjective. However, the compound words in such a combination are few in Kisukuma. The finding is in line with [24] in his study on the compounding process in Kinyakyusa. Joseph notes that, in Kinyakyusa, the verb + noun and noun + noun combination is much more productive in compounding than the verb + adjective. The findings also, revealed that compound words in Kisukuma are generated from different word categories. However, the most productive patterns in the formation of compound words are nouns and verbs. The data provided in this study indicate that Kisukuma shows the following compounding patterns:

- a) N + N → e.g. *bujiku+ng'waka-->bujikung'waka* 'the night is unpredictable'
- b) N+ V → e.g. *busiga + bulala--> busigabulala* 'fermented sorghum'
- c) N-V+ N → e.g. *igonda + nkila --> igondankila* 'worry'
- d) N + Adj → e.g. *ntwe + ndimu --> ntwendimu* 'arrogant'
- e) N-V + Adj → e.g. *manhya +kenda--> manhyakenda*'a ninth chief's wife'

The data shows that all compound words investigated so far in Kisukuma are compound nouns.

### 7.2.7 Words found in many compound words

Through documentation review, the findings of the study indicate that in Kisukuma, a single word can combine with different words to form different compound words. Some of these words are '*manhya*' 'meet', *masala* 'intelligence; and *bhuko* 'in law'.

### 7.2.8 Compound words formed from the word *bhuko*

In Kisukuma, the class 14 noun *bhuko* 'in law' (a state) is combined with various words to form different compound words. The compound words created from *bhuko* are presented in 27;

- 26) a. *bhabha* (N) + *bhuko* (N) → *bhabhabhuko* 'father in law'  
*bhabha* 'father'  
*bhuko* 'in law'
- b. *Mayu* (N) + *bhuko* (N) → *mayubhuko* 'mother in law'  
*Mayu* 'mother'  
*Bhuko* 'in law'
- c. *noko* (N) + *bhuko* (N) → *nokobhuko* 'your mother in law'  
*nook* 'mother'  
*bhuko* 'in law'
- d. *nina* (N) + *bhuko* (N) → *ninabhuko* 'his/her mother in law'  
*nina* 'mother'  
*bhuko* 'in law'

As observed in example 27 above the same word *bhuko* (N) "in law" combines with other words to create compound nouns. However, in this formation, all combinations observed are from the word category noun. For example, the compound word *mayubhuko* "my mother-in-law" IS formed from the class 1 noun *mayu* 'mother' combined with the class 14 noun *bhuko*. Similarly, the compound noun *nokobhuko* "your mother-in-law", is created from the class 1 noun *noko* (N) 'your mother' and the noun *bhuko*.

## 8. CONCLUSION

This study was conducted to find out the types of compound words and their formation in Kisukuma language. The research on Kisukuma compounds, however, is still on-going. In spite of this, study has identified the formation of compound words in Kisukuma involving three word categories, namely, nouns, verbs and adjectives. We have been able to identify compound nouns only in the data collected. The study further shows the the formation rules involve the following combinations: N + N, Nominalized-V+N, N+Nominalized-V, N + A, Nominalized-V+ A. In addition, we have shown that, apart from endocentric compounds noted by Luhende [12], Kisukuma has many compounds that are exocentric. However, the study did not find examples of copulative compounds.

Finally, we need to note that many Kisukuma compound nouns that are exocentric have metaphorical interpretations. As they have metaphorical interpretations, some native speakers of Kisukuma are unfamiliar with their meanings. Detailed investigation of this phenomenon is needed, which may be go hand in hand with research into other areas of the Kisukuma lexicon. In view of this, it is urgent that a Kisukuma dictionary be compiled before many words or expressions are completely lost.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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