

# A Morphological Classification of Kiswahili

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## **Abstract**

*Many scholars have classified Kiswahili as a member of Niger-Congo family based on the genealogical classification of Bantu languages. This system determines languages genetic relatedness by use of lexicostatistics (Schadeber, 1986). For years, this classification system has guided linguists and anthropologists to understand, analyse, compare and group languages. It has also aided the understanding of the births and deaths of languages. However, this classification system tells us little about the structural relatedness of genealogically grouped languages. This relatedness is only captured by the Morphological system. Although this system has been in existence since 1800 before the genealogical classification, it has least been used to classify and describe many languages of the world. Few Kiswahili scholars have classified Kiswahili morphologically as agglutinative. However, their classification has not put into consideration other morphological classification types that can be deduced from Kiswahili morphological structure. The objective of this paper therefore, is to do an in-depth morphological classification of Kiswahili based on secondary data collected from two Kiswahili prose texts, namely: “Shamba la Wanyama” (translation of animal farm) and “Siku Njema”.*

**Key words:** *Morphological classification, morphoclass, agglutinative, isolating, polysynthetic, fusional, oligosynthetic.*

## **1.0 Introduction**

Language classification systems arouse from linguists and anthropologists need to understand the languages' relatedness in origin, dispersion and linguistic structure. Three classification systems have so far been developed to address this need. The first is the genealogical classification system which groups languages according to their common ancestry and has been used to group languages into families (Setälä as quoted in



Michalove et al, 1998: 454) and Guthrie, Greenberg, Sebeok, Bennet & Sterk, Bendor-Samuel & Hartell as quoted in Olson (2004).

The second is the areal classification system which groups languages according to their geographical distributions and provides analyses on how these languages have influenced each other linguistically across a geographical span. A good example of the application of this system is classification of world languages with special emphasis on Asian languages done by Adelung from 1806-1817 (Michalove *et al.*, 454).

Linguistic typology is the third system which uses morphological, syntactic and tone features to classify languages. The morphological system groups and defines languages according to their morphological structure. This system has classified languages as agglutinative, fusional, polysynthetic and oligosynthetic (Pirkola, 2001:336-338 & SIL <http://www.sil.org/linguistics> Retrieved on November 09<sup>th</sup> 2007). The syntactic classification groups languages according to the order in which thematic role words of subject, object and verb (S/O/V) take in a language's syntactic structure. The tonal classification system groups languages according to their tonal features and how these features assume phonemic, morphemic and syntactic functions. These different language classification systems indicate that, man is continually searching for knowledge on human languages in order to understand and describe their genealogical, geographical and linguistic relatedness. This paper focuses on analysing and describing Kiswahili language from a linguistic perspective by focusing on its morphological classification.

### **Morphological Classification**

Morphological classification seeks to define and group languages according to their morphological structures. It has two approaches, the traditional and the contemporary. Each of these approaches is discussed below.

*The traditional approach* looks at specific morphological characteristics and defines languages after those characteristics. With this approach, languages have been grouped as isolating, agglutinative, fusional, polysynthetic and oligosynthetic. This approach is idealistic because it looks at these classifications as distinct and independent of each other. This compartmentalization of languages morphologically does not reflect real languages' morphological behaviours. One language could exhibit morphological characteristics that cut across the compartments. For example, English can be described morphologically as isolating when analysed on the basis of this sentence *he will come*, because, each word conveys a single morpheme. Likewise, it is also fusional with regard to the verb *come*. It is a single morph but has two morphemes *come* and *past tense*. We can say that the morphs carrying the two morphemes have been fused so that it is no longer possible to separate them. Equally, English could be classified as polysynthetic with regard to its word form *unmistakable*. It has three morphs; two grammatical {un-} & {-able} and one lexical {-mistake-}. Kiswahili too can be classified morphologically

more than once as exhibited by morphological analysis of the word cum clause *alimpikia* (He/she/it cooked for him/her/it). It is *agglutinative* because it has six morphs. It is also *polysynthetic* because it has a lexical morph {-pika} and four grammatical morphs {a-, -li-, -m-, & -i-} and two in the verb skeletal<sup>12</sup> morphological frame which has the root {-pik-} and bantu verb end vowel {-a}. Its frame is captured in this structural formula  $\mathbf{R_T(—)BV_{EV}^3}$ . From this example, we can also say that Kiswahili is fusional by looking at its applicative morph {-i-} in {-piki<sup>a</sup>}. It conveys two morphemes: one, that someone did the cooking which someone else ought to have done and two, that someone cooked for someone else who was the recipient of the food cooked. Table 1 shows the morphosyntactic items in this word form:

**Table 1: Morphological Analysis of the Kiswahili Word Form ‘Alimpikia’**

Morphosyntactic items	pronoun	past tense	indirect object	verb root	applicative	bantu verb end vowel
Kiswahili	a-	-li-	-m-	-pik-	-i-	-a
English	s/he/it	-ed	her/him/it	cook-	for	ϕ <sup>4</sup>

*Contemporary approach* arose due to the weaknesses of the traditional approach. Contemporary morphologists have instead analysed languages on the basis of morphological characteristic continuum within two indices namely: the *index of synthesis (IS)* and the *index of fusio (IF)* (Pirkola, 2001: 331). This approach recognises that, a language may have more than one morphoclass with certain classes dominating the structure more than the others but without one morphoclass dominating exclusively the morphological structure of a language.

*Index of synthesis (IS)* refers to the amount of affixation in a language. It calculates the degree of affixation on a continuum based on the number of morphs per word. All languages of the world fall within this continuum indicated below.

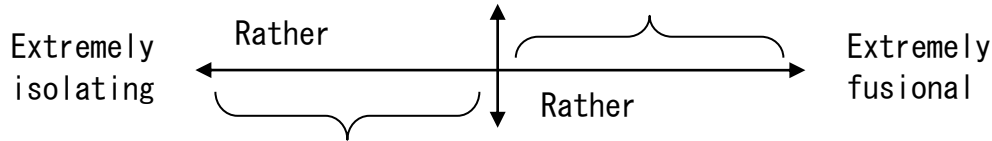
Isolating ←—————→ Synthetic

*Index of fusion (IF)* refers to the easiness or difficulty with which morph boundaries are identifiable in a word form. It refers also to the ability of one morph to encapsulate several morphemes. This index therefore, looks at how various morphs have been fused together to form a linguistic unit which carries a variety of morphemes without being able to identify any morph in the word form that is responsible for any of them. This index is represented by the continuum of agglutination and fusionality. All languages with the exception of isolating languages fall along this continuum.

Agglutinative ←—————→ Fusional

However, this paper has integrated the two approaches in the classification of Kiswahili.

Kiswahili will therefore be analysed according to a reconstituted continuum which starts from one extreme of isolation to the other extreme of fusionality.



This paper has used the two terms *rather* and *extremely* to describe varying degrees of a particular morphoclass. *Extremely* has been used to cater for greater presence of a morphoclass and *rather* to cater for the least presence.

### 3.0 Kiswahili classification

Kiswahili has been classified genealogically as a bantuphone of *sabaki* subgroup of North-Eastern Coast Bantu which is a branch of Southern group of Niger–Congo language family (Cortini-Morava, n.d; Center for World Languages (CWLs), n.d; Ogwana, 2001; Amidu, 1995: 105; Mwita, 1995: 1; Chiraghdin & Mnyampala, 1977).

The areal classification has listed Kiswahili as an East African language which has gained access to neighbouring countries within the Lake Victoria basin and Southern Africa countries (Choge, 2012; Kipacha, 2006; Ogwana, 2001; Amidu, 1995; CWLs, n.d). Currently, it is spoken in Kenya, Tanzania, Southern Coast of Somalia, Northern Coast of Mozambique and their off-shore islands. It is also spoken in Uganda, Southern parts of Ethiopia, Rwanda, Burundi, the Democratic Republic of Congo (DRC), Northern parts of Zambia, Malawi, the Comoros islands and Northwestern Coast of Madagascar. It is spreading to Southern Sudan through refugees who are returning home after living in Kenya for over two decades and also through East African community members who have gone there to set up businesses. Equally, South Sudan was admitted on March 2<sup>nd</sup> 2016 as a 6<sup>th</sup> member of the East African Community (EAC), and it is a requirement for each member to promote the use of Kiswahili in their own countries (State Department of East Africa Affairs, 2016). The East Africa community has adopted it as its official language and formed a Kiswahili Commission to promote it as a lingua franca in member states countries (Partner States, 2008). Kiswahili therefore, is a vehicular in Eastern Africa and in some parts of countries in central and Southern Africa with about 150,000,000 speakers.

Some scholars (Mgullu, 2005; Mohamed 2001) have also classified Kiswahili morphologically as agglutinative. However, this classification is narrow because, Kiswahili has other morphological characteristics which allows it to be classified in other ways morphologically. This gap in morphological classification of Kiswahili is what this paper seeks to fill.

## 4.0 Types of Morphoclasses

In this paper a Morphoclass refers to a category of languages which share similar morphological characteristics in their word forms. There are five morphoclasses which fall in two categories of namely synthetic and non-synthetic. The five morphoclasses are: agglutinative, polysynthetic, oligosynthetic, fusional and Isolating. These are the morphoclasses which this paper has based the morphological analyses and classification of Kiswahili. The discussion of the morphoclasses in each category follows.

### 4.1 Synthetic Category

Languages in this category are called synthetic because their word forms are formed by affixation (Bauer, 2006). There are two types of synthesis, one is derivational in which different types of morphs are joined to form new words and the second is relational (inflectional) in which bound morphs are prefixed or suffixed to roots or stems to perform certain grammatical functions. This category has four morphoclasses namely: agglutinative, polysynthetic, oligosynthetic and fusional. Each of them is discussed in details below.

#### 4.1.1 Agglutinative Morphoclass

This is a group of languages which form words by gluing morphs together in a sequence. Each morph carries a distinct morpheme. Classic examples are Turkish and Kiswahili. Turkish has the agglutinated word form *köpekleri* (Pirkola ibid: 337) which has the following morphs: {*köpe-*} dog; {*-ler-*} plural suffix and {*-i*}accusative suffix. An example of agglutinative word from Kiswahili is *nitakuacheni* (Walibora 2005: 61) whose morphs are:{*ni-*}first person singular, {*-ta-*} future tense marker, {*-ku-*} object marker, {*-ach-*} the root of the verb ‘*acha*’, {*-e-*} the allomorph of the Bantu verb end vowel {*-a*} and {*-ni*} the plural marker of recipient object.

#### 4.1.2 Polysynthetic Morphoclass

This is a group of languages that are agglutinative in nature, but their word forms combine lexical and grammatical morphs which at times are complete sentences. They use few words to express many ideas. Skorik, Shibatani & Fortescue (as cited in Wikipedia, <http://en.wikipedia.org/wiki/> retrieved, on 08<sup>th</sup> August 2007.) name Chukchi, classic Ainu, Western Greenlandic, Eskimo-Aleut, Yup’ik Inuit and Ubykh as examples of polysynthetic languages. In Table 2 is morphologically dissection of the polysynthetic word sentence *Tuntussuqatarniksaittengqiggtuq* from Yup’ik Eskimo .

**Table 2: Morphological Analysis of the Yup’ik Word Form**

‘Tuntussuqatarniksaittengqiggtuq’

<b>Y.Inuit</b>	Tuntu-	-ssur-	-qatar-	-ni-	-ksaite-	-ngqiggte-	-uq
<b>Gloss</b>	reindeer	hunt	FUT	say	NEG	again	3sg:IND
<b>English</b>	He had not yet said again that he was going to hunt reindeer.						

Source: Payne (1997: 28)

With the exception of the lexical morph {tuntu-} ‘reindeer’ that can stand alone, the rest are bound morphs that find complete meaning within the word form.

All Bantu languages are also polysynthetic. The Kiswahili polysynthetic word forms I have analysed in this paper expounds further the nature of polysynthesis in Bantu languages.

#### 4.1.3 Fusional languages

These are languages whose monomorph word forms are multimorphemic- that is, a single morph encodes several morphemes. It is not possible to identify the morph in the word that is responsible for a particular type of morpheme. Typical examples of fusional languages are a number of Indo-European languages (Pirkola, 2001). For instance, the {-ó} in Spanish verb *habló* ‘s/he speaks’ carries the morphemes: third person, indicative mood, singular, past tense and perfective aspect (Payne, 1997: 28). Equally, the English verb *went* and the noun *mice* are dimorphemic. The verb has the morphemes *go* and *past tense* while the noun has *mouse* and *plural*. Kiswahili too exhibits fusional in a few of its word forms of Arabic origin such as the *banati* ‘daughters or girls’ whose singular is *binti* ‘daughter or girl’ (TUKI, 2013). Analysis of the sentence word form *alimpiga* in Table 3 show that certain Kiswahili morphs are fusional in certain contexts.

**Table 3: Morphological Analysis of the Kiswahili Word Form ‘alimpiga’**

Kiswahili	Morph	a-	-li-	-m-	-pig-	-a
English	Gloss	<i>s/he/it</i>	<i>past tense</i>	<i>her/him/it</i>	<i>beat</i>	$\phi$
	Morphemes	~3sg ~cl <sub>1</sub> marker ~pronoun ~agent	~aspect ~Past tense ~perfective	~3sg ~cl <sub>1/3</sub> marker ~pronoun ~recipient	~verb root	~BV-Ev
English	Sentence	She/he/it beat her/him/it				

#### 4.1.4 Oligosynthetic morphoclass

This group of languages form words by application of minimal synthesis. They cannot be fully termed as isolating because they have elements of synthesis or fully synthetic because, they also have greater elements of isolation in their word forms. This morphoclass is at the border of synthetic and isolating languages. English is a member of this morphoclass because a number of its word forms have minimal synthesis such as in *walked* which has the verb {walk-} and past *tense* morph {-ed} and the noun phrase *Jane’s*, which has the noun {Jane-} and the possessive morph {-s}. Equally, the noun *children* has the singular noun {child-} and plural morph{-ren}. Kiswahili also exhibits some elements of oligosynthesis in some of its word forms such as in the adjective complex unit *mmoja* which has cl 1 & 3 *ngeli* marker {m-} and

the numeric adjective {-moja) ‘one’. In this paper, I have categorised any word form with two morphs as oligosynthetic.

#### 4.2 Non-Synthetic Category

Isolating languages is the only morphoclasses under this. These languages are also referred to as analytic languages. This is a group of languages whose single word encodes a single morpheme. In these languages, word order is important since word placement in a sentence determines the meaning constructed. Therefore, their syntactic rules are stricter and elaborate. Most of the Chinese and South East Asia languages belong to this group (SIL <http://sil.org/linguistic> Retrieved March 28, 2008; Pirkola 2001: 336; Payne 1997: 27). The Vietnamese sentence analysed in **Table 4** is a good example of an isolating language’s sentence:

**Table 4: Morphosyntactic Analysis of the Vietnamese Sentence *khi toi den nha ban toi chung toi bat dau lam bai***

Vietnamese	Khi	toi	den	nha	ban	toi	chung	toi	bat	dau	lam	bai
<i>Gloss</i>	<i>when</i>	<i>I</i>	<i>come</i>	<i>house</i>	<i>friend</i>	<i>I</i>	<i>Plural</i>	<i>I</i>	<i>begin</i>	<i>do</i>	<i>lesson</i>	
English	When I came to my friend’s house, we began to do lessons.											

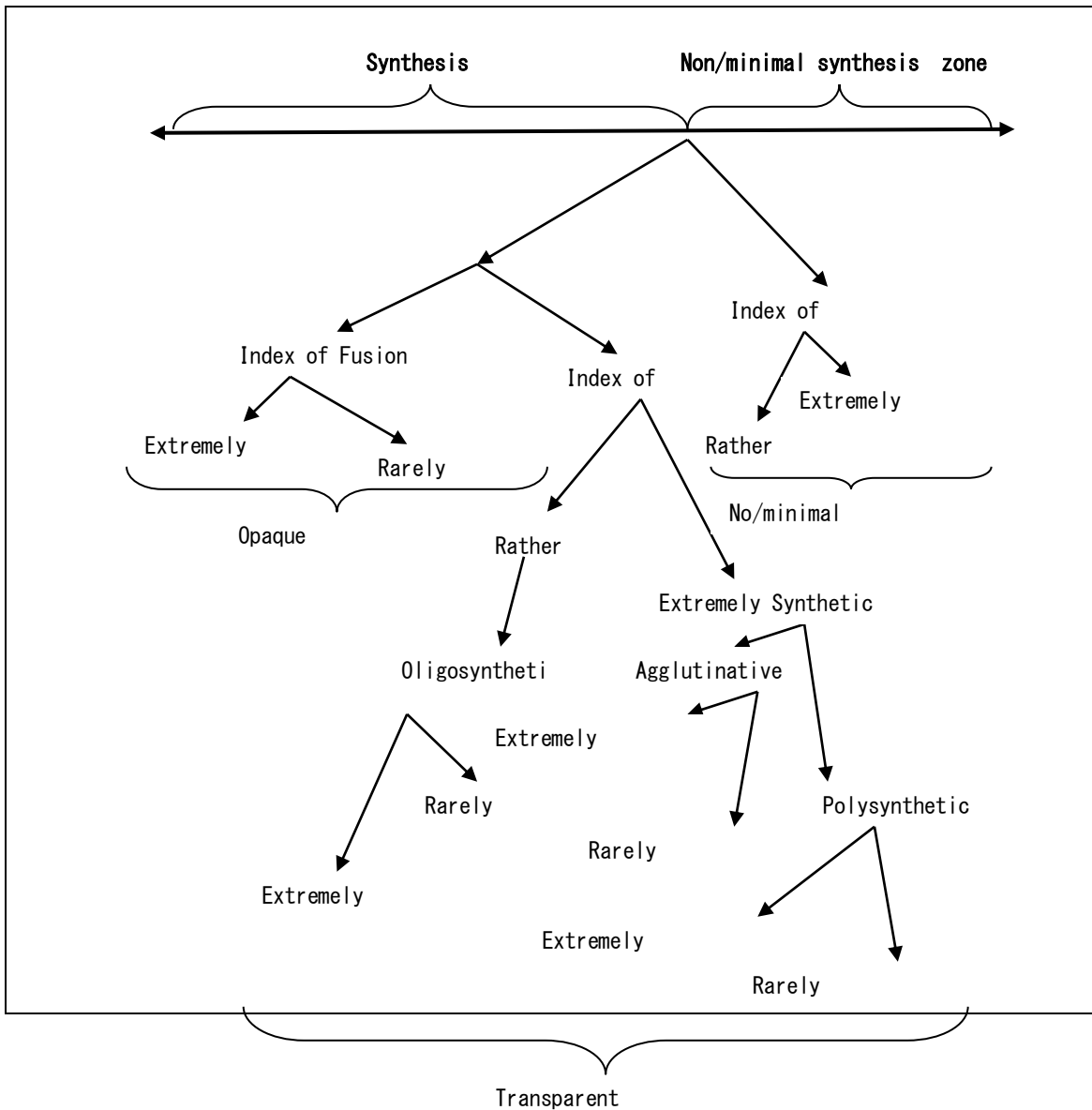
**Source:** [www.glossary.sil.org/term/isolating-language](http://www.glossary.sil.org/term/isolating-language) Retrieved in July, 22<sup>nd</sup> 2017

English is also an an isolating languages. These two sentences *Nairobi is good from far* and *Nairobi is far from good* convey different meanings by using the same words in different syntactic positions. The former means that the speaker’s analysis is based on the distance of observation and judgement making. Nairobi may not be good if the speaker is closer to it. Here, Judgement is based on what is observable. It means that Nairobi is lovable to see. The later means that there are other things the speaker is basing his/her judgement not necessarily, on what is observable. It carries a connotative meaning that some negative thing(s) is/are happening in Nairobi that may not be noticeable from far.

There are various degrees of language synthesis, isolation and fusionality as represented in Figure 1. It displays also the convergence and divergence of the various morphoclasses.



Figure 1: Synthesis-Fusional-Isolation Language Tree



**Morphological Classification of Kiswahili based on two Excerpts from *Shamba la Wanyama* and *Siku Njema* Prose Texts**

The following morphological analysis and classification of Kiswahili is based on text excerpts of hundred words each from two Kiswahili prose texts. The first text is from page 49 of *Shamba la Wanyama* a translated text done by Fortunatus Kawegere in 1988 of the prose text *Animal Farm* which was written by George Orwell in 1945. This text is

herein referred to also by the initials SLW (see Appendix 1). The second text is from page 61 of *Siku Njema* written by Ken Walibora in 2005. It is also referred to in this paper by the initials SNJ (see Appendix 2). Word forms from these two excerpts have been classified as per the morphoclasses (see Appendix 3 & 4). In this paper, data from these texts have been used to classify Kiswahili in two approaches, the first is according to the five morpho-classes and the second, is according to the three tier indices scale of *synthesis-fusional-isolation*.

## 5.0 Methodology

A hundred 100 word forms were picked consecutively from each excerpt starting from the first word form to the hundredth with skipping only proper names and repeated word forms. A word form was indicated whether it was a lexical unit (lxc), a clause (cls), a sentence (stnc) or a phrase (phr). Morphological division and identification of the number of morphs in each word form followed which made it possible to describe their morphological nature. Each word form was assigned to a morphoclass/es based on the distinctive features outlined in Table 5.

**Table 5: Distictive Features Applied in the Classification of Word forms from SLW and SNJ Excerpts**

<u>Distinctive Features</u>	<u>poly</u>	<u>agglu</u>	<u>olig</u>	<u>fus</u>	<u>isol</u>
Bound morph	+	+	+	+	-
Free morph	±	±	±	±	+
Lexical morph	+	±	±	-	±
Multimorphic	+	+	+	-	-
QMonomorphemic	-	-	-	-	+
Multimorphemic	-	±	±	+	-
<u>≧2or&lt; morphs</u>	-	-	+	-	+

After assigning word forms from the two text excerpts to the five morphoclasses, each morphoclass' number of appearances were totalled. The sum of each made it possible to evaluated Kiswahili morphological classification based on the five morphoclasses and the thri-tier index continuum of *synthesis-fusional-isolation*.

## 5.1 Quantitative Morphological Measurement of Kiswahili

Morphological classification of Kiswahili began immediately after the placement of a hundred word forms picked from each prose texts excerpts were placed in five morphoclasses. Each morphoclass' number of appearance were totalled as presented in Table 6.

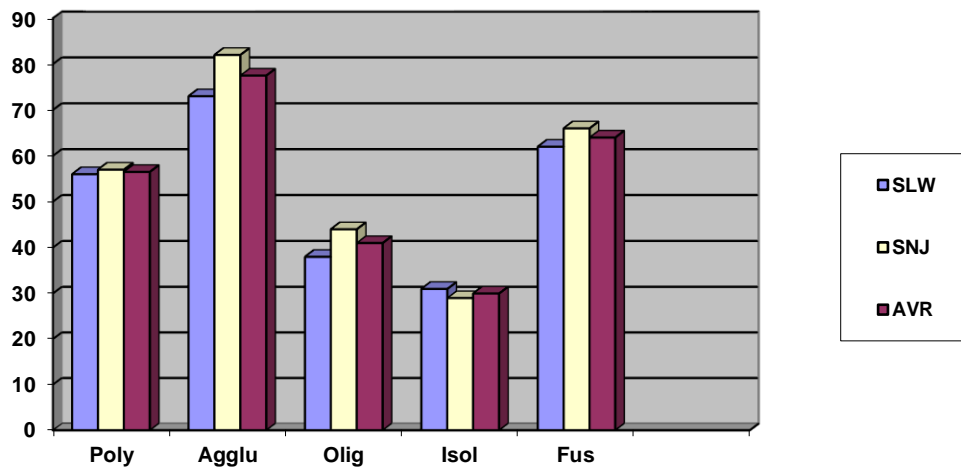
**Table 6: Morphological Classification of word forms from SLW and SNJ**

Source	Poly	Agglu	Olig	Isol	Fus	Total
SLW	56	73	38	31	62	<b>260</b>
SNJ	57	82	44	29	66	<b>278</b>
<b>Total</b>	<b>113</b>	<b>155</b>	<b>82</b>	<b>60</b>	<b>128</b>	<b>538</b>
<i>Average(AVG)</i>	<i>56.5</i>	<i>77.5</i>	<i>41</i>	<i>30</i>	<i>64</i>	<i>269</i>

**Evaluation of Morphological Classification of Kiswahili**

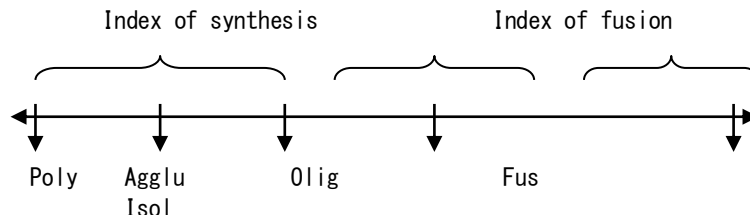
The morphoclass summaries in Table 6 prove that Kiswahili has all the five morpho-classes but in varying degrees. Kiswahili can therefore be classified in a rank order as: firstly agglutinative, secondly fusional, thirdly polysynthetic, fourthly oligosynthetic and fifthly isolating. Figure 2 presents this classification based on statistics in Table 6:

**Figure 2: Morphological Classification of Kiswahili**



On the index scale of *synthesis-fusional-isolation*, Kiswahili is mostly synthetic, moderately fusional and minimally isolating.

**Figure 3: Kiswahili Rating as per the Index of synthesis-Isolation**



### 5.3 Morphological Analysis of some Word FORMs from SLW and SNJ Excerpts

Word forms that fall in the polysynthetic, agglutinative and oligosynthetic morphoclasses are multimorphic in nature with between three and seven morphs. These word forms are clauses, sentences, and reduplicated verbs in clauses and some types of verb phrases. Table 7 gives analyses of some of the multimorphic word forms from the two texts.

**Table 7: Morphological Analyses of Multimorphic Word Forms from SLW and SNJ**

Source Text	clause, sentence, verb phrase word forms	Morphological structure of the word forms	Word forms	English Glosses
SNJ	ni-ka-mw-end- e- a	$S_M+T+O_M+V_{RT}+V_{EXT}+BV_{EV}$	nikamwendea <sup>5</sup>	I went to him/her/it
	ya-li-yo-m- pat-a	$S_M+T+R_P+O_M+V_{RT}+BV_{EV}$	yaliyompata	what got him/her/it
	wa- si- mw- on- e	$S_M+N_{EG}+O_M+V_{RT}+BV_{EV}$	wasimwone	so that they may not see. Him/her/it
SLW	a- ta-kamat-w- a	$S_M+T+V_{RT}+V_{EXT}+BV_{EV}$	(atakatwa)	= s/he/it will be caught
	ku- -m- -fany-i- -a	$INF_{NTV}+O_M+V_{RT}+V_{EXT}+BV_{EV}$	(kumfanyia)	to do for/to him/her/it
	a- -ka- ji- -ti- a	$S_M+T+R_{EFX}+V_{RT}+BV_{EV}$	(akajitia)	s/he/it tried/pretended him/her/it-self

A number of Kiswahili verbs are clausic word forms through the process of reduplication which is a phenomemon in many inflected Bantu languages such as Ekegusi (Ogechi, 2002, p. 66) and Kibukusu (Downing, 2003), Nadarajan (n.d) opines that, reduplication is a morphological process in inflected languages which is intended to create semantic forms and perform grammatical functions. Examples of these reduplicated verbs in Kiswahili picked from excerpts the two prose texts are: *Akapepesukapepesuka* (s/he/it staggeredstaggared) in SNJ and *alijizoazoa* (s/he/it liftedlifted her/him/it-self up) in SLW analysed in Table 8:

**Table 8: Morphological Structure of Un-Reduplicated and Reduplicated Verbs**

Source Text	sentence, clausal and verb phrase word forms	
	Morphological structure of the un-reduplicated and reduplicated verb word forms	
	Un-reduplicated verb <i>akapepesuka</i>	Reduplicated verb <i>akapepesukapepesuka</i>
SNJ	a- ka- pepesuk-a S <sub>M</sub> +T+ V <sub>RT</sub> + BV <sub>EV</sub>	a-ka-pepesuk-a- -pepesuk-a S <sub>M</sub> +T+ V <sub>RT</sub> + BV <sub>EV</sub> + V <sub>RT</sub> + BV <sub>EV</sub>
English gloss	s/he/it staggered	s/he/it staggeredstaggared
SLW	a- -li- -ji- -zo- -a S <sub>M</sub> +T+R <sub>EFX</sub> V <sub>RT</sub> + BV <sub>EV</sub>	a-li- -ji-zo- -a- -zo- a S <sub>M</sub> +T+R <sub>EFX</sub> V <sub>RT</sub> +BV <sub>EV</sub> +V <sub>RT</sub> + BV <sub>EV</sub>
English gloss	s/he/it lifted her/him/it-self (up)	s/he/it liftedlifted her/him/it-self (up)

Other word forms from the two texts that can be categorised as polysynthetic, agglutinated and oligosynthetic in nature are phrasal and compound in structure. The SNJ text has prepositional phrases: *kipajini* (on/in the forehead), *mdomoni* (in the mouth), *uchochoroni* (in the alley) and *puani* (in/on the nose). The SLW text has *mwanzoni* (in the beginning) and *jukwaani* (on the podium). Compound nouns too such as *mpendaraha* (squanderer) in SNJ and *Jumapili* (Sunday) fall in this category. *Mpendaraha* whose literal translation is ‘one who likes/loves pleasure’ is both a noun and adjective depending on the context of usage. **Table 9** gives the morphological structure of these word forms:

**Table 9: Morphological Structure of Phrasal and Compound Word Forms from SLW and SNJ excerpts**

Source Text	Phrasal and Compound Word Forms from SLW & SNJ that Fall within the Index of Synthesis			English Glosses
	Phrasal and compound word forms		Morphological Structures	
	word form	type		
SNJ	kipajini	Prep.phr	Ki-paji- ni CL <sub>M</sub> +R <sub>T</sub> + PREP	On/in the forehead
	mdomoni	Prep. phr	m-domo-ni CL <sub>M</sub> +R <sub>T</sub> +PREP	In the mouth
	uchochoroni	prep. phr	u- -chochoro -ni CL <sub>M</sub> +R <sub>T</sub> + PREP	In the alley/s
	puani	prep phr	Pua- ni N +PREP	On/in the nose
SLW	mwanzoni	Prep. phr	Mw-anzo- -ni CL <sub>M</sub> + R <sub>T</sub> + PREP	In the beginning
	jukwaani	Prep.phr	Jukwaa-ni N + PREP	On the podium
	mpendaraha	Comp.noun	m- penda-raha or m- pendaraha CL <sub>M</sub> + T + N or CL <sub>M</sub> + ST <sub>M</sub>	squanderer
	jumapili	Comp.Adv	Juma- pili N + ADJ	Sunday

Word forms that fall in the Oligosynthetic morphoclass are prepositional phrases formed from a free morph noun and a bound prepositional morph, nouns with overt class markers, parts of speech that are bound morphs such as possessives, interrogatives, conjunctions, adjectives and demonstratives. Examples of such words from the two texts are analysed in the Table 10:

**Table 10: Morphosyntactic Analysis of Various Oligosynthetic Word Forms from SLW and SNJ Excerpts**

Source Text	Oligosynthetic word forms from SLW & SNJ		Morphological structures	English Glosses
	Word forms	Type		
SNJ	mgeni	Noun Cl <sub>1</sub> sg	m-gen CL <sub>M</sub> + R <sub>T</sub>	visitor
	miguu	Noun Cl <sub>4</sub> pl	mi-guu CL <sub>M</sub> + R <sub>T</sub>	legs
	kikundi	Noun Cl <sub>7</sub> sg	Ki-kundi CL <sub>M</sub> + R <sub>T</sub>	group
	za	Preposition Conjunction	cum z-a CL <sub>M</sub> + R <sub>T</sub>	of/for
	wangu	Adjective (possessive)	Wa-ngu CL <sub>M</sub> + R <sub>T</sub>	mine
SLW	mbioni	Prepositional phrase	mbio-ni <sup>6</sup> N + PREP <sub>M</sub>	in the eye/see
	mmoja	Adjective (Numeral) CL <sub>1/3</sub> sg	m-moja CL <sub>M</sub> + ADJ	one
	hapo	Adjective (demonstrative)	ha-po or /h-o {ap} <sup>7</sup> CL <sub>M</sub> + R <sub>T</sub> or R <sub>T</sub> +CL <sub>M</sub>	There (further)

Word forms from the two text excerpts show that, grammatical morphs such as relative pronouns, subject and object markers fall in the fusional morphoclass. These morphs are bound and multimorphemic. Examples from SNJ are {ma-} in *macho* (eyes) and {o-} in *zao* (their) and from SLW there is {wa-} and {-o-} in *waliogeuka* (those who changed/turned (in)to) and {m-} and {-i-} in *kumfanyia* (to do for/to him/her/it). Table 11 gives a morphological analysis of these word forms.

**Table 11: Morphosyntactic Analysis of the Various Fusional Word Forms from SLW and SNJ Excerpts**

Source text	Fusional word forms SLW & SNJ		Morphological structures	English Glosses
	Word form	Morphological structure	Fusional morph & its morphemes	
SNJ	macho	<u>ma</u> -cho CL <sub>M</sub> +R <sub>T</sub>	<b>ma-</b> ~CL <sub>6</sub> marker, ~plural marker	eyes
	<u>z</u> ao	<u>z</u> -a-o CL <sub>M</sub> +R <sub>T</sub> +ADJ	<b>z-</b> ~CL <sub>10/11</sub> marker ~plural marker ~referent marker	theirs
SLW	<u>wali</u> ogeuka	<b>Wa-li-o</b> -geuk-a CL <sub>M</sub> +T <sub>s</sub> +R <sub>p</sub> +R <sub>T</sub> +BV <sub>-EV</sub>	<b>wa-</b> ~CL <sub>2</sub> marker ~plural maker ~patient ~CL <sub>2</sub> pronoun <b>o-</b> ~relative pronoun ~CL <sub>2</sub> marker ~plural marker ~patient/referent maker	those who turned into...  or  those who changed into...
	kum <u>fany</u> ia	ku- <b>m</b> -fany- <b>i</b> -a INF+OB <sub>M</sub> +R <sub>T</sub> +APPLIC +BE <sub>-EV</sub>	<b>m-</b> ~CL <sub>2/3</sub> marker ~singular marker ~recipient/referent maker <b>i-</b> ~for,to,on behave of	to do for

Free morphs are members of Isolating morphoclass in Kiswahili. These are word forms that are both monomorphic and monomorphemic in context. Nearly all of these words are of foreign origin but have been adapted into Kiswahili phonological and morphological systems. Some examples from excerpts are: *Taratibu* (patiently/orderly), *damu* (blood), *bwana* (sir) and *sura* (appearance) and *siri* (secret). Irregular Kiswahili nouns such as; *mbwa* (dog), *roho* (soul), *shimo* (pit/hole), *mbweha* (hyena) belong to this morphoclass. Conjunctions interjections, the free morphic adjectives, prepositions and adverbs also belong here. Examples of these word forms from the excerpts are; *na* (and), *kama* (like/if), *au* (or), *kwa* (by/at/with), *lakini* (but), *tangu* (since), *tena* (again), *ingawa* (although), *chakari* (excessively), *kwanza* (first), *sana* (very/too (much)), *kando* (beside), *baada* (after), *ndani* (in) and *karibu* (near) and *alaa!* (so!).

## 6.0 Conclusion

The statistics and the graph representation have show that Kiswahili's morphological behaviour is well captured in the two morphological approaches. The traditional approach classifies Kiswahili into five morphoclasses in a descending rank order as agglutinative, fusional, polysynthetic, oligosynthetic and isolating. The contemporary approach

classifies it along the three tier index continuum of synthesis-fusional-isolation in a comparative manner as majorly synthetic, moderately fusional and minimally isolating. These classifications dispute the long held tradition that classified Kiswahili as only agglutinative. The two approaches are interdependent in that, in using the contemporary approach to evaluate Kiswahili along the continuum, the evaluation has been informed by the the statistics gathered in classifying Kiswahili from the traditional approach. This paper therefore has interfaced the two approaches in the morphological description and classification of Kiswahili. This interfacing shows that, one approach cannot yield to an insightful and practical morphological classification of Kiswahili. Each approach has its role; the traditional identifies and quantifies the morphological characteristics, while the contemporary one explains and describes in a comparative manner how these characteristics have diffused into the morphological structure of Kiswahili.



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### **Abbreviations**

S <sub>M</sub>	subject marker
T	tense
N <sub>EG</sub>	negative marker
INF <sub>NTV</sub>	infinitive marker
R <sub>P</sub>	relative pronoun
R <sub>T</sub>	root
R <sub>EFX</sub>	reflexive
OB <sub>M</sub>	object marker
V <sub>RT</sub>	verb root
V <sub>EXT</sub>	verb extension
BV <sub>EV</sub>	Bantu verb end vowel
CL <sub>M</sub>	class marker
N	noun
ST <sub>M</sub>	stem
PREP	prepositional morph
M	Marker
ADJ	Adjective

### **Symbols**

+	glue with or add to.
±	present or absent (not obligatory in all cases)
/	or
( )	what is enclosed expounds what is before the brackets or optional dependent on context of use.

## Appendices

### **Appendix 1: Excerpt Text from *Shamba la Wanyama* (SLW) pg. 49 lines 1-21**

Walimfuata mguu kwa mguu wakawa karibu sana kumshika. Aliteleza ikawa wazi atakamatwa. Alijizoaoa akijitia mbioni tena kuisalimisha roho yake. Mbwa walizidi kumkaribia. Mmoja wao alikuwa karibu kuuma mkia wake, lakini mzushi alimwahi akaupunia upande. Kwa wepesi mwingi alitumbukia ndani ya shimo katika ua. Tangu hapo hakuonekana tena.

Wanyama walirudi ndani wakiwa kama waliogeuka vivuli. Mbwa walifuata baadaye. Mwanzoni hakuna aliyelewa viumbe wale walikotoka. Walitambuliwa hatimaye: Walikuwa wale mbwa wachanga waliochukuliwa na Mkimwa akawalea kwa siri. Ingawa walikuwa si wazima, bado walionekana wakubwa tena wenye sura ya Mbweha. Walikaa karibu na Mkimwa wakitikisa mikia yao, kama mbwa wengine walivyozoea kumfanyia Bwana Mtiki. Sasa Mkimwa akiandamwa na mbwa, alipanda jukwaani, mahali ambapo Mzee alitolea hotuba yake. Alitangaza kwamba tangu siku ile na kuendelea, mikutano ya Jumapili imekwisha. Alisema haikuwa na maana...

**Appendix 2: Excerpt Text from *Siku Njema* (SNJ) pg 61 lines 1-22**

Yule mshukiwa akaamka taratibu. Damu ilikuwa yamtoka sana puani, kipajini na mdomoni. Alikuwa uchi. Akapepesukapepesuka kama mlevi chakari kuelekea uchochoroni. Wanawake na vigoli waliangalia kando au kufumba macho wasimwone. Yaliyompata yalikuwa bidhaa ya wizi wake.

Watu wakaanza *kufumukana* na kuendelea na shughuli zao. Nikamwendea bibi mmoja baada ya *chamkano* hilo anionyeshe kwa Bwana Salim Makame kama alikuwa ajua huko. Yule bibi akamwita yule kijana mwenye miguu ya mbinu za mvungu. Huyu ndiye alikuwa wa kwanza kumtetea mvulana aliyekuwa akipigwa. Alikuwa kasimama katika kikundi cha wanaume wengine waliokuwa wakisimuliana yaliyokuwa yametukia.

“Rashid” alisema yule bibi alipokuja yule kijana, “huyu” bwanamdogo hapa ni mgeni wa Mpendaraha. Naona ajabu.”

“Alaa” alimaka Rashid. Wewe ni mgeni wake Mzee Salim Makame?” Akanisaili.

“Naam,” nikamjibu.

“Watoka wapi?”

“Natoka Tanga. Salim ni mjomba wangu.”

“Ahaa!”

“Basi nitakuacheni wanangu,” yule bibi alisema.

Nikamshukuru naye akaenda zake, huku yuacheka na kutikisa kichwa...

**APPENDIX 3: Sample of Morphological Classification of Words Selected From *Shamba la Wanyama* Excerpt**

*Poly = polysynthetic, agglu = agglutinative, olig = oligosynthetic, isol = isolating, fus = fusional*

*Lxc = lexical unitcls = clause stnc = sentence phr = phrase*

WORD FORM	MORPH DEMARCATION	MORPH <i>No.</i>	UNIT	CLASSIFICATION					ENGLISH GLOSS
				<i>poly</i>	<i>agglu</i>	<i>olig</i>	<i>isol</i>	<i>fus</i>	
1. Walimfuata	<u>wa</u> -li- <u>m</u> -fuat-a <sup>8</sup>	5	Lxc/cls/stnc	poly	agglu	-	-	fus	they followed him/her/it
2. Mguu	<u>m</u> -guu	2	Lxc	poly	agglu	olig	-	fus	leg
3. Kwa	kwa	1	Lxc	-	-	-	isol	-	on/by
4. Wakawa	<u>wa</u> -ka-wa (wa-ka-kuwa)	3	Lxc/cls	poly	agglu	-	-	fus	they were
5. Karibu	karibu	1	Lxc	-	-	-	isol	-	near
6. Sana	sana	1	Lxc	-	-	-	-	-	very
7. Kumshika	ku- <u>m</u> -shik-a	3	Lxc/phr	poly	agglu	-	-	fus	to catch
8. Aliteleza	<u>a</u> -li-telez-a	4	Lxc/cls/stnc	poly	agglu	-	-	fus	s/he/it slipped/skidded
9. Ikawa	ikawa	1	Lxc/phr	-	-	-	isol	-	it became
10. Wazi	wazi	1	Lxc	-	-	-	isol	-	clear/open
11. Atakamatwa	<u>a</u> -ta-kamat-w-a	5	Lxc/cls/stnc	poly	agglu	-	-	fus	s/he/it will be caught
12. Alijizoazoa	<u>a</u> -li-ji-zo-a-zo-a	7	Lxc/cls/stnc	poly	agglu	-	-	fus	s/he/it
	* <sup>9</sup> <u>a</u> -li-ji-zoazo-a	5	Lxc/cls/stnc	poly	agglu	-	-	fus	#
13. Akajitia	<u>a</u> -ka-ji-ti-a	5	Lxc/cls/stnc	poly	agglu	-	-	fus	s/he/it tried/pretended
14. Mbioni	mbio-ni	2	Lxc/phr	poly	agglu	olig	-	-	in the race/in the run
15. Tena	tena	1	Lxc	-	-	-	isol	-	again
16. Kuisalimisha	ku-i-salim-i-sh-a	6	Lxc/cls	poly	agglu	-	-	fus	to safeguard/to save

**APPENDIX 4: Morphological Classification of Words Selected from *Siku Njema* Excerpt**

*Poly = polysynthesis, agglu = agglutinative, olig = oligosynthesis, isol = isolating, fus = fusional*

*Lxc=lexical unit cls=clause stnc=sentence phr=phrase*

WORD FORM	MORPH DEMARCATION	MORPHS <i>No.</i>	UNIT	CLASSIFICATION					ENGLISH GLOSS
				<i>poly</i>	<i>agglu</i>	<i>olig</i>	<i>isol</i>	<i>fus</i>	
1. yule	<u>yu</u> -le <sup>10</sup>	2	Lxc	-	agglu	olig	-	fus	that person/animal
2. mshukiwa	<u>m</u> -shuk-i-w-a	5	Lxc	poly	agglu	-	-	fus	a suspect
	* <sup>11</sup> <u>m</u> -shukiwa	2	Lxc	-	agglu	olig	-	fus	# <sup>12</sup>
3. akaamka	<u>a</u> -ka-amk-a	4	Lxc/cls/stnc	poly	agglu	-	-	fus	s/he/it woke
4. taratibu	taratibu	1	Lxc	-	-	-	isol	-	steadily
5. damu	damu	1	Lxc	-	-	-	isol	-	blood
6. ilikuwa	<u>i</u> -li-kuwa	3	Lxc/cls	poly	agglu	-	-	fus	it was
7. sasa	sasa	1	Lxc	-	-	-	isol	-	now
8. yamtoka	ya- <u>m</u> -tok-a	4	Lxc/cls/stnc	poly	agglu	-	-	fus	it was oozing
9. puani	pua-ni	2	Lxc/cls/stnc	poly	agglu	olig	-	-	in the nose
10. kipajini	kipaji-ni	3	Lxc/cls/stnc	poly	agglu	olig	-	-	in the forehead
	* <u>Ki</u> -paji-ni	2	Lxc/cls/stnc	poly	agglu	olig	-	fus	#
11. na	na	1	Lxc	-	-	-	isol	-	and
12. mdomoni	<u>m</u> -domo-ni	3	Lxc/cls/stnc	poly	agglu	-	-	fus	in the mouth
13. uchi	uchi	1	Lxc	-	-	-	isol	-	naked
14. Akapepesukapepesuka	<u>a</u> -ka-pepesuk-a-pepesuk-a	6	Lxc/cls/stnc	poly	agglu	-	-	fus	he staggered
	* a-ka-pepesukapepesuk-a	4	Lxc/cls/stnc	poly	agglu	-	-	fus	#
15. kama	kama	1	Lxc	-	-	-	isol	-	like
16. mlevi	<u>m</u> -levi	2	Lxc	-	agglu	olig	-	fus	drunkard

