# A STUDY OF MORPHOLOGICAL REDUPLICATION IN KIEMBU

**BY**

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# DECLARATION

This research project is my original work and has not been presented for a degree in any other university.


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Nyaga, Papion Wanja                                Date




This project has been submitted for examination with our approval as University supervisors.



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Dr. Jane A. N. Oduor                                Date




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Dr. Lilian Kaviti                                Date

# DEDICATION

To

My two lovely daughters

Whose unconditional love

Gives me great inspiration and

Strength to move on in life

Blossom and baby Leyla


Leyla,

Thank you for growing up so fast

And putting up with mom's absence

At a tender age


Mum,

Thank you for being there for me

all the way. You put your dreams

aside so that we could be

Your determination in life has

been my inspiration.

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when I had little time for you. The family's encouragement, moral and financial support and understanding made my study a success. To them I owe this achievement.

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Thank you and God bless you all.

# ABBREVIATIONS AND SYMBOLS

| | |
|---|---|
| MDT | Morphological Doubling Theory |
| ` | Low tone |
| ´ | High tone |
| * | Ill formed |
| SG | Singular |
| PL | Plural |
| N | Noun |
| V | Verb |
| Adj | Adjective |
| C.f | Compare |
| / / | Phonemic representation |
| IPA | International Phonetic Alphabet |
| f | Semantic value of a word |

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# ABSTRACT

This study is essentially a study of reduplication in Kiembu. As explained in chapter 1, the study sought to establish the linguistic units affected by reduplication, how reduplication interacts with morphological and phonological processes, the semantic value of reduplication and whether reduplication in Kiembu is considered morphological doubling or phonological copying. The study is carried out within the framework of Morphological Doubling Theory. The theory is used to represent Kiembu reduplication. This theory looks at reduplication as morphological doubling. Since the study included both morphological and phonological analysis, it was necessary in chapter 2 to carry out a phonemic inventory of Kiembu consonant and vowel systems as well as provide a comprehensive description of Kiembu word classification that includes nouns, verbs, adjectives, adverbs, pronouns and prepositions. The findings of the study are then stated in chapter 3 and 4. The study found out that there are different types of reduplication in Kiembu which have various semantic contributions. This means that reduplication affects the semantic value of words in Kiembu. Derivation is established to be a major morphological process responsible for creation of reduplicatives in Kiembu. Vowel harmony, vowel substitution and vowel lengthening are the phonological processes that interact with reduplication in Kiembu. It is also established that reduplication affects the tone of words in Kiembu. A summary of the same findings are given in chapter 5 and it is in this chapter that it is concluded that reduplication in Kiembu is a case of morphological doubling and that reduplication targets the root and stem of a word. Total reduplication was found to be the most common mode of reduplication. More importantly, it is concluded in this chapter that Morphological Doubling Theory is applicable in the analysis and representation of reduplication in Kiembu.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Language

The language under study is Ki embu. The speech community associated with this language is the Embu of Kenya. The speakers of Ki embu live predominantly in Embu county of Kenya. Although, with the rural-urban migration in search of employment, education and better livelihood, the Aembu are now found in various parts of the country like Nairobi, Mombasa, Nakuru, Eldoret, and many other urban centers.

Ki embu has three dialects that differ at the lexical and phonological levels. Njeru (2010:1) says that amongst speakers of Ki embu, exists linguistic variations that give rise to three distinguishable dialects namely Kiiveti, Kiruguru and Kigaturi (the southern dialect). Kiiveti is the dialect spoken by the people of Runyenjes and Kyeni areas. Kiruguru is spoken in the northern parts of Embu close to Mt. Kenya forest, Ngandori and Nginda areas. The southern dialect is spoken in Gaturi and in the lower parts of Embu near the border of Embu and Mbeere.

This study uses the Kiiveti dialect because much has not been studied on it as compared to other dialects and it is the dialect that the researcher uses.

**1.2 Statement of the Problem**

Reduplication is a common morphological feature in Ki̱embu yet it has not been given any attention. Ashton (1944) as cited in Hyman (2009:1) says that reduplication is a characteristic of Bantu languages that affects syllables, verb stems, words and phrases.

After examining different works of Ki̱embu, the researcher discovered that not much has been written on the language. Waweru (2006) studied the structure of Ki̱embu verb. Though his study is in the area of morphology and reduplication in Ki̱embu occurs mostly in verbs, it seems to be beyond the scope of his study. Helga (2008) did a syntactic analysis of the relative clause in Ki̱embu. Njeru (2010) studied pragmatic categories namely topic and focus in Ki̱embu sentences. Njanga (2013) analyzed Ki̱embu idiomatic expressions using the relevance theory. Njagi, T. (2013) studied power relations in Ki̱embu proverbs and Njagi, J. (2013) analysed metaphors in Ki̱embu using a lexical pragmatic approach. Reduplication in Ki̱embu, which is in the field of morphology and to some extent phonology, to the best of my knowledge, has not been studied.

According to Omondi (1986) as cited in Okello (2007), reduplication in a language is not a peripheral matter and therefore should be studied. Spencer (1991:151) states that reduplication processes are of peculiar interest to morphophonology because it has a morphological and phonological aspect. In addition, according to Inkelas and Zoll (2005:1), the mechanism of reduplication and manner in which copies could differ from each other has been a foundational concern to theoretical and descriptive linguistics.

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Since this is an area of concern for linguists, reduplication in many languages should be studied. This being the case, a theoretical and descriptive study of reduplication in Kĩembu is necessary. By carrying out a theoretical and descriptive analysis of reduplication in Kĩembu, the study attempts to answer the following questions:

1) What are the linguistic units affected by reduplication in Kĩembu?

2) How does reduplication interact with morphological processes in Kĩembu?

3) How does reduplication interact with phonological processes in Kĩembu?

4) What is the semantic value of reduplicated words in Kĩembu?

5) Is reduplication in Kĩembu considered to be morphological reduplication or phonological copying?

## 1. 3 Objectives

The following are the objectives of the study:

1) To investigate the linguistic units affected by reduplication in Kĩembu.

2) To find out the relationship between reduplication and morphological processes in Kĩembu.

3) To find out the relationship between reduplication and phonological processes in Kĩembu.

4) To investigate the semantic value of reduplicated words in Kĩembu.

5) To establish whether reduplication in Kĩembu is morphological reduplication or phonological copying.

**1.4 Rationale for the Study**

The study gives reduplication a morphological theoretical perspective in a Bantu language. To the best of my knowledge, no study has been done concerning reduplication in Ki embu and Morphological Doubling Theory has not been applied to a Bantu language. This means that the study gives a new approach towards the study of reduplication in a Bantu language. The study is important in terms of contributing to theoretical linguistics in general as well as Ki embu linguistics in particular. The study enriches the study of morphology and phonology in K iembu.

Another justification for this study is derived from the fact that it gives a general outline of Kiembu parts of speech discussed in this study namely: nouns, verbs, adjectives, adverbs, pronouns and prepositions. It is therefore a crucial introduction for future linguistic studies in this language.

**1.5 Scope and Limitation**

The study not only mentions that there is reduplication in Ki embu but also shows the interaction between reduplication and morphological rules and phonological processes. The study is not a study of reduplication in general. The researcher did a phonemic inventory of sounds in Ki embu that are necessary for transcription of data in order to see the repeated parts of a word. The researcher has also done an analysis of the different words structure in Ki embu to see the parts that reduplicate. An inventory of Ki embu affixes was done to see whether affixes take part in reduplication. The researcher then

classified the reduplicated words according to the part that reduplicates and identified tones that exist in Ki embu.

This study left out parts of speech not affected by reduplication. Socio-linguistic factors associated with reduplication are beyond the scope of this study. The study looks at morphological and phonological processes that occur together with reduplication and leaves out those that do not interact with reduplication. Reduplication occurs with some morphological and phonological processes in Ki embu such as vowel substitution, vowel lengthening, vowel harmony and derivation. The study also looks at the effect of reduplication on tone of a word in Kiembu.

## 1.6 Theoretical Framework

Morphological Doubling Theory (MDT) is adopted for description and analysis in this study. MDT was developed in 2005 by Sharon Inkelas and Cheryl Zoll who are both professors of linguistics. It was developed for morphosemantic feature duplication or morphological duplication.

A fundamental claim of Morphological Doubling Theory is that reduplication involves semantic, rather than phonological identity. The theory claims that reduplication results when the morphology calls twice for a constituent of a given semantic description with possible phonological modification of either or both constituents. In MDT, reduplication couples morphological constituents (affix, root, stem, or word) which agree in their semantic specification. The two constituents, related morphosemantically, are not

required to match phonologically. In essence, one would say that MDT agrees that the two mechanisms are involved, though it opts to lean on the side of morphological duplication (Inkelas and Zoll 2005:9).

The following are the two claims of Morphological Doubling Theory:

1. a). A reduplication construction calls for morphological constituents (affix, root, stem, or word), not phonological constituents (mora, syllable, or foot).

   b). Reduplication calls for semantic identity of its daughters, not phonological identity.

It presupposes the double (or multiple) occurrence of a morphological constituent meeting a particular morphosemantic description.

Morphological Doubling Theory assumes the basic structure below for morphological reduplication. A reduplicated stem has two daughters that are featurally identical, i.e. mean the same thing.

2.                     (Output) f + some added meaning

            (Input) (f)              (Input) (f)
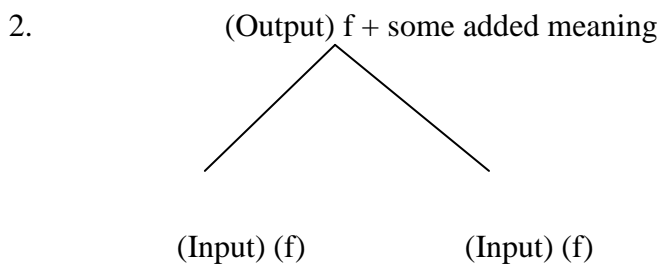
       Where (f) means the semantic value of a word.

       (Adapted from Inkelas and Zoll 2005:7)

The two sisters (inputs) are required to be identical only semantically.

The inputs in the above structure refer to morphological constituents and output is the reduplicated form. Consider the following example from K iembu:

3.          (okaoka) 'come closer'

                       (F + closer)

(oka) (f)        (oka) (f)        f = come
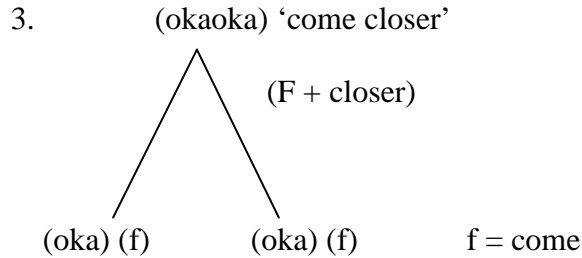
In the above example, what is coupled is a morphological constituent (oka) which is a stem in Ki embu. These constituents are semantically equal. The output (okaoka) has some added meaning. The original meaning is "come" and the new meaning after reduplication is "come closer".

Morphological Doubling Theory thus departs from previous theories in which the reduplication is treated as an abstract morpheme, RED, whose substance is provided by phonological copying. These include proposition by Marantz (1982) Steriade (1988) and those theorists who focused on base correspondence like McCarthy and Prince (1995). According to these theories, reduplication is driven by the presence of an affixal morpheme, RED, which has the grammatical requirement to phonologically copy material in a phonological adjacent string. The morpheme "RED" phonologically copies the base.

They further state that MDT is however:

> A native identity theory in the sense that surface phonological identity
> between the two copies occur as a side effect of semantic identity;
> often as the  simplest, or only way to assure semantic identity is to
> select exactly the same morphological entity for the two daughters.
> (Inkelas and Zoll 2005:18)

**1.6.1 The Morphology of Reduplication in MDT**

In order to carry out a theoretical analysis using MDT, one needs to understand the morphology of reduplication as propounded by Inkelas and Zoll (2005).

Consider the following example in Ki embu that shows the morphology of reduplication as presupposed by MDT.

4.        Mon   mo: n    "very much"

                            (F + intensification)

        mon    (f)       mo: n    (f)        where f= much
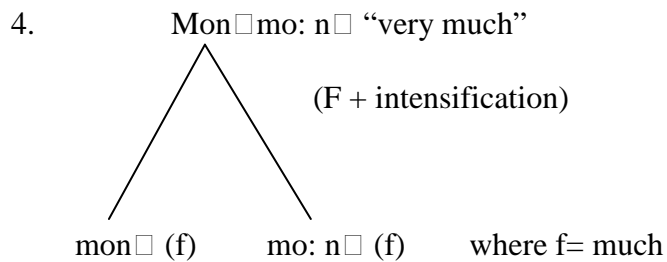
The example illustrates MDT approach to reduplication of the stem 'mon ' in Kiembu. The base and the reduplicant have the same semantic description, i.e. "much" but they are different in their phonology. There is vowel lengthening in one copy that makes it different phonologically from the other copy.

In summary, we would say morphological reduplication in MDT is a double selection (insertion) of morphological constituents such as stem or root.  This is further illustrated in the following schema with a different word:

5.

$$\begin{bmatrix} \text{Syntax = Adverb} \\ \text{Semantics = "slowly by slowly"} \\ \text{Phonology = kav\ rakav\ : ra} \end{bmatrix}$$

$$\begin{bmatrix} \text{Syn = Adv} \\ \text{Sem = "slowly"} \\ \text{Phon = /kav\ ra/} \end{bmatrix} \qquad \begin{bmatrix} \text{syn = Adv} \\ \text{sem = "slowly"} \\ \text{phon = /kav\ : ra/} \end{bmatrix}$$
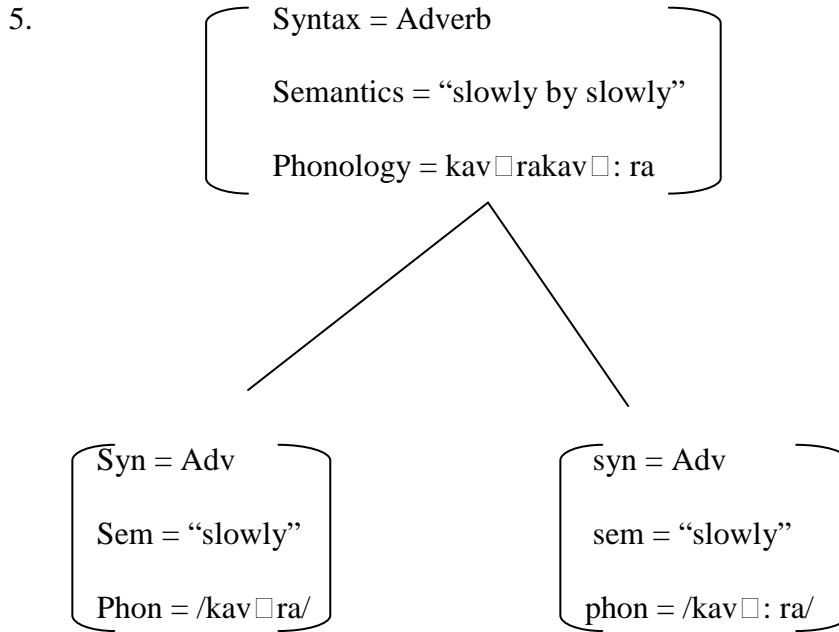
In MDT, as illustrated in the above schema, reduplication couples morphological constituent that agree in their semantic (and syntactic) specification. These constituents do not have to match phonologically.

MDT makes heavy use of the concept morphological construction to handle reduplicative semantics and phonology. A 'construction' broadly speaking is any morphological rule or pattern that combines sisters in to a single constituent. Each individual affix, compounding rule, truncation construction and/or reduplication process is a unique morphological construction.

## 1.6.2 The Phonology of Reduplication in MDT

According to Morphological Doubling Theory, the primary phonological issues arising in reduplication are the following:

6.  i)  Are the copies in reduplication phonologically modified relative to how they would appear in isolation?

ii) Is surface phonological identity an extrinsic requirement in reduplication?

In Morphological Doubling Theory, as already stated in section 1.6, the essential identity in reduplication is semantic. It does not require phonological identity.  MDT sees the role of phonological copying and its scope to be limited to narrow sets of contexts. Phonological constituent copying is restricted to cases motivated by phonological necessity.

Morphological Doubling Theory also makes predictions about the potential for phonological modifications of the morphological elements involved in reduplication. Inkelas (2008) says that morphological duplication is often accompanied by the phonological modification of one or both copies.

**1.6.3 Thesis of Morphological Targets in MDT**

As stated in section 1.6, a reduplication construction calls for morphological constituents like a whole word, a stem, a root or even an affix not phonological constituents like mora, syllable or foot. The existence of root reduplication shows that reduplication can target morphological sub-constituent of a word regardless of its phonological size. This confirms that what is doubled in reduplication is a morphosemantically defined constituent (Inkelas 2008:4). Consider the following example in Ki     embu:

7.     Base                    Reduplicant

       rema  'cultivate'     remaremera  'cultivate for someone for a while'

In the above example, the root rem- has been reduplicated confirming the existence of root reduplication in Ki embu.

That being the case, any morphological analysis requires an explicit morphological framework. This theory is used in the description and analysis of data to account for reduplication in Ki embu. The reason being, MDT is descriptively adequate and at the same time more constrained in its predictions than a phonological approach to reduplication.

**1.7 Hypotheses**

The following hypotheses were tested:

1. Roots and stems are affected by reduplication in Ki embu.

2. Reduplication interacts with derivation in Ki embu.

3. Reduplication interacts with vowel harmony and vowel substitution in Ki embu.

4. Reduplication affects the semantic value of a word in Ki embu.

5. Reduplication in Ki embu falls under morphological reduplication and not phonological copying.

## 1.8 Literature Review

The literature review is divided into three; theoretical literature review, general literature review on reduplication and literature review on Ki embu.

## 1.8.1 Review of Theoretical Literature

There is literature on theories of reduplication as provided by Spencer (1991), Steriade (1988) McCarthy (1981), Marantz (1982), and Broselow and McCarthy (1983). They argue that reduplication is a process that copies all or part of the phonological representation of a stem as an affix. In essence, they advocate for a phonological framework in the analysis of reduplication. They give the earlier framework of reduplication that has led to the present theoretical model, Morphological Doubling Theory. These theories are of interest to the current study since they helped the researcher understand the concept of phonological copying which is an aspect of this study.

Base Reduplicant Correspondence Theory (BRCT) (McCarthy and Prince 1995) is a phonological copying theory of reduplication. The theory claims that what is doubled in reduplication are phonological constituents and the strings that are reduplicated are identical phonologically. The precepts of this theory contrasts with those of Morphological Doubling Theory. The theory informs this study on checking the difference between MDT and phonological copying theories.

Inkelas and Zoll (2005) gave the researcher principles and approaches to duplication in Morphological Doubling Theory. They observe that reduplication involves morphology

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and phonology though they are biased to morphological reduplication and deviate greatly from the earlier theories that were based on phonological copying. This work contributed massively to this study as it provided the tenents of Morphological Doubling Theory that was used in the analysis of data.

Inkelas (2008:2) gave the researcher more insights on Morphological Doubling Theory. She explains in detail the difference between morphological doubling and phonological duplication. She says, "Morphological doubling occurs for a morphological purpose such as marking a change in meaning or creating a new stem type". This work equipped the researcher with the necessary knowledge of Morphological Doubling Theory, the theory used in this study.

**1.8.2 Literature Review on Reduplication**

Ashton (1944) as quoted in Hyman (2009) in his study of reduplication as a characteristic of Bantu languages says that Bantu grammars often include sections showing that verbs, nouns, adjectives, numerals and even pronouns, and demonstratives can be reduplicated with specific semantic function. He also explains that reduplications show a lot of similarity in both structure and meaning, but also of interest is their differences. His study informed this study on checking the various parts of speech that reduplicate in Kiembu.

Ashton (1944) in his book on Swahili grammar gives the various functions of reduplication in Kiswahili namely; emphasis, expressing intensiveness, modifying the

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force of a word, expressing continuous action and expressing distributive idea. His work assisted as Kiswahili is a Bantu language and this study is on a Bantu language.

Matthews (1974) studies reduplication as a morphological process and discusses the different types of redupli34 cation: partial, complete, prefixal, and suffixal. These four types of reduplication were of interest to the current study. The researcher investigated which ones among them exist in Ki embu.

Omondi (1986) as cited in Okello (2007) in a paper on a case study of reduplication in Dholuo writes on the various aspects of reduplication. She observes that reduplication occurs with some major phonological processes in Dholuo. In addition, she states that reduplication is a common and naturally integrated facility for linguistic expressions in this language. For that matter, it raises issues because it influences the structure and meaning of this language. She also says that reduplication is not a peripheral matter and therefore should be studied in detail.  In view of the above, she raises the following issues concerning reduplication:

8.   a) Whether all types of reduplication manifestations are of the same phenomenon.

b) Whether data on reduplication calls for a unified analysis or each case needs to

be considered as it functions in grammar.

 This work motivated us to do this study in order to establish whether the issues she raises about reduplication are of interest in a Bantu language. It also made us to carry out this study to establish the place of reduplication in Ki embu morphology and phonology.

Peng (1991) studies reduplication in Kikuyu and says that the verb stem in Kikuyu reduplicate to bring out three senses: a little, somewhat, and diminished in force. He looks at the structure of the Kikuyu verb root and explains the parts of the stem that takes part in reduplication. He observes that tone is not preserved in reduplication in Kikuyu. He also discusses stress as a feature of lexical items that is affected by reduplication. This work was of great importance to the current study because Kikuyu and Kiembu being cognates have a lot in common.

Spencer and Zwicky (1998) studied reduplication as a morphological operation that is a type of affixation of a prosodic template to a stem, followed by copying of that stem and associating it to the template. The two writers look at reduplication as an aspect of phonological copying. Their work was of interest to this study since it helped us in understanding the aspect of phonological copying which was relevant to this study.

Ngunga (2002) studies reduplication as a morphological process and analysis the different types of reduplication: total and partial. The current study investigated which one exists in Ki embu.

Oduor (2002) in her study of syllable weight and its effects on Dholuo phonology mentions reduplication in terms of its effect on syllable weight. She looks at reduplication as repetition of syllables .This study is beyond the scope of the current study.

Downing (2003) in his study looks at the various patterns of reduplication in Bukusu. He says that Bukusu has two patterns of verbal reduplication: prefixing and infixing pattern. Although this study is based on a phonological copying theory, one of the patterns he studies (prefixing) was of interest to the current study. The pattern of infixing is not there in Ki embu.

Odawa (2004) in his study of tonal notation and their presentation refers to reduplication as a case of repetition of a word to form a longer one. He says that this repetition leads to change of tone of a word. The current study established whether the same happens to reduplicated words in Kiembu.

Okello (2007) did a study on morphological reduplication in Dholuo. She observes that reduplication targets the root of a word and that derivational and lexical affixes are not targeted in Dholuo. In her research findings, she states that reduplication in Dholuo is morphological reduplication. Although Dholuo is a Nilotic language, Okello's major concerns are quite similar to the concerns of this study. For example, one of her concerns was to investigate the linguistic units affected by reduplication. This is also a concern of this study. Moreover, she employs Morphological Doubling Theory that is the same theoretical framework used in this study.

Hyman, Inkelas, and Sibanda (2009) in their study of morphosyntactic correspondence in Bantu languages argue in support of Morphological Doubling Theory. They observe that it is in reduplication where an ideal testing ground for theories of morphology,

phonology, and their interface is provided. They argue that prosodic study of reduplication by phonological copying theories, does not account for partial reduplication because they treat reduplication as the total copy of the abstract morphological structure of the base. They conclude that reduplication is not wholly a prosodic phenomenon. This work is relevant to the current study since in investigating the relationship between reduplication and morphology and phonology, the study shows that reduplication is not wholly a prosodic phenomenon.

In her study of the nature of stress in Kidawida, Mwasusu (2012:72) says, "polysyllabic adverbs are formed with the reduplication of some bisyllabic adverbs." She concludes that primary stress is at the final syllable in reduplicated words. This work is relevant to this study as it contributed towards providing information needed when looking at reduplication in adverbs.

**1.8.3 Literature Review on Kiˊembu**

Mwaniki (1971) has written an anthology of riddles, proverbs and stories from Embu. This book contains reduplicated forms that formed part of data for this study.

Maringah (1987) analysed the structure of verbs in Kiˊmbeere. She discusses all affixes that occur in a verb root. She also analyses inflectional morphemes which when affixed to the verb root extend its meaning. Kiˊmbeere being a very closely related language to Kiˊembu, this study informed the current study in checking the morphological structure of verbs.

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Mberia (1993) looks at Bantu noun classification and the structure of Bantu verbs. He identifies thirteen slots occupied by meaningful morphemes that may be attached to the verb in most Bantu languages. They include subject pronoun, verb negation, tense and aspect, object pronoun, root, reversive, stative, causative form A, causative form B, reciprocals, applicative, addressee plurality and mood. This work informed the current study in the analysis of the structure of Kiembu verbs. He also made the researcher understand noun classification in Kiembu that was relevant to this study.

Waweru (2006) has studied the structure of Kiembu verb. Downing (2003) says that it is the verb stem that reduplicates in Bantu languages. That being the case, Waweru's work provided important information that was useful in the analysis of reduplication of verbs. His work informed this study given that it is a morphological analysis. The researcher referred to it for verification of structural properties of Kiembu verbs.

Njeru (2010) describes the different linguistic variations that are there in Kiembu that give rise to three distinguishable dialects that are spoken. She concludes that the three dialects differ at the lexical and phonological levels. This work provided pertinent literature on the dialects of Kiembu. It informed the researcher of where these dialects are spoken which was important for data collection.

Njuki (2012) did a morphological structure of different word categories in Ki mbeere namely verbs, nouns, adverbs and adjectives. As earlier stated, Kimbeere is very closely

related to Ki embu. This work informed the current study in the analysis of the morphological structure of the various parts of speech.

Njagi (2013) studied metaphors in Ki embu using a lexical pragmatic approach. He looked at manifestations of stereotypes in Ki embu. He observes that metaphors in Ki embu have different kinds of stereotypes embedded and that these stereotypes are understood within the culture of speakers of the language. He also says that gender, age and race stereotypes are in Ki embu metaphors just as there are positive and negative stereotypes. Some of the metaphors used in this study have reduplicated forms hence a good source of data for the current study. There is also Njagi (2013) who did a case study of power relations in Ki embu proverbs. In her research findings, she observes that proverbs are an effective tool of reinforcing inequality in society because they are rich in pithiness, frankness, appeal and they are handed down by mouth and ear. They are also remembered easily and spread universally. Some of the proverbs used in this study have reduplicated forms. Therefore, the study was instrumental in the generation of data used in the current study.

Njanga (2013) studied Ki embu idioms using a relevance theoretical approach. In her research findings, she notes that Ki embu idioms can be classified according to semantic features into transparent, semi-transparent and opaque ones. Some idioms used in this work have reduplicated forms that formed part of data for this study.

There is also a Kĩembu New Testament Bible (the Old Testament does not exist) and Kĩembu-Kĩmbeere Bible translation that were useful tools from which data was generated.

## 1.9 Research Methodology

### 1.9.1 Data Collection Methods

This study used both primary and secondary data. Primary data was collected through naturalistic observation of Kĩembu speakers in ordinary discourse noting down reduplicated forms.

The researcher also took part in natural conversations with adult native speakers (18-65 years old) with the aim of getting reduplicated forms. The researcher ensured that the informants were free enough so that conversations could be as natural as possible. In addition, ten informants (five men and five women) who are native speakers of Kĩembu were asked to give the researcher reduplicated words and also their original forms before reduplication. The ten informants represented the ten areas of the constituency. The ten informants were sampled from different parts of the area of study to ensure the data was as representative of the area as possible. Gender balance was considered important hence the need for five men and five women. The data collected was noted down. For confirmation, the data was verified with ten other informants who speak Kĩembu as a native language.

In addition, any literature on Ki embu that makes use of reduplication and other works mentioned in the literature review section were good sources of secondary data that the researcher identified, wrote down and presented to the ten informants for confirmation.

The study was based in Runyenjes constituency of Embu County. This is where the variety that was used is spoken. Data was collected from several places in the constituency to ensure that the researcher got as many reduplicated words as possible.

## 1.9.2 Data Analysis

It is in data analysis where the researcher applied Morphological Doubling Theory for representation, description and interpretation of data. Each reduplicated word was transcribed phonemically. The data was then grouped into either complete or partial reduplication and also according to the part of speech of the reduplicated word. The part that reduplicates in every word was underlined. The reduplicated words were also classified according to the morphology of repeated parts (stem, root, affix or word). The researcher then checked the phonological processes that the reduplicated words have undergone. The researcher also checked the original meaning before reduplication and meaning after reduplication to see whether the meaning has changed, shifted, extended, intensified or what is new. Finally, the researcher checked the tone of original words before reduplication and that of the reduplicated words to see if tone was affected by reduplication.

## 1.10 Significance of the Study

This study was essential in establishing the place of reduplication in Ki embu morphology and phonology. It was a step in the study of morphology in Ki embu. No study, to the best of my knowledge, has paid attention to reduplication in Ki embu hence the need for this study. Omondi (1986) as cited in Okello (2007) says that reduplication should be studied in detail. Therefore, an analysis of reduplication in Ki embu was necessary. Learners and linguists will find this study beneficial in gaining an in depth understanding of morphological reduplication in Ki embu. This study shows that Morphological Doubling Theory is a suitable model for representing reduplication in any natural language.

## 1.11 Summary

This chapter forms an introduction of the study. It shows that this study is essentially a study of reduplication in K iembu. This chapter has given the background to the language of study. The researcher has also stated the research problem, the objectives to be achieved and the hypotheses to be tested. The chapter shows the study is carried out within the framework of Morphological Doubling Theory as propounded by Inkelas and Zoll (2005). This chapter offers a brief review of literature about the theoretical frame work, a general review of reduplication as well as review of literature about Ki embu. The chapter also gives the scope and limitations, the rationale and the methods to be used in data collection and analysis.

# CHAPTER TWO

# PHONEMIC INVENTORY OF KIEMBU SOUNDS AND WORD

# CLASSIFICATION

## 2.1 Introduction

This chapter introduces Kiembu consonantal and vowel system. This is important because an analysis of reduplication in Kiembu, which will be done in chapter three and four, requires one to understand the phonemic inventory of the language.

The chapter also introduces word classification of Kiembu. A brief analysis of morphological systems of various word classes is carried out. This is important because lexical items used in this study are drawn from this classification. Nouns, verbs, adverbs, adjectives, pronouns and prepositions are the categories of words that will be considered in the analysis because reduplication occurs in them. Reduplication in Kiembu is evident in these parts of speech.

## 2.2 Phonemic Inventory of Kiembu Sounds

Kiembu language is very closely related to Kimbeere phonologically that they share not only a vowel system but also the consonant system (Mutahi 1983: 109). Therefore, the phonemic inventory used here is adopted from Maringah (1987) and Mutahi (1983).

## 2.2.1 Kiembu Vowel Phonemes

There are seven short vowels and their corresponding long vowels in Kiembu (Mutahi 1983).

Table 1 below shows the seven short vowels in Kiembu.

|  | Front | Back |
|---|---|---|
| High | i | u |
| Mid-high | e | o |
| Mid-low | ɛ | ɔ |
| Low | a |  |

**Table 1: Kiembu Vowel sounds based on tongue-body features (adopted from Maringah (1987: 22))**

Below is a presentation of the seven short vowels and their corresponding long vowels. Table 2 provides the IPA symbols used to represent each one of them, their corresponding Kiembu orthography, an example of a Kiembu word containing the vowel sound, its transcription, and the English gloss.

| IPA Symbol | Orthography | Example in Kiembu orthography | Transcription | Gloss |
|---|---|---|---|---|
| i | I, i | Ina | ina | 'Sing ' |
| i: | II, ii | Tiira | tiira | 'Support with a log' |
| e | I , i | I gu | eɣu | 'wasp' |
| e: | I I , i i | I i ri | e:re | 'two' |
| ɛ | E, e | Ene | ɛnɛ | 'owners' |
| ɛ: | EE, ee | Eenda | ɛ:nda | 'has loved' |
| a | A, a | Tava | tava | 'fetch' |
| a: | AA, aa | Taa | taa | 'lamp' |
| u | U, u | Tuma | tuma | 'build' |
| u: | UU, uu | Vuura | vu:ra | 'wipe' |
| o | U , u | Gu ra | ɣora | 'buy' |
| o: | U  U ,  u u | Tu u ra | to:ra | 'live' |
| ɔ | O, o | Oca | ca | 'take' |
| ɔ: | OO, oo | Oona | ɔ:na | 'has seen' |

**Table 2: IPA and orthographic symbols of Kiembu Vowels**

**2.2.2 Glide Formation**

There is glide formation in Kiembu. Glide formation is a phonological process that changes vowels into semi-vowels. According to Mberia (1993: 49), semi-vowels are also referred to as glides.

A glide is formed in Kiembu when a short mid-high back vowel /o/ is followed by a front vowel. The glide formed this way is a bilabial glide. The following are examples:

9.  a) /o/ + /i/→ /w/        e.g.  /mo-iro/ →/mw-iro/ 'black one'

    b) /o/ + /e/ →w/        e.g.  /mo-evia/ →/mw-evia/ 'sinner'

    c) /o/ + /ɛ/ →w/        e.g.  /mo-ɛne/ →/mw-ɛnɛ/ 'owner'

    d) /o/ + /a/ →w/        e.g.  /mo-andeki/ →/mw-andeki/ 'writer'


A bilabial glide is also formed when a short mid-high back vowel /o/ is followed by a short mid- low back vowel as in the following example.

10. e) /o/ + /ɔ/→/w/        e.g.  /mo-ɔsi/ →/mw-ɔsi/ 'taker'

A glide is also formed in Kiembu when a short mid- high front vowel /e/ is followed by other short vowels except the short high front and back vowels /i/ and /u/.  A palatal alveolar glide is formed this way as seen in the examples below.

11. a) /e/ + /ɛ/→ /j/        e.g.  /re-ɛɲu/→/rj-ɛɲu/ 'yours'

    b) /e/ + /a/ →j/        e.g.  /re-aɔ/ →/rj-aɔ/ 'theirs'

    c) /e/ + /ɔ/ →/j/        e.g.  /re-ɔru/ →/rj-ɔru/ 'rotten'

    d) /e/ +/o/ →j/        e.g.  /re-omo/ →/rj-omo/ 'hard/ dry'

**2.2.3 Kiembu Consonant Phonemes**

This study identifies eighteen (18) consonant sounds and of the eighteen consonant sounds, two (2) are glides while five (5) are prenasalised consonants as seen in Table 3 below.  As also observed and noted by Njuki (2012), Maringah (1987: 21) identifies sixteen consonants with two glides and four prenasalised consonants. She does not identify prenaslised dental /nð/ which exists in Kiembu. Moreover, the palatal sound /ʃ/ that Maringah identifies is replaced by the alveolar fricative /s/ in Kiembu. This differs from what Mutahi (1983: 109) says, "Kiembu has /s/ or /ʃ/ which are used interchangeably without creating meaning differences". This study shows that Kiembu has only /s/ and does not have /ʃ/ as Mutahi (1983) claims.

|  | **Bilabial** | **Labio-dental** | **Dental** | **Alveolar** | **Palatal** | **Velar** |
|---|---|---|---|---|---|---|
| Stops |  |  |  | t |  | k |
| Fricatives |  | v | ð | s |  | ɣ |
| Nasals | m |  |  | n | ɲ | ŋ |
| Prenasals | mb |  | nð | nd | ɲɟ | ŋg |
| Liquids |  |  |  |  |  |  |
| Glides | w |  |  | r | j |  |

**Table 3: A chart showing the consonant sounds in Kiembu**

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Table 4 below provides the Kiembu orthography, Kiembu examples of words bearing the consonant sounds identified above and the gloss. The examples provided are transcribed using the IPA symbols.

| Orthography | IPA symbol | Example in Kiembu orthography | Transcription | Gloss |
|---|---|---|---|---|
| T, t | t | tema | tɛma | 'cut' |
| K, k | k | kena | kɛna | 'be happy' |
| V,v | v | vu ra | vora | 'beat' |
| TH , th | ð | thoma | ðɔma | 'read' |
| NTH , nth | ɲð | nthaka | ɲðaka | 'beautiful' |
| C, c | s | curia | suria | 'hang ' |
| G,g | ɣ | gu ra | ɣora | 'buy' |
| M,m | m | mami | mami | 'mother' |
| N,n | n | nene | nɛnɛ | 'big' |
| NY, ny | ɲ | nyita | ɲ ita | 'touch' |
| NG', ng' | ŋ | ngondu | ŋɔndu | 'sheep' |
| MB, mb | mb | mboco | mbɔsɔ | 'beans' |
| ND, nd | nd | ndata | ndata | 'drop' |
| Nj, nj | ⁿɟ | nju ku | ɲɟ oku | 'bad' |
| NG, ng | ⁿg | ngai | ɲgai | 'God |
| R, r | r | ri u | reu | ' now' |
| W, w | w | wega | wɛɣa | 'goodness' |
| Y, y | j | yakwa | jakwa | 'mine' |

**Table 4: IPA and orthographic symbols of Kiembu Consonants**

From Table 4 above, Kiembu consonants have two categories of phonemes. The first category can be referred to as simple phonemes and the second category can be referred to as prenasalised consonants. Prenasalised consonants are similar to what Mutiga (2002: 39) refers to as consonant clusters or nasal compounds. This study adopts the term prenasalised consonants and not consonant clusters. According to Mutiga (2002: 40), consonant clusters or nasal compounds function as units of phonemes in a language.

## 2.3 Classification of Words in Kiembu

This section will give a brief analysis of word classes in Kiembu, since an analysis of reduplication requires understanding of the morphological structure of words. As stated in section 2.1, nouns, verbs, adverbs, adjectives, pronouns and prepositions are the categories of words that will be considered because they undergo reduplication in Kiembu.

### 2.3.1 Nouns

The understanding of nouns and their morphological structure is deemed important in this study since reduplication occurs with some nouns in Kiembu. The study uses derived nouns therefore, the analyses of nouns takes into account both singular and plural prefixation.

Bantu languages have nouns that morphologically consist of a noun affix and a stem. The affixes and noun stem constitute a criterion for dividing nouns into a number of noun classes that differ from each other in a variety of grammatical categories. The system of

prefixation in Bantu nouns is categorized into classes which are both semantic (in that they express the meaning of the noun) and grammatical (in that they express grammatical number in nouns) (Welmers 1973: 159).

Nouns belonging to the same class may share an identical prefix. This, however, is not always the case. Therefore, a classification based on prefixes is not sufficient. This is so because two nouns belonging to the same class may have different prefixes for historical reasons (Mberia 1993: 44). For example, the plural morpheme {a-} while it is maintained in a number of members of class two (2) is deleted in most of members of the same class or sometimes a different prefix is used, e.g. /ɛ-retu/ 'girls'. The plural prefix here is {ɛ-} in contrast to {a-}. In addition, two nouns belonging to different classes may have identical prefixes at the phonological and phonetic levels. For example, the prefix {mo-} is present in class one (1) and class three (3). C.f / mo-ɣɛni/ 'visitor' class one (1) nouns and mo- ɣɛmbɛ 'mango tree' class three (3) nouns. See Table five (5) below for more examples.

There is also a category of nouns that do not have prefixes at the phonological and phonetic levels. For example, most borrowed words in Kiembu do not have a prefix. For example, /vurana /, 'sweater', / nɣiraði / 'glass'. It is therefore not appropriate to classify nouns relying on only prefixes (Mberia 1993: 44).

Mberia (1993:44) proposes a more appropriate classification of nouns based on their effect on syntactic constructions. Nouns that take identical concordial agreement patterns should be grouped together, since they are perceived by the speaker to be members of the same group. This kind of classification has one important feature. That is, the classes group themselves into singular-plural pairs. The first member of these pairs consists of singular nouns whereas the second pair consists of the corresponding plural nouns.

Below is a Kiembu noun classification based on concordial agreement patterns proposed by Mberia (1993). Using this classification method, seventeen classes are identifiable. Examples 12, 13 and 14 below show the first six noun classes in Kiembu.

| 12. | **Class one (1)** | **Class two (2)** | **Gloss** |
|---|---|---|---|
| | a. mondo | ando | 'human being/person' |
| | b. moɣɛni | aɣɛni | visitor' |
| | c. mwanakɛ | anakɛ | boy' |
| | d. mwana | siana | 'child' |

The above two classes consists of nouns denoting human beings. The nouns in class one (1) consists of singular forms while the nouns in class two (2) consists of plural forms. From the example, the noun prefix for class one is **mo-** or **mwa-,** while the noun prefix for class two is **a-.**

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| 13. | Class three (3) | Class four (4) | Gloss |
|-----|-----------------|----------------|-------|
| a. | mote | mete | 'tree' |
| b. | moðɛɲa | meðɛɲa | 'day' |
| c. | mokwa | mekwa | 'strap' |
| d. | moɣɛmbɛ | meɣɛmbɛ | 'mango tree' |

Nouns in class three and four denote trees and crops. Also included in these two classes are nouns of diverse semantic field especially the physical world. Nouns in class three consist of singular forms and nouns in class four consist of plural forms. The noun prefix for class three is **mo -** and the noun prefix for class four is **me**-.

| 14. | Class five (5) | Class six (6) | Gloss |
|-----|----------------|---------------|-------|
| a. | etimo | matimo | 'lemon' |
| b. | etunda | matunda | 'fruit' |
| c. | erinda | marinda | 'dress' |
| d. | eðanwa | maðanwa | 'axe' |

Nouns in example 14 constitute cultivated fruits, things that do not fall into a single semantic set and mass nouns which are uncountable though concrete.

 Table 5 below summarizes the seventeen identifiable classes of Kiembu nouns with their noun class prefixes, based on concordial agreement patterns as proposed by Mberia (1993).

| Class | Singular Prefix | Example | Plural Prefix | Example |
|---|---|---|---|---|
| 1/ 2 | mo- | mo-ndo 'person'' | a- | a-ndu 'people'' |
| 1/3 | mo- | mo-te 'tree' | me- | me-te 'trees' |
| 5/6 | e- | e-suŋgwa 'orange' | ma- | ma-suŋwa 'oranges' |
| 7/8 | ke-  ɣe | ke-ðima'a well'  ɣe-kombɛ 'cup' | i- | i-ðima ' wells'  i-kombɛ ' cups' |
| 9/10 | n-  zero morpheme | mboko 'rabbit'  mɛða ' table' | n-  Zero morpheme | mboko 'rabbit'  mɛða 'table' |
| 11/10 | ro- | ro-tambi 'thread' | n- | n-dambi 'threads' |
| 12/13 | ka-  ɣa- | ka-ɣoko'a small chicken'  ɣa-sao 'calf' | to-  to- | to-ɣoko 'small chicken'  to-sao 'calves' |
| 14/6 | o- | o-viki 'wedding' | ma- | maviki'weddings' |
| 15/6 | ko- | ko-ðɛka 'laughing' | ma- | ma-ðɛka 'laughter' |
| 16/17 | va- | va-ndo 'a specific place' | ko- | ko-ndo 'a generalized place' |

**Table 5: Noun classes with singular and plural morphemes in Kiembu**

**2.3.2 Verbs**

Verbs are words that convey an action. Kiembu has verbs  like /ruɣa/ 'cook', /ɔsa/ 'take',

/roɣa/ 'jump and /ina/ 'sing' just to mention a few. Bantu languages are agglutinative,

meaning that they are characterized by adding prefixes and suffixes to the root of a verb.

Kiembu is a good example of an agglutinative language. In this respect, the verbal forms

of Kiembu are highly inflected with morphemes serving as prefixes and suffixes. These

affixes are attached to the verb root morpheme as meaningful morphemes. Besides, these

affixes have their specified position in the verb structure.


The structure of Bantu verbs does not have infixes (Mberia 1993:72). According to

Mberia, there are thirteen slots occupied by meaningful morphemes that may be attached

to the verb in most Bantu languages. They include the following:

15. i)     Subject pronoun

   ii)     Verb negation

   iii)   Tense and aspect

   iv)   Object pronoun

   v)     Root

   vi)   Reversive

   vii)  Caustive form A

   viii) Stative

   ix)   Reciprocals

   x)     Applicative

   xi)   Causative form B

xii) Mood

xiii) Addressee plurality

He also says that some slots have one possible morpheme while others have a wide range of morphemes that can occupy them. The analysis of the Kiembu verb structure is based on these slots and morphemes that occupy them.

The subject pronoun and object pronoun has twenty three possible morphemes. The choice of the first six is dependent on person and number as seen in Table 6 below.

| Person | Singular | Plural |
|--------|----------|--------|
| 1st | ne- | to- |
| 2nd | o- | mo- |
| 3rd | a- | ma- |

**Table 6: The three possible Morphemes of the subject and object pronoun in Kiembu**

See the following examples for illustration:

16. a) / **ne**-m-ɛ /  'I cultivate / weed'  /**to**-rem-ɛ/  'we cultivate/ weed'

 b) **/o-**k-ɛ/  'you (SG) come'  /**mo-**k-ɛ/  'you (Pl) come'

 c**)** **/a**-ok-ɛ/  'S/he come'  / **ma**-ok-ɛ/  'they come'

Example 16 (a) shows the first singular and plural morphemes, (b) shows the second singular and plural morphemes and (c) shows the third person singular and plural morphemes as indicated in Table 6 above. These morphemes represent the subject and

object pronouns in Kiembu. The rest of the morphemes are dependent on the noun class as seen in Table 7 below. The noun classes are as discussed in section 2.3.1.

| Class | Subject Pronoun | Example of Verb with Morpheme | Example of Noun | Gloss |
|---|---|---|---|---|
| 1 | a | a-ruɣ-a | Mary or Peter | S/he has cooked |
| 2 | ma | ma-ruɣ-a | Mary or Peter | they have cooked |
| 3 | o | o-ɣok-a | mote 'tree' | it (SG) has come |
| 4 | e | e-ɣok-a | mete 'trees' | it (PL) has come |
| 5 | re | re-ɣok-a | evavae'pawpaw' | it has come |
| 6 | ma | ma-ɣok-a | matunda 'fruits' | they have come |
| 7 | ɣe | ɣe-ɣok-a | kevaŋa 'panga' | it has come |
| 8 | i | i-ɣok-a | ivaŋa 'pangas' | they have come |
| 9 | e | e-ɣok-a | mboko 'rabbit' | it has come |
| 10 | i | i-ɣok-a | mboko 'rabbits' | they have come |
| 11 | ro | ro-ɣok-a | rotambi'thread' | it has come |
| 12 | ɣa | ɣa-ɣok-a | ɣatambi 'a small thread' | it has come |
| 13 | to | to-ɣok-a | twana 'children' | they have come |
| 14 | o | o-ko-ɲiv-a | wɛndɔ 'love' | it has reduced |
| 15 | o | o-ko-ɲiv-a | oruɣi 'cooking' | it has reduced |
| 16 | va | va-ko-ɲiv-a | vando 'place' | it has reduced |
| 17 | ɣo | ɣo-ko-ɲiv-a | kondo 'places' | it has reduced |

**Table 7:  Seventeen morphemes of the subject pronoun determined by the Noun in Kiembu**

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The verb negation slot has two possible morphemes **/ t-** / and / **nd-/** depending on number and person. For example:

17. a)  / **t**-e- ŋɛnd-a-ɣɛnd-a/ 'I will not move' or   **/nd**-e-ko-ɣɛnd-a-ɣɛnd-a/  'I will not

    move'

   b) / **t**-o-ɣɛnd-a-ɣɛnd-a/ 'you (SG.) will not move' or /**nd**-o-ko-ɣɛnd-a-ɣɛnd-a/ 'you

    (SG.) will not move'.

 The examples in 17 (a) are used with first person singular nouns while those in 17 (b) are used with second person singular nouns.

Tense and aspect morphemes depend on the specific tense or aspect used as seen in Table 8 below.

| Tense | Examples | |
|---|---|---|
| | Past | **Distant - irɛ**<br>/ ne-wa-o-k-**irɛ** 'he came' |
| | | **Near -ɣo-**<br>/ ma-**ɣo-sɔ**-ka / 'they have gone back' |
| | Present | **-o-**<br>/ ma-**o-**ri-a/ 'they have asked' |
| | Future | **Distant -ɣa-, ka-**<br>/no-**ɣa**-sok-a/ 'you will go back'<br>/no-**ka**-rem-a/ 'you will cultivate' |
| | | **Near – ɣa-, ŋa**<br>/a-**ɣa**-sok-a/ 'he will go back'<br>ŋa-sok-a/ 'I will go back' |
| Aspect | progressive | **-ra-**<br>/ no-**ra**-rem-a/ 'he is cultivating' |
| | Perfective | **–wa-**<br>/ne-**wa**-rem-a/ 'he has cultivated' |
| | Habitual | **- ɣa-**<br>/a-rem-a-**ɣa**/ 'he cultivates' |

**Table 8: A summary of Morphemes that mark Tense and Aspect in Kiembu**

The object pronoun is much like subject pronoun determined by the class of the noun in question as well as person as already seen in the discussion on the subject pronoun in this section. The object pronoun is affixed before the verb root as shown in the following example.

18.　　a) /**mo**-kɛðiɛ/　　'greet him/ her'

　　　　b) /**ma**-kɛðiɛ/　'greet them'


The object pronoun is marked in a verb when there is no nominal object. If someone uses the object pronoun when a nominal object is present, it results in ill formed construction as the following illustration shows.

19. a) ***mo**-ɣendaɣendɛrɛ　Jane.　　'move for Jane'

　　c.f.

　　b) ɣendaɣendɛra Jane.　　　　'move for Jane'

In example 19 (a) above, the object pronoun **mo-** has been used in a construction where the nominal object Jane is present making it ill formed.


The verb root is the base form on which affixes are added to modify meaning, but it carries the basic meaning of the verb. Maringah (1987:91) observes that when other morphemes are added to the verb root they modify the meaning, but do not change the basic meaning of the verb. Example 20 below illustrates this:

20.a) ruɣ-a　　　　　'cook'

　　b) ruɣ-er-a　　　'cook for'

c) ruɣ-i-ði-a      'assist someone to cook'


Mood can be seen as either conditional expressed by the morpheme –**ŋge-**

For example:

21.  / ne-**ŋge-**re-mir-e/   'if I had cultivated'

Mood can also be seen as imperative expressed by the final vowel –**a** as seen in example

22 below.

   22.  a) ruɣ-a      'cook'

      b) ɔs-a      'take'

      c) in-a      'sing'

      d) ok-a      'come'


Reversive, stative, causative form, reciprocals, applicative and addressee plurality form

part of verbal extension and have one morpheme each as shown in example 23.

   23. a) Reversive  -**or**-      /va-ŋg-**or**-a/ 'disarrange'

      b)  Stative  -**ɛk-**      /ðɔ-d-**ɛk**-a/  ' repair '

      c)  Causative form  **-iði-**   /rug-**iði**-a/  'help someone to cook'

      d)  Reciprocals  -**an-**      /kwe-r-**an**-a/   'to tell'

      e)  Applicative  **-er**-      /in-**er**-a/ 'sing for'

**2.3.3 Adverbs**

Adverbs are words that modify verbs or sentences (Ford 1974). They can be classified according to their function or modification role. Below are examples of adverbial classifications in Kiembu examples.

24. a) Adverbs of manner; /weɣa/ ' good'

   /karoɣe/ 'fast'

   b) Adverbs of time;    /reu/ 'now'

   /rosio/ 'tomorrow'

   c) Adverbs of place; /ava/ ' here'

   /varɛa/ 'there' (away from the speaker)

   /vau/ 'there' (near the speaker)

   d) Adverbs of frequency; /remwɛ/ 'once'

   e)  Adverbs of degree; /monɔ/ 'very'

**2.3.4 Adjectives**

Adjectives are classified according to their noun modification roles (Gathenji (1981) citied in Wachera (2002:60).  The following is the classification of adjectives in Kiembu.

25. a) Adjectives expressing quality ;    /nðɛru/ ' clean'

   /mbjo/ 'hot'

   /mbɔru/ 'not hot,

b) Adjectives expressing quantity ;  /ɔɲðɛ/          'all of them'

/ɲeɲge/          'many'

c) Possessive adjectives are realized as morphemes and are subject to class

agreement as discussed in section 2.3.1

**2.3.5 Pronouns**

Pronouns in Kiembu are either bound morphemes or free morphemes (Gathenji (1981) as

cited in Wachera (2008: 55). Pronouns that are bound morphemes have affixes that are

concordial to the nominal subject class and grammatical number as discussed in the

section 2.3.2.Kiembu has personal pronouns, neuter/ impersonal pronouns, indefinite

pronouns and possessive pronouns. Personal pronouns in Kiembu are as follows:

26. a) 1ˢᵗ person singular          ni          'me'

b) 2ⁿᵈ person singular          wɛ          'you'

c) 3ʳᵈ person plural          ɔ          'them'

d) 1ˢᵗ person plural          tuɛ          'us'

e) 2ⁿᵈ person plural          muɛ     'you (plural)'

Impersonal pronouns also referred to as neuter pronouns, are used to replace nouns not

referring to human beings. The noun class in which the nominal subject falls in

determines the form of the pronoun. The following examples show impersonal pronouns

in Kiembu.

27. a) sio    'them'

    b) mo    'them'

    c) yo    'it'

    d) ko    'it'

    e) tuo    'them'

    f) ruo    'it'

The impersonal pronouns are used depending on the noun class as discussed in section 2.3.2.

Indefinite pronouns are pronouns which expresses a part of the whole or part of a quantity. Examples of indefinite pronouns in Kiembu are as following:

28. a) amwe    ' some (people)'

    b) imwe    'some (things)'

    c) mɔna    'of a type'

    d) kɔna    'indefinite place'

Possessive pronouns indicate ownership of persons or things. Kiembu possessive pronouns, like possessive adjectives, are concordial to the nominal subject. Nominal prefixation is attached on possessive pronouns as example 29 below shows.

29.  Noun                                    Possessive pronoun

| a) | mware | 'girl' | waku | 'yours (SG)' |
| b) | mware | 'girl' | wao | 'theirs (PL)' |
| c) | mware | 'girl' | weɲu | 'yours  (PL)' |
| d) | mware | 'girl' | wakwa | 'mine (SG)' |
| e) | mote | 'tree' | wakwa | 'mine (SG)' |

| f) | mete | 'trees' | jakwa | 'mine (PL)' |
| g) | etunda | 'fruit' | rjaɔ | 'theirs (PL)' |
| h) | matunda | 'fruits' | caɔ | 'theirs (PL)' |
| i) | ɣetanda | 'bed' | kjaɔ | ' theirs (SG)' |
| j) | itanda | 'beds' | sjaɔ | 'theirs (PL)' |
| k) | itanda | 'beds' | sjaku | 'yours (PL)' |

## 2.3.6 Prepositions

Prepositions are relational words that express sense referent. Prepositions describe a relationship between other words in a sentence. They show the place of one noun in relation to another (Ford 1974). They can be termed as nouns of place since they indicate the position of a noun in relation to another (Wachera 2008:63). The following are examples of prepositions in Kiembu.

30. Prepositions

a) nðe      'down'

b) ndare      'inside'

c) ruŋgu      'under'

d) mbɛrɛ      'in front of'

e) ɲɟa      'outside'

f) ɛɣoro      'up'

44

## 2.4 Summary

This chapter has shown the Kiembu phonemic inventory and word classification. It has established that Kiembu vowel system comprises of seven short vowels and their corresponding long vowels making fourteen vowels. As Mutahi (1983) states, vowel length is a distinctive feature in Kiembu, hence the distinction between short and long vowels. It can therefore be described as a seven-vowel system (Maringah 1987: 22).

This chapter has also established Kiembu consonant phonemes. It has demonstrated that Kiembu has eighteen consonants. Among the eighteen consonants are two glides and five prenasalised consonants. The study has established that Kiembu does not have the palatal alveolar fricative /ʃ/ as Mutahi (1983: 109) shows but has the alveolar fricative /s/ in its place. Kiembu has therefore both simple phonemic consonants and consonant clusters. Consonant clusters function as one phonemic unit in Kiembu (Mutiga 2002:39-40).

This chapter has also discussed the process of glide-formation that is there in Kiembu. The process changes some vowel sounds into semi-vowels.

The chapter has also introduced classification of words in Kiembu with a detailed analysis of morphological structure of different word categories. Nouns, verbs, adverbs, adjectives, pronouns and preposition are the word classes discussed in this chapter. The data discussed in chapter 3 and 4 is drawn from these word categories.

# CHAPTER THREE

## A MORPHOLOGICAL ANALYSIS OF REDUPLICATION IN KIEMBU

### 3.0 Introduction

This chapter focuses on reduplication that seems to be a common morphological feature in Kiembu. It deals with various types of morphological reduplication in Kiembu, morphological processes that interact with reduplication, grammatical and semantic functions of reduplication in Kiembu.

### 3.1 Types of Morphological Reduplication in Kiembu

Words are reduplicated in Kiembu in various ways. These various ways of reduplication are discussed in sections 3.1 of this chapter.

### 3.1.1 Total Reduplication

Total reduplication is the morphological process where the reduplicant and the base are identical at the segmental level (Ngunga 2002: 105). It is called full reduplication because the entire word is repeated. This type of reduplication is the most common in Kiembu since most word classes undergo total reduplication. It is common with verbs, nouns, adjectives, adverbs, prepositions and pronouns. Consider the following examples of total reduplication in Kiembu.

31. a) oka   'come'   okaoka (verb)   'come closer'

  b) iriɔ   'food'   iriɔiriɔ (noun)   'real food'

  c) vau   'there'   vauvau (adverb)   'exactly there'

  d) ndare   'inside'   ndarendare (preposition)   'completely inside'

  e) waku   'yours'   wakuwaku (pronoun)   'emphatic yours or

                     yours alone'

  f) ndoro   'sour'   ndorondoro (adjective)   'very sour'

Example 32 is a structure showing total reduplication of 31(a) above according to Morphological Doubling Theory. The example illustrates MDT's approach to reduplication of the stem /oka/ in Kiembu. MDT couples morphological constituents that agree in their semantic specifications. This means that the constituents which are doubled in reduplication are equal semantically. In the example, the base and the reduplicant have the same semantic value.

32.     [okaoka] 'come closer' (f + closer)

         /\

   /oka/ (f)    /oka/ (f)    f = come
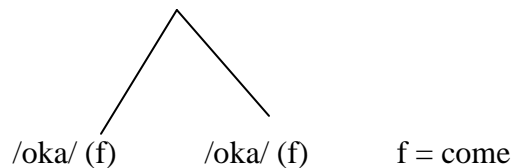
According to MDT, the morphology calls twice for identical inputs /oka/ 'come' that results to /okaoka/, which has some added meaning, 'closer.' The inputs are identical semantically. This morphological doubling in Kiembu serves a morphological purpose of

marking a change in meaning. The input has the semantic value 'come'. This meaning changes after total reduplication to mean 'come closer'.

### 3.1.2 Partial Reduplication

Partial reduplication is a form of reduplication where only part of the base is reduplicated. Partial reduplication is not very common in Kiembu. The following are a few examples of partial reduplication in Kiembu.

   33. a) ndasa         'tall'         ndasarasa       'a bit taller'

     b) weɣa          'goodness'     weɣaeɣa      ' a bit better'

In example 33, partial reduplication is realized. Derivational affixes **nd** – and **w-** are not reduplicated. In example 33 (a) there is addition of the sound /r/ for easier articulation. Partial reduplication is also realized in Kiembu where pre-stem affixes do not reduplicate. Consider the following examples in Kiembu:

   34. a) ne-ma-ra-oka 'they are coming'     ne-ma-ra-okaoka 'they are coming closer'

     b)  ko-ma-rɛɣa 'to reject them'       ko-ma-rɛɣarɛɣa    'to reject them a little'

In example 34, pre-stem affixes **ne-ma-ra-** and **ko-ma-** are not reduplicated.

In addition, extension suffixes attached to the root do not reduplicate in Kiembu. Consider the following examples:

   35.      a) remi-ðia 'help someone cultivate' remaremiðia  'help someone cultivate for a while'

       b) ruɣa-nera 'cook for one another' ruɣaruɣanera 'cook for one another for a while'

      c) mɛɲɛ-rɛra 'take care of'          mɛɲamɛɲɛrɛra 'take a little care of'

In example 35, extension suffixes **-ði-**, **ner-** and **- rɛr-** are not reduplicated. These suffixes are the causative, applicative and stative forms respectively of the verbal extension morphemes. The morphemes have been discussed in detail in chapter two of this work.

### 3.1.2.1 Prefixal Reduplication

Prefixal reduplication is a form of reduplication where the reduplicant is added before the root as a prefix. It is also called initial reduplication (Spencer 1991: 150). This type of reduplication is common with verbs in Kiembu.

36. Verb                           Reduplicated form

   a) remiðia  'help someone cultivate'   remaremiðia  'help someone cultivate a

                                            little'

   b) mɛɲerɛra 'take care of'             mɛɲamɛɲerɛra 'take care of a little bit'

   c) kɛðɛra     'harvest for someone'    kɛðakɛðɛra  'harvest for someone  a little'

   d) ruɣanera  'cook for one another'    ruɣaruɣanera  'cook for one another a little'

As observed from example 36 above, verbs in Kiembu undergo prefixal reduplication with the semantic value of doing something a little. According to MDT, the semantic value of some verbs in Kiembu changes when the word is reduplicated, to mean doing the action described by the verb a little bit.

**3.1.2.2 Suffixal Reduplication**

Suffixal reduplication is the repetition of the end of the base. Reduplication takes place to the right of the base as a suffix. This form of reduplication is also common with Kiembu verbs.

37. Verb                                          Reduplicated form

   a) komarɛɣa   'to refuse them'                    komarɛɣarɛɣa 'to refuse them a little'

   b) nemaraoka   'they are coming'                nemaraokaoka 'they are coming closer'

   c) komasuna   'to take from them by force'    komasunasuna 'to take from them by force a little'

From the discussion in section 3.1 above, it is clear that stems and roots are the units that take part in reduplication in Kiembu. From section 3.1.2.1, examples 36 a, b, and c shows roots taking part in reduplication. The roots here are rem-, mɛɲ- and kɛð- respectively.

Section 3.1.2.2 shows stems taking part in reduplication.  Examples 37 a, b and c of this section have the stems rɛɣa, oka and suna taking part in reduplication. Roots and stems are morphological constituents taking part in reduplication as presupposed by MDT.


**3.2 General Concepts conveyed by Reduplication in Kiembu**

Reduplication in Kiembu mainly occurs for grammatical or semantic contrast (O' Grady et al 1997:143). According to Morphological Doubling Theory, the semantics of the output (reduplicated form) is specified in each construction as a particular function of the semantics of the inputs. It is the inputs that determine the semantic value of the output. This has been explained in example 32 of section 3.1.1.

A lot of reduplication in Kiembu results to reduplicated forms that lead to changes in the semantic value of words; of course, there are always exceptions to this rule. Some of the concepts conveyed by reduplication in Kiembu are augmentation, intensification, doing something for a while or a little, turning adjectives into comparative adjectives, the act of doing something, repeated occurrence of events, emphasis, expressing permission, commanding and marking a change in grammatical category.
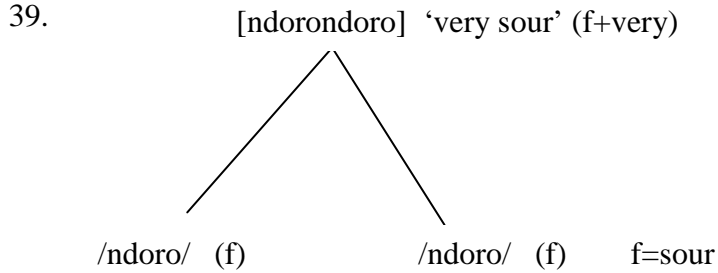
### 3.2.1 Augmentation

Augmentation refers to the increased quantity, activity or greatness (Oxford Advanced Learner's Dictionary). This concept fits in MDT since augmentation adds to the semantic value of a word as the examples below shows. Adjectives in Kiembu are augmented through reduplication. Any adjective in Kiembu is reduplicated to bring in the semantic value very. The following adjectives in Kiembu illustrate that.

38. Adjectives

a) ndoro 'sour'        ndorondoro        'very sour'

b) nɛnɛ 'big'          nɛnɛnɛnɛ          'very big'

c) ɲomo 'hard'         ɲomoɲomo          'very hard'

d) nini 'small'        nininini          'very small'

e) mbɛɣa 'good'        mbɛɣambɛɣa        'very good'

Examples in 38 shows total reduplication in Kiembu as discussed in section 3.1.1. Example 39 below is a representation of total reduplication of the stem /ndoro/ 'sour'

51

which when reduplicated is augmented to mean very sour. The augmentation here shows increased quantity.

39.                    [ndorondoro]  'very sour' (f+very)



        /ndoro/  (f)              /ndoro/  (f)        f=sour


The inputs in example 39 are semantically equal as presupposed by MDT. Reduplication here serves the semantic value of augmentation.
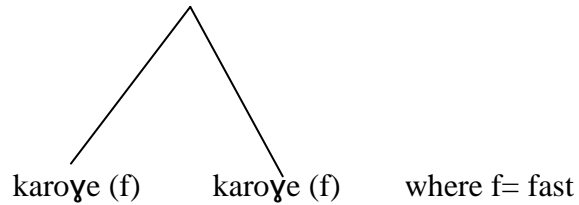

## 3.2.2 Intensification

Manner adverbials in Kiembu are intensified through reduplication. The intensity of the manner in which something is done is increased through reduplication. Adverbials in example 40 below show this in Kiembu.

40. Adverbials

a)  nae 'bad'        naenae 'extremely bad'

b)  karoɣe 'fast'   karoɣekaroɣe 'extremely fast'

c)  wɛɣa 'well'    wɛɣawɛɣa 'extremely well'


Consider the following structure according to Morphological Doubling Theory approach to reduplication.  The example is taken from Example 40 (b).

41.         [karoɣekaroɣe] 'extremely fast' [f + intensification]

```
                          /\
                         /  \
                        /    \
                       /      \
                      /        \
              karoɣe (f)    karoɣe (f)      where f= fast
```

Example 41 illustrates MDT's approach to the reduplication of the stem /karoɣe/ which

means 'fast.' The reduplicant and the base are semantically similar as presupposed by

MDT. Reduplication here serves the semantic value of intensification. The meaning of

the adverb before reduplication (fast) is intensified to mean extremely fast through

reduplication.

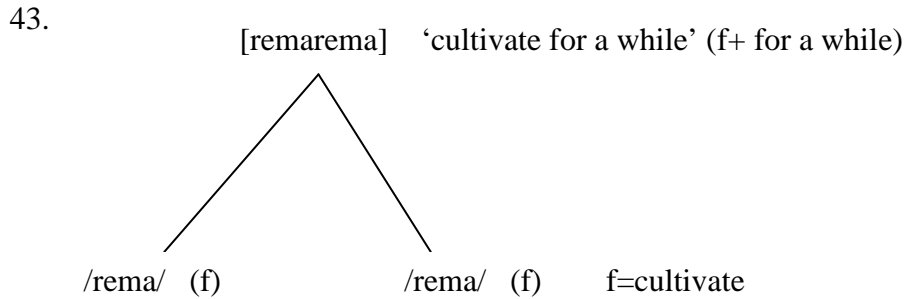
**3.2.3 Doing Something for a while**

Most of the verbs in Kiembu undergo reduplication to bring out the semantic value of

doing something for a while before it stops. Consider the examples below:

42. Verbs

   a)  rema 'cultivate'             remarema 'cultivate for a while'

   b)  ruɣa 'cook'                ruɣaruɣa 'cook for a while'

   c)  rera 'cry'                 rerarera 'cry for a while'

   d)  roɣa ' jump'             roɣaroɣa 'jump for a while'

   e)  kɛða 'harvest'          kɛðakɛða 'harvest for a while'

The above are examples of total reduplication in Kiembu. Example 43 below illustrates MDT's approach to reduplication of the stem /rema/ 'cultivate' in Kiembu. MDT presupposes double insertion of morphological constituents as the diagram below shows.

43.

            [remarema]    'cultivate for a while' (f+ for a while)

     /rema/  (f)            /rema/  (f)     f=cultivate

The reduplicant and the base are identical at the level of meaning as presupposed by MDT. Reduplication here serves the semantic value of doing something for a while. The stem /rema/ 'cultivate' has some added meaning 'cultivate for a while' after reduplication.

### 3.2.4 Turning Adjectives into Comparatives

Reduplication in Kiembu is used to turn adjectives into their comparative forms. Consider the following examples in Kiembu.

44. Adjectives           Comparatives

  a) nini 'small'           ninanini 'smaller'

  b) nɛnɛ 'big'            nɛnanɛnɛ 'bigger'

  c) ŋuve 'short'          ŋuvakuve 'shorter'

  d) vakuve 'near'        vakuvakuve 'nearer'

  e) ndasa 'tall'          ndasarasa 'taller'

Examples in 44 above illustrate partial reduplication discussed in section 3.1.2. The examples show vowel substitution during reduplication. In 44 (a), a high vowel is substituted with a low vowel. However, in examples 44 (b), (c) and (d) a low vowel is substituted with a mid vowel. In 44 (e), derivational prefix **nd-**does not reduplicate and sound /r/ is inserted for easier articulation as mentioned in section 3.1.2. Example 45 below is a presentation of partial reduplication of (a) above according to MDT.

45.

[ninanini]    'smaller' (f+comparative)

/nini/  (f)          /nini/  (f)        f=small
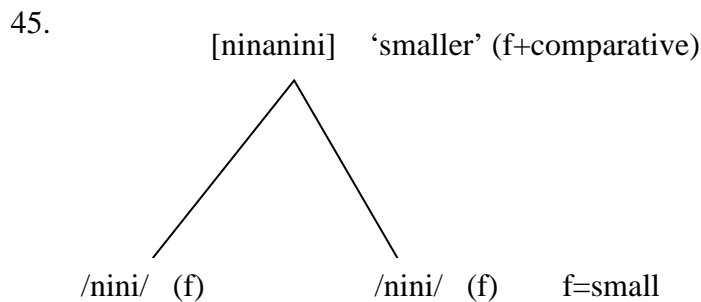
According to MDT, the morphology calls twice for inputs that are equal in meaning. The input here is /nini/ 'small' that results to /ninanini/. This output has a different meaning, 'smaller'. In addition, vowel substitution has taken pace as explained above.

### 3.2.5 The act of doing something

Some verbs in Kiembu are reduplicated to bring out the sense of act of doing something. The following examples demonstrate this in Kiembu.

46.    Verbs

a)  oroɣi 'jumping'        oroɣaroɣi 'the act of jumping'

b)  oɲiti ' touching'      oɲitaɲiti   'act of touching'

c)  oðɔmi 'reading'        oðɔmaðɔmi   'act of reading'

55

d) oreri 'crying'          orerareri 'act of crying'

e) oðɛki 'laughing'        oðɛkaðɛki 'act of laughing'

Example 47 taken from Example 46 (d) shows that morphological reduplication in MDT is a double insertion of morphological constituents.

47.
                              [orerareri]    'act of crying'



            /oreri/  (f)              /oreri/  (f)      f=crying
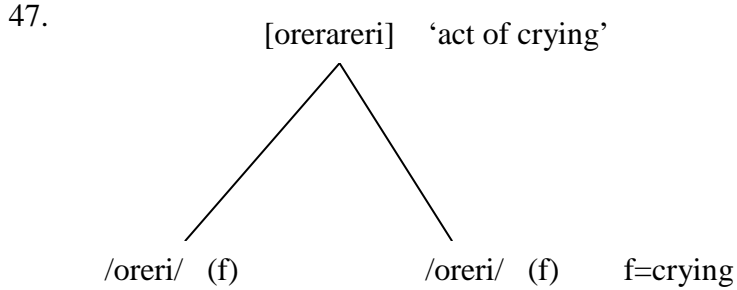
In the example above, the inputs have the same semantic value as presupposed by MDT. The pre-stem prefix is not reduplicated as was mentioned in section 3.1.2. There is also substitution of a high vowel /i/ with a low vowel /a/. This is because a reduplication construction may be modified phonologically as was discussed in chapter one of this work.  That is to say, phonological rules interact with reduplication as mentioned in the following chapter.


### 3.2.6 Repeated Occurrence of Events

Reduplication of certain verbs in Kiembu gives the semantic value of repeated occurrence of events/ doing something frequently. Some verbs in Kiembu reduplicate to bring out the meaning of repeating an event. The verb becomes a frequentative verb after reduplication.  The following examples illustrate this in Kiembu.

48. a) koðama 'move out of a place'  koðamaðama 'move from place to place

    severally.

    b) koroɣa 'to jump'            koroɣaroɣa 'jumping repeatedly'

    c) korera'to cry'             korerarera  'to cry several times'

    d) kuma 'to go out'           kumauma 'to go out several times'


In Examples 48 a, b and c, the pre-stem prefix ko- does not take part in reduplication. It is

the stem that reduplicates. In Example 48 (d) the pre-stem prefix k- does not reduplicate.

As stated in section 3.1.2, pre- stem affixes do not reduplicate in Kiembu.

Example 49 taken from example 48 (d) shows that morphological reduplication in MDT

is a double insertion of morphological constituents.

49.        [korerarera] ' to cry several times'



/korera/  (f)        /korera/  (f)    f= to cry
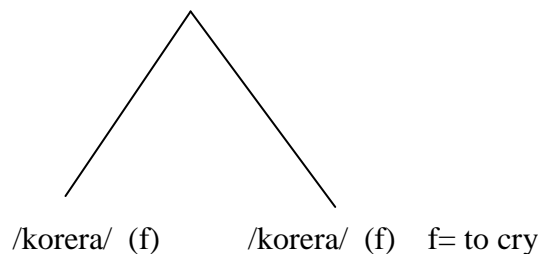

In Example 49, the morphology calls twice for the morpho semantic feature /korera/

which means to cry. It is the stem /rera/ that reduplicates. Derivational prefix **ko-** does

not take part in reduplication. The reduplication gives a semantic contribution of to cry

several times. The meaning of this reduplication construction is a property of the inputs.

The identity between the base and the reduplicant is semantic.


57

### 3.2.7 Expressing Permission

Reduplication of verbs in Kiembu also expresses permission. Verbs in example 50 illustrate this in Kiembu.

50. a) ɔsa 'have it'　　　　　ɔsaɣwɔsa 'permission given so have it'

   b) oka 'come'　　　　　okaɣoka　'permission given so come'

   c) ðie 'go'　　　　　　ðiekoðie 'permission given so go'

   d) uma 'go out'　　　　umakuma 'permission given so go out'


In Example 50 above, the pre-stem affixes in bold namely ɣw-, ɣ-, ko- and k- do not take part in reduplication as explained earlier. The affixes are inserted in the reduplicant to express permission in the above Kiembu examples.


### 3.2.8 Emphasis

Almost any noun in Kiembu may be followed by its own stem for emphasis. This is especially to bring out the semantic value that something is real as opposed to the other. For instance, one would talk of a real phone as opposed to a toy phone through reduplication of the noun phone in Kiembu. /ðimo/'phone' /ðimoðimo/'a real phone'.

The following are more examples in Kiembu:

51. a) iriɔ 'food'　iriɔiriɔ 'real food as opposed to junk food'

   b) mosie 'home' mosiemosie 'home of your parent as opposed to current residence'

c) kana 'baby'        kanakana 'real baby as opposed to a doll baby'

d) mwɛnɛ 'owner'      mwɛnɛmwɛnɛ 'real owner as opposed to one renting'

Other examples of word classes, which express emphasis when reduplicated in Kiembu, include adverbials, pronouns and prepositions. Examples 52, 54 and 55 illustrate this in Kiembu.

Adverbials in Kiembu undergo total reduplication for emphasis as the examples below shows.

   52. Adverbials

   a) reu 'now'          reureu  'just now'

   b) vau 'there'        vauvau  'specifically there'

   c) remwe 'once'       remweremwe 'just once'

Example 53 is a diagram of total reduplication of 52 (a) according to Morphological Doubling Theory. This example illustrates MDT's approach to reduplication of the stem /reu/ 'now' in Kiembu.

   53.              [reureu]    'just now' (f+just)

            /reu/  (f)              /reu/  (f)      f=now
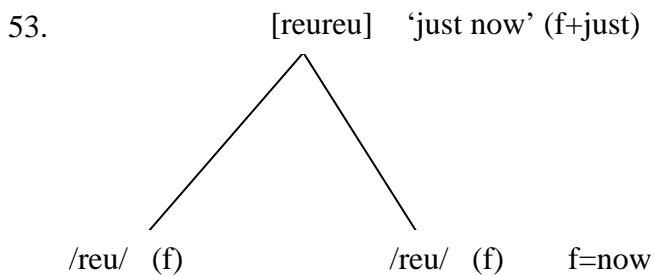
In Example 53, the base and the reduplicant have the same semantic value. The stem /reu/ 'now' has some added meaning 'just now' after reduplication. Reduplication here serves the semantic value of emphasizing.

Pronouns in Kiembu also undergo total reduplication for emphasis as shown below.

54. Pronouns

a)  wakwa 'mine'              wakwawakwa 'mine alone'

b)  siaku 'yours'             siakusiaku 'yours alone'

c)  maɔ 'theirs'             maɔmaɔ 'theirs alone'

d)  sio 'ones (indefinite)'   siosio 'the exact ones'

e)  mɔ 'ones (indefinite)'    mɔmɔ 'the exact ones'

f)  kɔ 'one (indefinite)'     kɔkɔ 'the exact one'

Personal pronouns in Example 54 (a), (b) and (c) above undergo total reduplication with the semantic value of not belonging to anyone else. Indefinite pronouns undergo total reduplication with the semantic value of exact one(s). This is illustrated in Examples 54 (d), (e) and (f) above.

Prepositions undergo total reduplication in Kiembu with the semantic value of completely as Example 55 below shows. This type of reduplication in Kiembu is used for emphasis.

55. Prepositions

a) ndare 'inside'          ndarendare 'completely inside'

b) ɲɟa 'outside'          ɲɟaɲɟa 'completely outside'

**c)** eɣoro 'up'          eɣoroeɣoro 'completely up'


Example 56 below illustrates MDT approach to reduplication of the stem /ndare/ 'inside taken from example 55 (a).

56.          [ndarendare]    'completely inside' (f+completely)



/ndare/   (f)                    /ndare/   (f)        f=inside
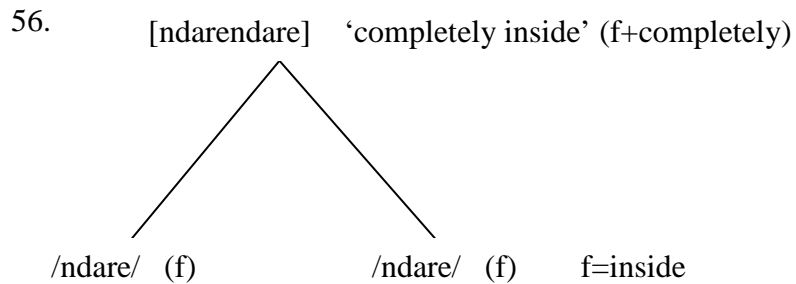

In the example, the base and the reduplicant have the same semantic value 'inside'. Reduplication here serves the semantic value of emphasis. The meaning of the preposition before reduplication 'inside' is emphasized to mean completely inside through reduplication.


### 3.2.9 Commanding

Some words in Kiembu reduplicate with the semantic value of commanding. The following examples demonstrate this in Kiembu.

57. a) tiɣa 'stop'    tiɣatiɣa 'don't'

  b) nare 'no'    narenare 'never'

Examples in 50 of section 3.2.7 are also used to express command. This is because the meaning or semantic function of a reduplication construction may be varied depending on the context in which it is used. For instance /okaɣoka/ in example 50 (b), which may express permission and command when used in varied contexts. If this reduplicative is used when the speaker is welcoming someone, it expresses permission. On the other hand, if the speaker is telling someone to go to him by force, it expresses command. Those examples are a representation of the possibility that some reduplication construction used in different contexts may have varied meanings.

## 3.3 Morphological Processes

### 3.3.1 Derivation

Derivation seems to be the only morphological process responsible for creation of reduplicated forms in Kiembu. Derivation is a morphological process that results in formation of new words or lexemes where one word category is derived from another one (Lyons 1968:522). Reduplication is a form of derivation in that it involves affixation. Its operation, however, is different in that the identity of the added material is partially or wholly determined by its base (Spencer 1991:13). Reduplication as a form of derivation is also called the repetitive compounding (Zapata 2007: 6). The examples in 58 below demonstrate formation of new words in Kiembu through reduplication. They are seen as

new words because the meaning of each word is different from the meaning assigned before reduplication.

58. Base             Reduplicative

  a. kanini 'small'      kaninanini 'smaller'

  b. nene 'big'        nɛnanɛnɛ 'bigger'

  c. karoɣe 'fast'     karoɣaroɣe 'faster'

In Kiembu just as in other languages, derivation is sometimes also subdivided into class maintaining derivation and class changing derivation.


### 3.3.1.1 Class maintaining Derivation

Class maintaining derivation is the morphological process of forming new lexemes that are of the same part of speech as the base from which they are formed. Examples 59, 60 and 61 shows class maintaining derivations with reduplication in Kiembu. The examples also illustrate total reduplication discussed in section 3.1.1.

59. Adverbials

    a. reu 'now'         reureu 'just now'

    b. rosio 'tomorrow'    rosiorosio 'just tomorrow'

    c. vau 'there'        vauvau 'right there'

    d. ɲiŋe 'much'       ɲiŋeɲiŋe 'very much'

    e. vio 'complete'     viovio 'completely'

    f. karoɣe 'fast'      karoɣekaroɣe 'very fast /quickly'

Reduplication of adverbials in Kiembu is class maintaining as seen above.

60. Verbs

    a) roɣa          ' jump'        roɣaroɣa       'jump a little'

    b) rema        'cultivate'    remarema     'cultivate a little'

    c) sɔka        'go back'     sɔkasɔka      'go backwards a little'

    d) kɛna        'be happy'    kɛnakɛna     'be happy a little'

    e) rera         'cry'         rerarera       'cry a little'

The verbs above illustrate total reduplication in Kiembu.

61. Adjectives

    a) nɔru        ' fat'         nɔranɔru      'fatter'

    b) nini         'small'      ninanini      'smaller'

    c)  nɛnɛ        'big'         nɛnanɛnɛ     'bigger'

    d) ndasa      'tall'        ndasarasa    'taller'

    e) mbɛɣa     'good'      mbɛɣaɛɣa    'better'

In 61 (a) and (b), there is vowel substitution whereby a high vowel is substituted with a low vowel in the reduplicative as discussed in section 4.1.3. However, in example 61 (c), a low vowel is substituted with a mid vowel and not a high vowel. Examples 61 (d) and (e) are explained in section 3.1.2 of this chapter.

As seen above, reduplication of some verbs and some adjectives in Kiembu is class maintaining.

### 3.3.1.2 Class changing Derivation

Class changing derivation produces lexemes that belong to different word classes from their bases. In other words, it results into change of word class. Therefore, reduplication can also serve seemingly arbitrary derivational functions. This means that derivational functions of word formation that reduplication serves are not by necessity, neither are they planned or chosen by the speakers. Moreover, derivation through reduplication does not follow a consistent rule. Reduplication makes changes in the syntactic category or verbal argument structure. For instance, nouns can be formed from verbs by reduplication. Consider Example 62 below in Kiembu.

62. Verb                    Noun

   a) roɣa    'jump'        oroɣaroɣi    'the act of jumping'

   b) sɔka    'go back'     osɔkasɔki    'act of going back severally'

   c) ɲita    'touch'       oɲitaɲiti    'the act of touching here and there'

   d) uma     'go out'      umaumi       'the act of going out several times'

   e) ɔsa     'take'        wɔsaɔsi      'the act of taking severally'

In Example 62 (a), (b) and (c) above, the pre-stem prefix **o-** is inserted during reduplication. In addition, a low vowel /a/ is substituted with a high vowel /i/. The same substitution occurs in example (d) and (e). Pre-stem prefix w- is inserted during reduplication in example (e).

Example 63 below illustrates MDT's approach to reduplication of the stem /soka/ in Kiembu. MDT couples morphological constituents that are identical semantically.

63.
        [osokasoki]   'act of going back

/soka/  (f)          /soka/  (f)     f=go back
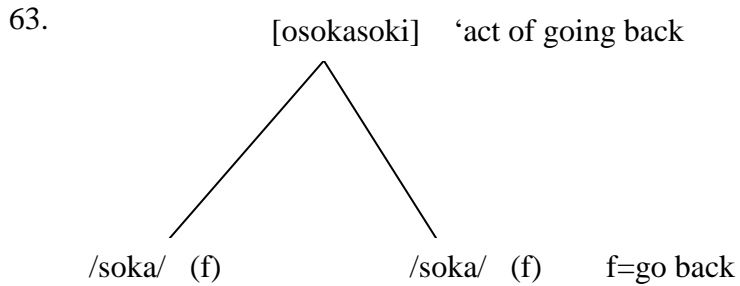
In the example, the base and the reduplicant have the same semantic value 'go back'. Reduplication gives a semantic contribution of the act of going back severally. This morphological doubling serves a morphological purpose of marking a change in meaning.

### 3.3.2 Productivity

Reduplication is a synchronically productive word formation process. According to Omondi (1986:89) as cited in Okello (2007:39) reduplication may be said to be of restricted (limited) or unrestricted (unlimited) productivity. According to Booij (2005: 68), a morphological pattern is limited if it occurs to specific words and unlimited if it can be extended to other lexemes. Total reduplication in Kiembu is unlimited productivity since it occurs in a variety of word classes. On the other hand, partial reduplication that occurs on specific words is limited productivity. Examples 64, 66 and 67 given below are typical examples of words whose productivity is unlimited in Kiembu.

64. Manner adverbials

    a) karoɣe        'fast'        karoɣekaroɣe 'very fast'

    b) kavɔra        'slowly'      kavɔrakavɔra 'very slowly'

    c) nae          'bad'         naenae 'very bad'


Example 65 below taken from 64 (c) shows that morphological reduplication in MDT contributes to the semantic value of a word.

65.

              [naenae]   'very bad'  (f+very)

      /nae/  (f)            /nae/  (f)     f=bad
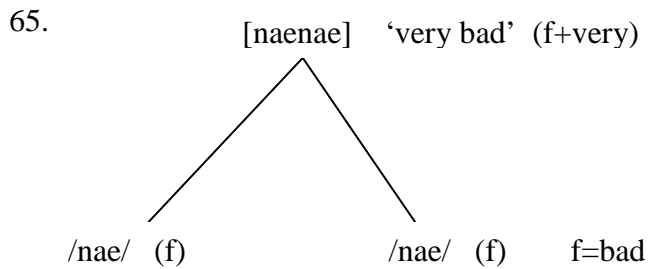

In the Example, the reduplicant and the base are semantically equal. Reduplication here serves the semantic value of augmentation as discussed in section 3.2.1.


66. Time adverbials

    a)  eɣɔrɔ        'yesterday'      eɣɔrɔeɣɔrɔ 'just yesterday'

    b)  rosio        'tomorrow'     rosiorosio 'just tomorrow'

    c)  reu         'now'        reureu 'just now '

67. Numerals

Any numeral in Kiembu can be totally reduplicated as follows.

a) emwe 'one'     emwɛemwɛ 'one by one, or one each'

b) iɲa 'four'     iɲaiɲa 'four by four, in groups of four or four each'

c) iðanɔ 'five'     iðanɔiðanɔ 'five by five, in groups of five or five each'

d) iɲaɲa 'eight'   iɲaɲaiɲaɲa 'eight by eight, in groups of eight or eight each'

e) ekomi 'ten'     ekomiekomi 'ten by ten, in groups of ten or ten each'

According to MDT, morphological doubling here occurs for a morphological purpose of marking a change in meaning. As Example 67 demonstrates, any numeral reduplicates in Kiembu with a change in meaning from the meaning assigned before reduplication. Examples 64, 66 and 67 above are illustrations of total reduplication in Kiembu, hence unlimited productivity as explained in this section. See examples of partial reduplication in section 3.1.2 that are cases of limited productivity in Kiembu.

**3.4 Summary**

This chapter has discussed the different types of morphological reduplication in Kiembu. These types of reduplication as has been established have different semantic contributions in Kiembu. It has been established that reduplication conveys meanings such as augmentation, intensification, doing something for a while before it stops, the act of doing something, repeated occurrence of events, emphasis, expressing permission, commanding and marking a change in grammatical category.

However, the meanings of reduplicated constructions are not always predictable in Kiembu. Different words reduplicated in a similar way may convey more than one meaning since reduplication is sometimes context bound.

This chapter has also discussed the morphological process of derivation that interacts with reduplication in Kiembu. Derivation also referred to as repetitive compounding has been established to be the only morphological process responsible for creation of reduplicated forms in Kiembu.

## CHAPTER FOUR

## A PHONOLOGICAL ANALYSIS OF REDUPLICATION IN KIEMBU

### 4.0 Introduction

This chapter gives a phonological analysis of reduplication in Kiembu. Phonological processes that interact with reduplication in Kiembu are discussed in this chapter. The chapter also discusses cases of phonological copying in Kiembu. The chapter also shows the effect of reduplication on the tone of a word in Kiembu.

### 4.1 Phonological Processes that interact with Reduplication

Reduplication, as stated by Omondi (1986) who is cited in Okello (2007:28), occurs with some major phonological processes of a language. This section will discuss some vowel processes that occur in some reduplicated forms in Kiembu. These processes include vowel harmony, vowel substitution and vowel lengthening.
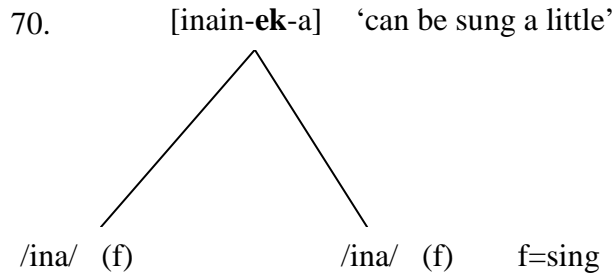
### 4.1.1 Vowel Harmony

There is vowel harmony between the vowel in the root of the verb and that in the infix. It is the vowel of the verb root that determines which vowel will occur in the infix.   For example, if the verb root is either /**i, u, e, a, o**/ the vowel of the infix will be**/ e**/ and if the vowel of the verb root is either/**ɛ** / or**/ɔ/** the vowel of the infix will be /**ɛ/** (Maringah 1987: 37). This type of harmony is demonstrated when the applicative morpheme **[-er-]** and the stative morpheme [**-ek**-] are added to the verb root during reduplication as indicated in 68 and 69 below.

68. a) ruɣa 'cook'        ruɣaruɣera                'cook for someone a little'

    b) viŋga 'close'      viŋgaviŋgera              'close for someone/ thing a little'

    c) ðɔma 'read'        ðɔmaðɔmɛra                'read for someone for a while'

    d) rɛta 'bring'       rɛtarɛtɛra                'bring something for someone for a while'

    e) tɛma 'cut'         tɛmatɛmɛra                'cut something for someone for a while'

    f)  rema 'cultivate' remaremera                'cultivate for someone for a while'


69. a) viŋga   'close'      viŋgaviŋgeka           'can be closed a little'

    b) ɛnda    'love (verb)   ɛndaɛndɛka           'can be loved a little'

    c) ðɔma    'read'         ðɔmaðɔmɛka           'can be read a little'

    d) ɔsa     'take'         ɔsaɔsɛka             'can be collected a bit'

    e) tuma    'consruct'     tumatumeka           'can be constructed  a little'

    f)  ina    'sing'         inaineka             ' can  be sung a little'


It should be noted that the vowel /**e**/ in the infix that is a tense vowel combines with **/e, i,**

**u/** which are tense vowels. These three vowels share the feature [+tense]. The vowel /**ɔ**/

which takes **/ɛ/** as its infix vowel is a lax vowel. The vowel /ɛ/ is also a lax vowel. From

this explanation, it is clear that the vowel in the root is similar to the vowel in the infix in

terms of phonetic features. This is to say, a tense vowel in the root takes a tense vowel in

the infix and a lax vowel in the root takes a lax vowel in the infix as illustrated in examples 68 and 69 above.

Example 70 below taken from 69 (f) above illustrates that morphological reduplication as presupposed in MDT is a double insertion of morphological constituents.

70.        [inain-**ek**-a]    'can be sung a little'

/ina/  (f)                    /ina/  (f)        f=sing

In the example, the morphology calls twice for the inputs /ina/ that has the semantic value sing.  It is the stem /ina/ that reduplicates. The infix **–ek**- (a stative morpheme) is inserted during reduplication. This infix creates vowel harmony where the vowel /e/ {+tense} combines with /i/ {+tense} in the root. This result to reduplication with the semantic value 'can be sung a bit'.

**4.1.2 Vowel Lengthening**

 Vowels in Kiembu are lengthened in the penultimate position especially in emphatic speech (Gachugi 2007: 69).  This is evident in reduplicated forms since reduplication is sometimes used for emphasis. The vowel in the penultimate position is lengthened in reduplication for emphasis. Example 71 below demonstrates this in Kiembu.

71. a) ɣatunɛ 'ripe'  ɣatunatunɛ 'a little ripe'    ɣatunatu: nɛ  'a little ripe (with

emphasis)'

b) kavɔra 'slowly'   kavɔrakavɔra 'slowly by slowly'   kavɔrakavɔ: ra  'slowly

by slowly (with emphasis)'

c) monɔ 'much'   monɔmonɔ 'very much'    monɔmo:nɔ  'very much (with

emphasis)'

d) korasa 'far'   korasakorasa 'very far'    korasakora: sa  'very far (with

emphasis)'

Example 71 (b) is used below to show how vowel lengthening is used for emphasis. The

reduplicated form /kavɔrakavɔra/ has the semantic value 'slowly by slowly'. However,

the vowel in the reduplicative is lengthened when the speaker wants to emphasize as

shown in the example. Lengthening is used for emphasis. The example is here also used

to illustrate MDT's approach to reduplication as follows:

72.        kavɔrakavɔ:ra  'slowly by slowly (with  emphasis)'



        kavɔra  (f)      kavɔ:ra  (f)      f= slowly
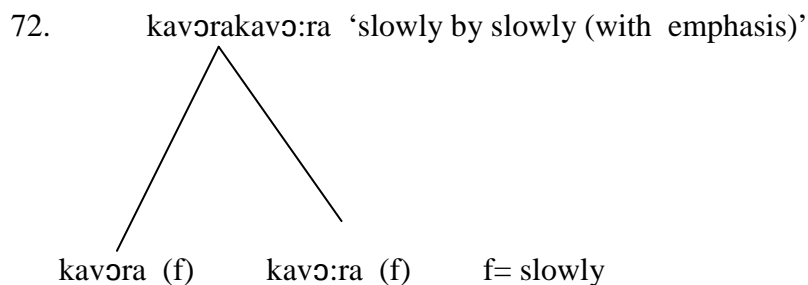
MDT couples morphological constituents that agree in their semantic specifications but

do not have to match phonologically. In the example, the base and the reduplicant are

identical at the level of meaning but are different in their phonology. Lengthening of the vowel here emphasizes on the pace.

### 4.1.3 Vowel Substitution

Vowel substitution is evident in reduplicated forms in Kiembu. A high vowel is substituted with a low vowel and vice versa (Gachugi 2007:81). The following examples demonstrate this in Kiembu.

| | | | | | |
|---|---|---|---|---|---|
| 73. a) | ruɣ**a** | 'cook' | oruɣaruɣ**i** | 'act of cooking  now and then' |
| b) | ɲit**a** | 'hold' | oɲitaɲit**i** | 'the act of holding' |
| c) | ðɔm**a** | 'read' | oðɔmaðɔm**i** | 'the act of reading' |
| d) | onɔr**u** | 'fatness' | onɔr**a**nɔru | 'a high degree of fatness' |

In Example 73 (a), (b) and (c) above, a low vowel /a/ is substituted with a high vowel /i/ during reduplication. However, in 73 (d), a high back vowel /u/ is substituted with a low front vowel /a/. This happens because vowel substitution is one of the phonological processes that interact with reduplication in Kiembu as mentioned earlier.

### 4.2 Phonological Reduplication in Kiembu

Phonological reduplication is a case where a phonological element is doubled, but is not amenable to a morphological doubling analysis, in part because the doubling does not result in change of meaning (Inkelas 2008:4). Reduplication is referred to as

morphological doubling if there is semantic or grammatical change. Phonological copying has been exemplified below in section 4.2.1.

## 4.2.1 Names of Things

Some names of things in Kiembu occur in reduplicated form not amenable to a morphological doubling analysis. Below are examples of phonological copying in Kiembu words.

74. a)  karakara 'larynx'

b) varavara 'road'

c) vikiviki 'motorbike'

The above examples occur in a reduplicated form but the repetition is not amenable to morphological doubling. There is no evidence that a morphological element occurs twice. We only see phonological copying of the elements. This is because the words given above do not occur singly in Kiembu.  They always occur in a reduplicated form. Reduplication is morphological doubling if there is a change in  meaning associated with the act of reduplication or if there is a change in grammatical category (Inkelas and Zoll 2005: 28).

In the examples given on phonological copying above, the base forms are unacceptable in Kiembu because they are nonexistent forms. Moreover, if the forms exist, they have a totally different meaning. For example, /kara/ which means 'sit/ finger' and /karakara/ which means 'larynx'.

## 4.3 Reduplication and Tone in Kiembu

Since Kiembu is a tonal language, it is important to look at the effect of reduplication on the tone of a word. Example 63 shows some tone patterns in Kiembu and how the pattern changes after reduplication.

75. Verbs

    a) ròɣá 'jump'        ròɣáróɣá 'jump a little'

    b)  rúɣá 'cook'        rúɣárúɣá 'cook a little'

    c)  rèmá 'cultivate'    rèmárémá 'cultivate a little'

    d)  sɔ̀ká 'go back'    sɔ̀kásɔ́ká 'go back a little'

    e)  kɛ́ná 'be happy'   kɛ́nákɛ́ná 'be happy a little'

The pattern of tone in nouns in Kiembu is as follows.

76. Nouns

    a) mwánà 'baby'  mwánàmwànà 'a real baby'

    b) múndù 'person'  múndùmùndù 'a real person'

As seen from the above examples, it is clear that reduplication affects the tone of words in Kiembu. A full investigation as indicated in the recommendation section in chapter five should be done to find out how reduplication affects the tone of words in Kiembu.

## 4.4 Summary

This chapter has discussed some phonological processes that interact with reduplication in Kiembu. The phonological processes established are vowel harmony, vowel lengthening and vowel substitution.

The chapter has also discussed instances of reduplication that are not amenable to morphological doubling. This means that Kiembu has words which are reduplicated but do not have an effect on the semantic value of the words. These include a few names of things in Kiembu. This type of reduplication is not very common in Kiembu as has been established.

The chapter also discusses the effect of reduplication on the tone of the word in Kiembu. It was observed that reduplication affects the tone of a word.

# CHAPTER FIVE

## SUMMARY, CONCLUSION AND RECOMMENDATION

### 5.1 Introduction

This final chapter presents a summary and conclusion to the study. The study was about reduplication in Kiembu in a Morphological Doubling Theory. The study set five objectives that guided data analysis. It was the goal of the researcher to establish the place of reduplication in Kiembu morphology and phonology. In this chapter, the research findings are briefly discussed and conclusion made in relation to research questions, objectives and hypotheses. Recommendations for further research on the issues arising from this current research are also made.

### 5.2 Summary and Conclusions of the Findings

Chapter 3 provides a detailed analysis of morphological reduplication in Kiembu based on Morphological Doubling Theory. The various types of reduplication in Kiembu were discussed in this chapter. Total or complete mode of reduplication was established to be the most common type of reduplication in Kiembu. Reduplication in Kiembu as was established has certain semantic effects. This provides evidence of morphological doubling. In most of the data analyzed, the base and the reduplicant corresponded semantically. This means that the base and the reduplicant are equal semantically or have the same semantic value as presupposed by MDT.

The semantics or the function of a reduplication construction is sometimes determined by the context in which it is uttered. Some reduplicatives in Kiembu are only understood

with reference to the context. This behavior is not peculiar to reduplicatives alone; there are other words whose meaning is determined by context in Kiembu.

Chapter 4 provides a phonological analysis of reduplication in Kiembu. Vowel harmony, vowel substitution and vowel lengthening are the phonological processes established to interact with reduplication in Kiembu. The chapter discussed few cases of repetition in Kiembu that are not amenable to morphological doubling; these are the instances referred to as phonological copying. The examples in this category were mainly names of things.

Chapter 4 also established that reduplication affects the tone of some words in Kiembu. The tone of words changes after reduplication.

### 5.2.1 On the Hypotheses

At the beginning of the study, the researcher hypothesized that:-

   i.    Roots and stems are affected by reduplication in Kiembu.

  ii.    Reduplication interacts with vowel harmony and vowel substitution in Kiembu.

 iii.    Reduplication interacts with derivation in Kiembu.

 iv.    Reduplication affects the semantic value of a word in Kiembu.

  v.    Reduplication in Kiembu falls under morphological reduplication.

It was the task of the study to show which of the hypotheses has been validated and which ones have been rendered invalid by the research findings. The first hypothesis is validated. It was established that stems and roots of a words, which are morphological

constituents, are doubled in Kiembu reduplication. The root and stem of a word is basically what reduplication targets. Derivational and lexical affixes are not targeted in reduplication in Kiembu. This is because these affixes are not constant parts of the word and are deleted in various morphological processes such as plural formation. The existence of root reduplication in Kiembu provides evidence of morphological doubling. According to MDT, as stated in chapter 1, reduplication can target morphological sub-constituents of a word regardless of size. This confirms that what is doubled in reduplication is a morphosemantically defined constituent. This means that what is doubled is a morphological constituent that has some semantic value.

The second and the third hypotheses were validated. It was established that reduplication in Kiembu interacts with vowel harmony and vowel substitution. These phonological processes go hand in hand with reduplication in Kiembu. Derivation was also established to be a major morphological process that interacts with reduplication in Kiembu. This is so because morphological doubling occurs for a morphological purpose such as creating a new stem type. Therefore, reduplication in Kiembu serves a morphological purpose of being a word formation process.

The fourth hypothesis was validated. It was established that reduplication in Kiembu results to a change in meaning of a word. This is so because morphological doubling, as stated above, occurs for a morphological purpose such as marking a change in meaning. This means that reduplication in Kiembu, as was established in chapter 3 and 4, has a semantic value.

Lastly, having validated the above four hypotheses, it is clear that reduplication in Kiembu is morphological reduplication and not phonological copying. It occurs for a morphological purpose. This study has argued for reduplication in Kiembu as a case of morphological doubling rather than phonological copying. The study confirmed that semantic identity and not phonological identity is what defines the base and the reduplicant in Kiembu reduplication. This means that the base and the reduplicant are semantically equal and not phonologically equal. Reduplication involves linguistic constituents that are identical semantically.

## 5.3 Recommendations for further Research

This study deals with reduplication in Kiembu. The findings of this study have shown that reduplication affects the tone of words in Kiembu. Since Kiembu is a tonal language, a full investigation should be done to determine how reduplication affects the tone of words in Kiembu.

Further research also needs to be done on the morphosyntactic issues of reduplicated forms in Kiembu. The study should aim at establishing the various syntactic functions reduplicatives play in the language.

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