GİKŬYŬ VERBAL EXTENSIONS: A MINIMALIST ANALYSIS

BY

MARTIN MBURU WAWERU
C82/15323/2005

A Thesis Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy in Theoretical Linguistics, Kenyatta University.

November 2011
DECLARATION

This thesis is my original work and has not been presented for a degree in any other university or any other award.

WAWERU, MARTIN MBURU
DEPARTMENT OF ENGLISH AND LINGUISTICS
KENYATTA UNIVERSITY

Signature ____________ Date ____________

We confirm that the work reported in this thesis was carried out by the candidate under our supervision.

____________________________________

DR. PHYLLIS W. MWANGI
DEPARTMENT OF ENGLISH AND LINGUISTICS

Signature ____________ Date ____________

____________________________________

DR. JOYCE I. WANGIA
DEPARTMENT OF ENGLISH AND LINGUISTICS

Signature ____________ Date ____________
DEDICATION

To my wife Kaari, for her unconditional love and support
ACKNOWLEDGEMENTS

I have longed for the day I would write the acknowledgements for this thesis, signalling the end of a long journey. That day is finally here. I start by thanking the Lord Almighty for his presence in my life; for giving me the desire to pursue graduate studies; and giving me grace to see it through.

For this thesis to be what it is today, a lot of drafting and re-drafting has been done. I am greatly indebted to my supervisors: Dr. P. Mwangi and Dr. J. Wangia for their patient support, and commitment in guiding me to mould this document to its present shape. Your dedication challenged and motivated me to work hard and hang in there.

I express my sincere gratitude to all the members of the English Department for their support and words of encouragement. Special mention is reserved for my academic sisters: Dr. L Vikiru and Dr. H. Kebeya; ‘thank you for mentoring me.’ In the same vein, a big ‘thank you’ to my officemate, Mr. D. Karanja and his family. Thank you for your support too and for teaching me the difference between being learned and educated. Kudos to Kamau Karanja for making the syntactic trees grow in the work, and symmetrically so. I am indebted to Isaac and Kanana for helping format the work.

While on this academic journey I had Dr. Purity Nthiga and Dr. Fridah Kanana for company; ‘thank for your support’. I did meet advisors in Dr. Schroeder of the University of Nairobi; ‘thank you for introducing me to the world of Minimalism.’ I also received invaluable guidance from Prof. E. Voeltz of Frankfurt University, Dr. Michael Diercks of Pomona College, Dr. P. Muriungi of Chuka campus, and Dr. J. Sikuku of Moi University.

Away from the hustles of work and studies, I did spend time with my siblings: Susan and the Late James; Rose and Amos; Godfrey and Rose; Julius and Lucy; Lewis and Judy. Thank you for your prayers, encouraging words and gestures. Thank you too for allowing me to use your Gĩkũyũ names in my examples (a fact you don’t know yet)
To my parents: Thank you Mom and Dad for your prayers and support. You have been a source of inspiration to me and my family. I always treasure your faith in me. You never pressured me to work hard; but you often did remind me to maintain a balance in all my endeavours.

My family has made great sacrifices to accommodate my unorthodox reading habits. To my sweetheart, Kaari: ‘You are truly a pillar of strength’ and to my son, Shane: ‘Thank you too for your support. Sorry I had to hide my books from you; your reading methods of zealously tearing them apart were rather inappropriate for me then.

Lastly, I express my appreciation to all who helped me in one way or another. Your having not been mentioned explicitly is due to constraint of space, not lack of appreciation. I was never alone in this journey. I above all express my appreciation to Kenyatta University for placing me on the staff development scheme which has made my PhD studies possible. Finally, I unreservedly accept responsibility for any errors of omission or commission that this thesis might contain.
# TABLE OF CONTENTS

Declaration          ii  
Dedication         iii  
Acknowledgements         iv  
Table of Contents        vi  
Definition of Terms        ix  
Abbreviations and Acronyms       xi  
Abstract        xiii  

## CHAPTER ONE

### INTRODUCTION

1.0 Introduction  1  
1.1 Background to the Study  1  
1.2 Statement of the Problem  5  
1.3 Research Questions  5  
1.4 Research Objectives  6  
1.5 Research Assumptions  6  
1.6 Rationale of the Study  6  
1.7 Scope and Limitations  8  
1.8 Summary  10  

## CHAPTER TWO

### LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction  11  
2.1 Literature Review  11  
   2.1.1 The Place of Morphology in Linguistics  11  
   2.1.2 Verbal Extensions in Bantu Languages  16  
   2.1.3 Gĩkũyũ Morphology  23  
2.2 Theoretical Framework  28  
   2.2.1 Towards Minimalism  28  
   2.2.2 The Minimalist Program  32  
   2.2.3 Justification for Choosing the Minimalist Program  38  
   2.2.4 The Mirror Principle  38  
2.3 Summary  39
# CHAPTER THREE
## METHODOLOGY
3.0 Research Design 41
3.1 Sampling and Data Collection 41
3.2 Data Presentation and Analysis 43

# CHAPTER FOUR
## THE APPLICATIVE, THE CAUSATIVE AND THE REVERSIVE
4.0 Introduction 46
4.1 The Applicative 46
   4.1.1 The Applicative Construction Cross-Linguistically 46
   4.1.2 Types of Applicatives 49
   4.1.3 The Gĩkũyũ Applicative Construction 51
      4.1.3.1 Argumentless verbs 52
      4.1.3.2 Intransitive verbs 57
      4.1.3.3 Monotransitive verbs 61
      4.1.3.4 Ditransitive verbs 66
4.2. The Causative 72
   4.2.1 The Causative Cross-Linguistically 72
   4.2.2 The Gĩkũyũ Causative 76
      4.2.2.1 Argumentless verbs 76
      4.2.2.2 Intransitive verbs 79
      4.2.2.3 Intransitive verbs II 80
      4.2.2.4 Monotransitive verbs 83
      4.2.2.5 Ditransitive verbs 86
4.3 The Reversive 90
   4.3.1 Status of the Reversive Affix 91
   4.3.2 The Gĩkũyũ Reversive Construction 92
4.4 Summary 96

# CHAPTER FIVE
## THE RECIPROCAL AND THE PASSIVE
5.0 Introduction 98
5.1 The Reciprocal 98
   5.1.1 The Reciprocal Construction Cross-Linguistically 98
DEFINITION OF TERMS

Applicative Construction: A construction in which the addition of an argument introduces a prepositional meaning such as ‘to do something for or because of’ and other meanings such as locative. e.g. endia (sell)-enderia (sell for or sell at)

Argument: A noun phrase bearing a specific grammatical relation to a verb, for example, the doer.

Causative Construction: A construction in which one entity is made to do something by another. e.g. James niamūriragia (James makes her cry).

Checking: A component of the Minimalist Program which determines the grammatical features carried by words during derivation.

Co-occurrence: The realization of two or three verb extensions on the same verb root

Verbal Extension: The derivation morpheme attached to a verb root.

Natural Language: Human language.

Reciprocal Construction: A construction expressing mutual action. e.g hūra (beat) hūrana (beat each other)

Reversative Construction: A construction in which the action of the verb is reversed or undone. e.g amba (roof)-ambūra (unroof)

Passive Construction: A construction in which the subject of the active sentence is either ellipted or expressed as an oblique by-Noun Phrase. e.g. Nīrarīairio (He is eating food) is active. Irio nīirarīo (The food is being eaten.) a passive construction

Primary object: The post-verb nominal that is considered as the main object of the verb, (it can be passivised) and its position is adjacent to the verb considered to have the same qualities as the direct object. There can only be one primary object.
Secondary Object

Any other post-verb nominal that is not a primary object. It is possible to have a series of secondary objects.
### ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRoP</td>
<td>object agreement phrase</td>
</tr>
<tr>
<td>AGRo’</td>
<td>object agreement-bar</td>
</tr>
<tr>
<td>AGRO</td>
<td>object agreement</td>
</tr>
<tr>
<td>AGRsP</td>
<td>subject agreement phrase</td>
</tr>
<tr>
<td>AGRs’</td>
<td>subject agreement-bar</td>
</tr>
<tr>
<td>AGRs</td>
<td>subject agreement</td>
</tr>
<tr>
<td>APP P</td>
<td>applicative phrase</td>
</tr>
<tr>
<td>APP’</td>
<td>applicative bar</td>
</tr>
<tr>
<td>APP</td>
<td>applicative</td>
</tr>
<tr>
<td>BEN P</td>
<td>benefactive phrase</td>
</tr>
<tr>
<td>BEN’</td>
<td>benefactive bar</td>
</tr>
<tr>
<td>BEN</td>
<td>benefactive</td>
</tr>
<tr>
<td>CP</td>
<td>complementiser phrase</td>
</tr>
<tr>
<td>C’</td>
<td>complementiser bar</td>
</tr>
<tr>
<td>C</td>
<td>complementiser</td>
</tr>
<tr>
<td>CARP</td>
<td>causative, applicative, reciprocal and passive</td>
</tr>
<tr>
<td>CAUSP</td>
<td>causative phrase</td>
</tr>
<tr>
<td>CAUS’</td>
<td>causative-bar</td>
</tr>
<tr>
<td>CAUS</td>
<td>causative</td>
</tr>
<tr>
<td>FOCP</td>
<td>focus phrase</td>
</tr>
<tr>
<td>FOC’</td>
<td>focus bar</td>
</tr>
<tr>
<td>FOC</td>
<td>focus</td>
</tr>
<tr>
<td>FV</td>
<td>final vowel</td>
</tr>
<tr>
<td>GB</td>
<td>Government and Binding</td>
</tr>
<tr>
<td>GFC</td>
<td>Grammatical Functioning</td>
</tr>
<tr>
<td>INFL</td>
<td>inflection</td>
</tr>
<tr>
<td>IP</td>
<td>inflection phrase</td>
</tr>
<tr>
<td>LOCP</td>
<td>locative phrase</td>
</tr>
<tr>
<td>LOC’</td>
<td>locative bar</td>
</tr>
<tr>
<td>LOC</td>
<td>locative</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>LF</td>
<td>logical form</td>
</tr>
<tr>
<td>MP</td>
<td>Minimalist Program</td>
</tr>
<tr>
<td>NP</td>
<td>noun phrase</td>
</tr>
<tr>
<td>OM</td>
<td>object marker</td>
</tr>
<tr>
<td>PASP</td>
<td>passive phrase</td>
</tr>
<tr>
<td>PAS’</td>
<td>passive bar</td>
</tr>
<tr>
<td>PAS</td>
<td>passive</td>
</tr>
<tr>
<td>PF</td>
<td>phonological form</td>
</tr>
<tr>
<td>RECP</td>
<td>reciprocal phrase</td>
</tr>
<tr>
<td>REC’</td>
<td>reciprocal bar</td>
</tr>
<tr>
<td>REC</td>
<td>reciprocal</td>
</tr>
<tr>
<td>REV’</td>
<td>reversive bar</td>
</tr>
<tr>
<td>REV</td>
<td>reversible</td>
</tr>
<tr>
<td>SPEC</td>
<td>specifier</td>
</tr>
<tr>
<td>SUB</td>
<td>subject</td>
</tr>
<tr>
<td>SM</td>
<td>subject marker</td>
</tr>
<tr>
<td>TGG</td>
<td>Transformation Generative Grammar</td>
</tr>
<tr>
<td>TNS’</td>
<td>tense-bar</td>
</tr>
<tr>
<td>TNS</td>
<td>tense</td>
</tr>
<tr>
<td>VP</td>
<td>verb phrase</td>
</tr>
<tr>
<td>V</td>
<td>verb</td>
</tr>
</tbody>
</table>
ABSTRACT
The purpose of this study was to investigate the Gĩkũyũ verbal extensions: their individual occurrence and their co-occurrences. Gĩkũyũ, just like other Bantu languages, has a rich and complex morphology. The complexity is more evident in derivational morphology than inflectional morphology. A feature that makes derivational morphology complex is the concatenations of the derivational affixes such as the verbal extensions under investigation in this study. The five affixes, namely the causative, the applicative, the passive, the reciprocal and the reversive were described and analysed individually and then they were concatenated. The individual occurrences and the co-occurrences were then analysed using the Minimalist Program, the theoretical framework used in the study. The theory has been revised extensively but it is the 1995 version that showed a higher degree of explanatory adequacy in analysing Gĩkũyũ verbal extensions. The data for the study was in form of four hundred verbs. The verbs were then classified according to their transitivity status. The concatenations of the verbal extensions revealed that they are determined by the interaction of morphology, semantics and syntax, but occasionally semantics overrides the other two. The thesis is divided into seven chapters. Chapter one gives the preliminary details of the research, that is, the research problem, the objectives and the background to the problem. Chapter two has literature on studies in Bantu, Gĩkũyũ and on the theoretical framework. In chapter three, the study discusses the methodology used. Chapter four is the first of the analysis and description chapters. It discusses the causative, the applicative and the reversive. In chapter five, the reciprocal and the passive are discussed. Chapter six has the description and the analysis of the co-occurrences of the Gĩkũyũ verbal extension. The last chapter gives the conclusion of the study and areas for further research.
CHAPTER ONE

THE INTRODUCTION

1.0 Introduction

This chapter places the study of Gĩkũyũ verbal extensions within the broad field of Bantu derivational morphology within the Minimalist Program (MP), a Generative Grammar theory. The chapter has several sections. The first section gives the background to the study. This is followed by the statement of the problem, then research questions, objectives and assumptions. After that comes the rationale of the study, and lastly the scope and limitations.

1.1 Background to the Study

Gĩkũyũ is a Bantu language that is spoken primarily in the central regions of Kenya. In the classification system of Guthrie (1967) it is part of zone E and labeled E51. It belongs to the Niger-Kordofian language group, and to the subgroup commonly referred to as Bantu. Bantu languages are part of the largest African language family: Niger-Congo. Bantu languages are rich in morphology, inflectional as well as derivational.

Bantu verbal morphology plays an important role in marking relations marked syntactically in other languages. Relationships such as causative and applicative are marked by derivational morphemes or suffixes. These derivational morphemes are generally referres to as verbal extensions because of the effect they have on
the meaning of the verbs both morphologically and syntactically. Bantu languages have a rich array of verbal extensions which do not form a neat semantic or syntactic system (Schadeberg, 2003). Guthrie (1967) considers the presence of the verbal extensions among the main criteria to establish whether or not a language belongs to the Bantu family. Coochi (2008) says that the number, the types and forms of verbal extensions vary among languages. Therefore there is need to study verbal extensions across languages to establish their scope.

Gĩkũyũ is an example of an agglutinating language, agglutinating meaning ‘glued together’. Isolating languages have their morphemes occurring as words in isolation; for instance, the English sentence, *she will go home* has four morphemes occurring separately. In Gĩkũyũ, the same sentence occurs as two words. The first word combines several morphemes: the focus marker, person, tense, root verb and indicative mood, for instance, *nĩeguthie* (*nĩ-a-kũ-thi-ĩ*) *mucii* or it even be one word ‘*nĩekũinũka* (*nĩ-a-kũ-inũk-a*)’. From the Gĩkũyũ words, we see several morphemes glued together. The morphology of isolating languages is not as rich as that of agglutinating languages such as Gĩkũyũ and other Bantu languages.

The five Gĩkũyũ verbal extensions are largely considered derivational affixes distinct from inflectional ones because of their ability to alter the argument structure of the host verbs, and the ability to change the meaning of the host verbs (Benson, 1964; Mwangi, 2001). On the other hand, inflectional morphemes mark
grammatical relationships like tense, aspect and mood. Gĩkũyũ has several derivational affixes also known as verbal extensions. This complex nature of Gĩkũyũ morphology and in general Bantu morphology poses a challenge to existing linguistic theories.

The study adopts the Minimalist Program (Chomsky’s 1995) as the theoretical framework. The Minimalist Program is a Generative Grammar theory. Carnie (2002) observes that Generative Grammar (blanket term for the Chomskyan theories) has been the dominant theory of syntax. A unique feature of all the Generative Grammar theories has been the relative neglect of morphology. The MP, however, differs from its predecessors by integrating morphology and syntax. Morphology plays a central role in the theory since the structure-building process depends on how rich or weak the morphology of a language is (Chomsky, 1993). The MP is the first Generative Grammar theory to give morphology serious attention. However, just like all the Generative Grammar theories, MP is built around English and other isolating languages.

The evolution of Generative Grammar to the Minimalist Program has been in search of descriptive and explanatory adequacy. Chomsky (1995) admits that the early Generative Grammar faced two immediate problems: to find a way to account for the phenomena of particular languages-descriptive adequacy, and to explain how knowledge of these facts arises in the mind of the speaker-hearer-
explanatory adequacy. He adds that the leading questions guiding the Minimalist Program (MP) came into focus as the Principles and Parameters model took shape. Zwart (1998) says that the MP seeks to bring out and eradicate the descriptive and explanatory weaknesses in the earlier models of Generative Grammar.

Chomsky (1965) proposed levels of adequacy that a grammar or the theory of language must meet: observational adequacy, descriptive adequacy and explanatory adequacy. Observational adequacy refers to the ability of a grammar to predict which sentences in a language are grammatical and which ones are not. This level accounts for cognition of language and nothing more. Descriptive adequacy refers to the ability of a grammar to assign structural descriptions to the sentences in the language that capture native speaker intuitions about the structure and meaning of the sentences, in addition to being observationally adequate. Explanatory adequacy refers to a grammar that has descriptive adequacy and is also able to provide an account of how language is acquired.

Two studies on Gĩkũyũ have been done within the MP, but their focus has been on some aspects of inflectional morphology, one of the two branches of morphology. The studies are by Njino (2004) and Gachomo (2004). Derivation is the other main branch of morphology. This study focuses on the analysis of some aspects of Gĩkũyũ derivational morphology within the MP.
1.2 Statement of the Problem

In the Minimalist Program, morphology plays a central role. It is claimed that the amount of movement of the lexical items in structure building that takes place depends on how rich or weak the morphology of a language is. Languages with rich morphology will license more movement, and those with a weak morphology will allow less movement. This suggests that the MP is flexible and can take care of all languages. Verbal extensions make the morphology of Gĩkũyũ rich and complex. In addition, the co-occurrences of the verbal extensions add to this morphological complexity. To account for the co-occurrences, a Pan-Bantu default template has been suggested. The study seeks to find out the extent to which co-occurrences of Gĩkũyũ verbal extensions fits within the template. There are still descriptive gaps in Bantu morphology; therefore, there is need to study individual Bantu languages. The Gĩkũyũ verbal extensions and their co-occurrences are described and explained using a theory that is considered a breakthrough in studying morphosyntactic phenomena like the verbal extensions.

1.3 Research Questions

The research was guided by the following questions:

1. What are the morphosyntactic features of Gĩkũyũ verbal extensions?
2. What are morphological, syntactic and semantic features of the co-occurrences of Gĩkũyũ verbal extensions?
3 How are the individual occurrences and co-occurrences of Gĩkũyũ verbal extensions accounted for within the Minimalist Program?

1.4 Research Objectives

The research had the following objectives:

1. To describe and explain individual occurrences of Gĩkũyũ verbal extensions.
2. To describe and explain the co-occurrences of Gĩkũyũ verbal extensions
3. To analyse and explain the individual occurrences and co-occurrences of Gĩkũyũ verbal extensions within the Minimalist Program.

1.5 Assumptions

The research was guided by the following assumptions:

1. That to some extent, Gĩkũyũ verbal extensions have both morphological and syntactic features.
2. That to some extent, the co-occurrences of Gĩkũyũ verbal extensions have morphological, syntactic and semantic features.
3. That the Gĩkũyũ verbal extensions and their co-occurrences can be accounted for within the Minimalist Program.

1.6 Rationale of the Study

The goal of this study is to determine the morphosyntactic scope of five verbal extensions in Gĩkũyũ by using the Minimalist Program. The study hopes its
findings will add new insight into description of Gĩkũyũ morphology and by extension to Bantu languages, and add too to the already existing literature on descriptive linguistics. As Stegen (2002) observes, there are descriptive gaps on Bantu languages especially on Bantu morphology thus more studies on derivation morphology are required. Diercks (2010) observes that Bantu languages (and Niger-Congo languages more generally) represent a large percentage of the world’s language diversity, and yet are under-researched (compared to the languages and language families of more economically-developed regions). Based on the Ethnologue’s current statistics (Lewis 2009), 1,532 of the world’s 6,909 languages are in the Niger-Congo family, 522 of which are classified as Narrow Bantu. That is, 22% of the world’s languages are Niger-Congo languages, and 7.5% of these languages are Bantu languages. In contrast, there are 439 Indo-European languages, with 48 Germanic languages and 41 Romance languages (0.7% and 0.6% of the world’s languages, respectively, to nit-pick a few sub-families). Therefore more researches in individual Bantu languages like Gĩkũyũ and others are required.

Morphology plays a central role in the Minimalist Program as it is taken that all the information of a sentence is in the verb. The prominent position of morphology in the theory greatly contributes to the debate on the status of morphology in linguistic theory: should morphology be autonomous or should it be studied under syntax? Hyman (2002) observes that Bantu suffixation provides strong evidence
for the autonomy of morphology. The current study hopes to make contributions to the on-going debate by making a strong case for the autonomy of morphology. The study hopes to add insights to the MP in search of explanatory adequacy. Many of the Generative Grammar theories, MP included have been built on English data; therefore, it is important to test them against other languages such as Gĩkũyũ, a Bantu language, in order to determine the levels of adequacy of the theory in analysing a language with rich morphology hence considered as having strong agreement. Mchombo (1993) observes that the verbal unit in Bantu languages is the most structurally complex unit; it can support a number of elements affixed to it either as prefixes or suffixes. He adds that advances within the theories of Relational Grammar and Government and Binding have been marked by research based on Bantu languages.

1.7 Scope and Limitations

The thesis focused on Gĩkũyũ, a Bantu language. The study was limited to derivational verb morphology and verbal extensions in particular. Derivational morphology is more common than inflectional verb morphology which deals with grammatical aspects such as tense, aspect and subject agreement (Payne, 1997). In addition, Gĩkũyũ derivational verb morphology, especially the verbal extensions, is yet to be studied within the MP. As is the case in other Bantu languages, Gĩkũyũ verbal extensions play an important role in marking relationships which other
languages, especially isolating languages, indicate by syntactic means (Schadeberg, 2003).

The study was limited to five extensions. The five are the causative, the applicative, the reciprocal, the passive and the reversative. Two of these, the applicative and the causative, are argument increasing; the reversative is neutral but in a few isolated cases it can transitivise, and the other two, the reciprocal and the passive, are argument decreasing. Gĩkũyũ has only two argument-increasing extensions and one neutral one, which means that it neither increases nor decreases the arguments. The argument decreasing ones are more than two. The choice of the passive and reciprocal was made based on Hyman’s (2002) Pan-Bantu default suffix ordering template: Causative, Applicative, Reciprocal and Passive (CARP). The template dictates the order of the four affixes in Bantu languages when they co-occur. Therefore, the choice of the passive and the reciprocal is determined by the desire to see how they co-occur in Gĩkũyũ in comparison to the template.

The study investigated the Gĩkũyũ verbal extensions basically from a morphosyntactic perspective. To explain the extensions theoretically, the research used the Minimalist Program (1995). Since the theory is relatively new, its adequacy needs to be tested across many languages. The theory gives prominence to morphology thus making it appropriate. The theory has undergone changes over time, changes that have not been informed by data from Bantu languages thus
leaving the 1995 version as the most appropriate. Julien (2002) notes that the changes in the theory do not fit the analysis of Bantu data. In addition, MP has the capacity to explain the verbal extensions and the morphosyntactic changes observed like the increase or decrease in the number of participants.

1.8 Summary

The introductory chapter locates the current research within the context of research on languages with an aim of testing the levels of adequacy of the MP in analysing Gĩkũyũ, a language considered to have a rich morphology, hence strong agreement. The study has these broad objectives: one, to describe and analyse individual occurrences of Gĩkũyũ verbal extensions, and two, to describe and analyse the co-occurrences of Gĩkũyũ verbal extensions. Much of the research seeking explanatory adequacy has been driven by the generative grammar theories whose basic tenets are based on English. In the pursuit of an all encompassing theory, it is important to study other languages such as Gĩkũyũ so that they can also offer insights and inform the current body of theories. The next chapter discusses the literature reviewed for the study and the theoretical framework used in the analysis.
CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.2 Introduction

This chapter has two major sections, namely literature review and theoretical framework. The first section is on literature review followed by a section on the Minimalist Program which is the theoretical framework used in this study.

2.1 Literature Review

The reviewed literature is presented in three parts. The first part traces the place of morphology in linguistics. The second part is on derivational verb morphology in different Bantu languages while the third presents studies on Gĩkũyũ.

2.1.1 The Place of Morphology in Linguistics

Lyons (1968) says morphology deals with the internal structure of words and syntax with the rules governing their combination in sentences. He adds that the term was introduced into linguistics in the 19th Century to cover both inflexion and derivation. However, the term was meant to have been applied in biology to refer to the study of living organisms. From the middle of the 19th Century, linguistics was very much influenced by evolutionary biology.

Carstairs (1992) says that the revival of morphology as a subject of study by theoretical linguists has been announced more than once; while phonology and
syntax maintain their sway as the two indispensable core requirements, morphology has not generally managed to establish itself alongside them.

Katamba (1993) notes that morphology did not emerge as a distinct sub-branch of linguistics until early 19th Century when morphology played a pivotal role in the reconstruction of Indo-European. In 1816, Franz Bopp published the results of a study supporting the claim, originally made by Sir William Jones in 1786, that Sanskrit, Latin, Persian and the Germanic languages all descended from a common ancestor. Bopp’s evidence was based on a comparison of the grammatical endings of words in these languages.

Later under the influence of the Darwinian theory of evolution, the philologist Max Muller contended, in his Oxford lecture of 1899 that the study of the evolution of words would illuminate the evolution of language just as in biology morphology, the study of the forms of organisms, had thrown light on the evolution of species. In the 20th Century morphology has been regarded as an essentially synchronic discipline; that is, a discipline focusing on the study of word-structure at one stage in the life of a language rather than on the evolution of words.

American structural linguistics viewed linguistics as a body of descriptive and analytical procedures (Katamba, 1993). Linguistic analysis was expected to
proceed by focusing on one linguistic level at a time before tackling the next one. The levels are semantic, syntactic, morphological and phonological. The levels were assumed to be ordered in a hierarchy with phonology at the bottom and semantics at the top.

In the early days, between 1920 and 1945, American structuralists developed and refined the theory of the phoneme (Sapir, 1925; Swadesh, 1934; Twaddell, 1935; Harris, 1944). Later, the focus gradually shifted to morphology. Many structuralists investigated issues the theory of word-structure (Bloomfield, 1933; Harris, 1942; Hockett, 1952 and 1954)

One of the structuralists’ main contributions was the recognition of the fact that words may have intricate internal structure. Traditionally, linguistic analysis had treated the word as the basic unit of the structure of language; but the structuralists showed that words are analyzable in terms of morphemes, thus introducing morphology as separate sub-branch of linguistics.

With the introduction of Generative Grammar, morphology was eclipsed. Generative grammarians initially rejected the validity of a separate morphological module. Morphology was eclipsed for more than a decade, though not fully as a few non-generative scholars such as Robins (1959) and Matthews (1972, 1974) made important contributions to morphology. Matthews (1972) expounded on the
advantages of a word-based rather than a morpheme-based approach to morphology. Hockett (1954) and Robins (1959) called it the word-paradigm model.

Part of the reason for the widespread neglect of morphology during the early years of Generative Grammar was the belief that word-formation could be adequately covered if it was portioned between phonology and syntax. It was argued that no separate morphological level was needed in grammar. Ways were found of describing the structure of words in a model of language that had a phonological component, a syntactic component and a semantic component but no morphological component (Katamba, 1993).

The publication of Chomsky (1970) drew a dichotomy between lexicalist and transformationalist approaches which gave prominence to morphology within TGG. This was followed by studies that tried to explain the relationship between morphology and syntax in the eighties, namely, Chomsky (1981), Marantz (1984) and Baker (1988).

Chomsky came up with the GB theory, a derivational theory discussed in the above section. Marantz (1984), in his monograph, argues that morphology should be considered a sub-theory of GB. He further argues that morphemes directly influence the semantic-logic structure of a sentence. In this model the lexicon has
roots and affixes and information about argument structures, transitivity and semantic roles. The merger principle takes care of the morpho-syntactic processes. The affixes such as the causative, applicative among others merge with the root of the main verb and build a new verb stem which creates syntactic and logico-semantic relationships.

Baker (1988) also attempts to relate morphology to syntax. He views morphological processes in terms of syntactic function. The incorporation processes are grammatical function changing which are dealt with as movements of lexical heads into the verb. Baker says that it is the morphology that determines whether the result of incorporation is grammatically acceptable in given language or not. Baker advances the Mirror Principle which states that contrastive affix orders directly correlate with the order of syntactic operations.

Pollock (1989) demonstrates how the presence of or absence of morphology conditions the differences in the sentence structure of languages. He investigates verb morphology in French and shows that verb movement requires a split IP (Inflection Phrase) and forces verb movement. The IP is split into an agreement phrase (AGRP) and tense phrase (TNSP). Agreement phrase is a complement of tense and negation. These concepts have been incorporated into the Minimalist Program (MP).
2.1.2 Verbal Extensions in Bantu Languages

A number of studies on Bantu languages exist. The literature in this section focuses on studies dealing with Bantu verb morphology. Mchombo (1993) focuses on the reflexive and the reciprocal in Chichewa. He observes that the asymmetrical distributional behaviour of the reflexive and the reciprocal needs to be explained within an adequate theory that will not treat them as bound anaphora. He concludes by observing that recent versions of GB could not account for the asymmetries. His study helps highlight the inadequacies of GB in analysing the reciprocal, a verbal extension being investigated by this study but from a different theoretical perspective.

Matsinhe (1994) has studied the valence reducing and increasing affixes in Tsonga, further looking at the concatenations of verbal affixes as well as constraints applying to their co-occurrence. However his work is descriptive whereas ours is both descriptive and theoretical. Kioko (1994) describes and analyses verbal extensions in Kikamba among other issues of Kikamba syntax. Kioko (1995) notes that Lexical Functional Grammar is not adequate to handle the Kikamba multiple applicative, and Kioko (1998) deals with the syntactic status of the reciprocal and reflexive affixes in Bantu. The studies inform our study on the nature and characteristics of these affixes.
Another study on Kikamba is Wambua (2001). She focuses on the valence of the Kikamba verb. The study uses the applicative, the causative, the stative and the passive to show that the valence of the basic verb can be reduce or increased. The study observes that the applicative affix is the most productive of all the four affixes. The study uses Chomsky’s sub-categorization frames, which are a feature of the Extended Standard Theory. The study informs the proposed study on the methodology, particularly in the classification of verbs according to valence.

Simango (1998) observes that there are two types of causative affixes in Bantu languages, namely lexical and syntactic causative. The current study is investigating the causative; thus Simango’s will inform our study on the description of the causative although the current study focuses more on morphological causatives.

Friesen (2002) explores the valence changing processes indicated by Oroko verbal morphology. Oroko is an agglutinative Bantu language of Cameroon. The study identifies the derivational suffixes increasing valence, suffixes decreasing valence and those that do not affect valence. In the study, she identifies the complex combinations of Oroko verb suffixes. The reflexive morpheme in Oroko is marked both by a prefix and a suffix but the prefix and suffix are not used simultaneously. Her study informs ours on the methodology especially on data presentation. In
addition, the study informs the current one on in the description of the verbal extensions.

Another study on the causative in a Bantu language is by Kula (2002). The study traces the mutation effects of the causative affix in Bemba, a Bantu language principally spoken in Northern Province of Zambia. Contributing to the debate of phonology/morphology interface, she says that morphology is only visible to phonology in analytic contexts, while in non-analytical context phonology is blind to morphological boundaries. She concludes that two processes one involved in constant mutation: a floating causative suffix and a process of constant harmony. The floating causative suffix in Bemba triggers spirantisation or palatalisation of the constant that precedes it but in addition, as in Kinyarwanda, there is a constant harmony process that mutates segments preceding either the voiceless fricative ‘sh’ or other mutated elements. The mutation process is blocked and does not affect more than the stem final consonant; stem initial and internal consonants remain intact. Kula, identifies morphologically complex stems as stems that are already suffixed with one or more suffixes; and when causativised multiple mutations occur leading to only one causative being semantically interpretable.

Hyman and Sharon (2002) give a description of verb-stem reduplication in Ndebele a Southern Bantu language of the Nguni group, which also includes Zulu, Xhosa and Swati. Hyman (2002) in another paper considers the determinants of
affix ordering in languages which exhibit multiple affixes and suffixes. The examples come from Bantu languages. Hyman acknowledges that within recent years there has been considerable interest in multiple affixation, particularly in explaining why strings of prefixes occur in the orders in which they do. He adds that the explanations given have been either of a semantic or syntactic nature as in the publications of Bybee (1985) and Baker (1985). Bybee attributes the most widely attested orders to the semantic function and scope of each affix such that those having greater relevance to the action of the verb root appear close to it. Baker (1985), focusing on cases where affix ordering is not strictly fixed, argues for a ‘Mirror Principle’ by which contrastive affix orders (AB&BA) directly correlate with – and hence are explained by the order of syntactic operations.

Hyman (2002) adds that although seeking different motivation, and to some extent covering a different data base, Byee and Baker have in common that they seek to find a morphology-external explanation for why affixes occur in the observed orders. However, Hyman notes that affix ordering, or at least certain aspects, is directly determined by Morphology proper. That is, language can impose specific morphotactic constraints for which there is no synchronic extra morphological explanation. The so-called ‘morphotactic’ constraints might represent a relation between pairs of specific morphs, or they might define an overarching ‘template’ by which multiple affixes are automatically ordered.
In the paper, Hyman (2002) adapts the basic notions of *Optimality Theory* to the morphological realm to prove that the ordering of Bantu derivational verb suffixes is not accounted for fully by either the semantic scope or the syntactic mirror principle. It must be noted that the current study cannot employ Optimality Theory as it is a phonological theory which will not explain the morphosyntactic phenomena. He adds that Bantu suffix ordering is driven by a Pan-Bantu default template. He proposes a Pan-Bantu default template that determines the Bantu suffix ordering. The default suffix ordering is causative-applicative-reciprocal-passive or CARP. This notion of template is further supported by phonological conditions which enter into the realization of suffix combination. Hyman concludes by saying that Bantu suffixation provides strong evidence for the autonomy morphology. Hyman’s proposed template forms a basis for the ordering of verbal extensions in our study. The study considers the Pan-Bantu default template adequate in explaining suffix ordering thus adopts it to explain the co-occurrences of Gĩkũyũ verbal extensions.

Stegen (2002) has written on derivational processes in Rangi, a Bantu language of Northern Central Tanzania. He confirms that despite many linguistic works on Bantu languages, there are still descriptive gaps in Bantu morphology. The study describes the extensions occurring in Rangi, both nominal and verbal. He observes that verb derivation in Rangi is restricted to the extension slot in the verb structure.
Closely related to the current study and Stegen’s is one by Lodhi (2002). It is an introductory description of verbal extensions in Bantu languages with reference to Swahili and Nyamwezi. Lodhi’s definition of verbal extensions is extensive as it includes all the post-radical or pre-final elements of a verb stem. Lodhi identifies sixteen verbal extensions in Bantu languages among them the being the causative, the applicative, the passive, the reciprocal and the reversative. He observes that verbal extensions are a phenomenon more complex than what it appears to be. That under the seemingly regular system of vowel harmony and assimilation, there are some complex modifications. This complexity of the verbal extensions is acknowledged in the current study.

Pylkkänen (2002) focuses on verbal arguments in coming up with a universal system of functional units and argues that cross-linguistic variation either from different units the languages selects form the way a language groups the universal units into syntactic heads. The study informed our study on how to treat the different arguments introduced by the applicative morpheme in the analysis within the MP.

Petzell (2004) compares Lexical Functional Grammar with Transformational theory. Petzell says that Chomskyan grammatical theories work less for agglutinative languages like Bantu. He analyses and discusses four phenomena that occur in Bantu languages within LFG and TG. The phenomena in focus include
portmanteau morphs, general phrase structure including negation, the mirror principle and applicative constructions. The current study will look at the applicative and investigate the truth of the above claim by using the MP which has mechanisms to analyze both weak and strong morphologies.

Petzell further observes that the transformational theory applies to Bantu languages only if one disregards certain features such as negation; languages with rich morphology seem to constitute a problem for the Chomskyan grammarians. Petzell adds that certain morphological phenomena would seem to lend themselves better to surface oriented, lexical analysis like the LFG. The Chomskyan theories were built around English and other isolating languages and are difficult to apply to languages with a complex morphology. LFG on the other hand, arose as an alternative to modern transformational grammar; Petzell does not make a distinction between the different theories of TGG such as Government-binding and the Minimalist Program. Much of the analysis and discussion is not from a minimalist view. For instance, the analysis of the applicative is done based on Baker’s *Incorporation Theory* and not Chomsky’s theory. The study does form a base for the current study as it is yet to be seen whether Chomsky’s latest theory, the MP, can analyse Bantu languages adequately.

Jeong (2006) uses the Minimalist Program to carry out a cross-linguistic analysis of Applicatives and multi-object constructions hoping to account for the variations
in applicative constructions. He also aims at providing a formal typology of applicatives and how this typology yields the landscape for applicatives. He concludes that a phase-based derivation to the syntactic analysis of the applicative is not appropriate, and that semantically, the applicative is accounted for by theta-driven movement. This is the same approach the current study adopted.

Cocchi (2008) discusses the nature and productivity of verbal extensions in Tshiluba, a Bantu language spoken in South-Eastern Congo. In her description, Cocchi makes a distinction between lexical and syntactic extensions. This is distinction adopted in this study in the establishing the status of the reversive affix.

2.1.3 Gĩkũyũ Morphology

Although a lot has been written on Gĩkũyũ language, Mugane (1997) observes that descriptive studies of Gĩkũyũ have been few. The current study is both descriptive. Barlow (1960) and Armstrong (1940), both based on research done earlier on are the main publications available on Gĩkũyũ grammar. As Mwangi (2001) notes, Barlow and Armstrong’s main aim in writing appears to be provision of a simple grammar that could be used by those wishing to learn the language. Some of those works are: Armstrong (1940) that deals with tonal classification, Gecaga and Kirkday (1953), which covers very little on verbal morphology, listing verbs and affixes detailing how they alter meaning in the verb system. Others are Leakey
(1959) and Barlow (1960). All in all, the works do provided a base for our study as far as the descriptions of the targeted extensions are concerned.

Two studies done within Phrase Structure Grammar are Everton (1972) and Njoroge (1978). Everton deals with the basic syntax of Gĩkũyũ focusing on the inflectional categories of number in nouns and tense and mood in verbs. Njoroge’s study deals with deverbatives and other types of nominalizations through affixation. The current study confines itself to nominalization. The studies differ from the current one, in that they use different theoretical frameworks and that their focus is not the verbal extensions. However, the two studies offer some insight on how transformational grammar theories have been inadequate in dealing with some Bantu phenomena.

A study closely related to the current one is Gathenji (1981). Gathenji employs Functional Grammar to the study of verbal extensions. She extensively analyzes the verbal extensions of various morphological categories and the meaning associated with each. She notes that most of the extended verbs in Gĩkũyũ may be derived by predicate formation rules and should not therefore be entered in the lexicon as basic predicates. Gathenji further observes that there is need for a predicate formation component in a grammar so as to properly account for verbal extensions in Gĩkũyũ since most of the extensions are derived predicates. Her work differs from the current study in that the Minimalist Program employed in the proposed study is not a theory driven by interaction of rules and modular
principles. The lexicon in MP is no longer a collection of roots and stems for verbs and nouns but it also contains all relevant inflectional morphology of these categories. In addition the checking theory of MP gives every affix (verbal extension) its own head.

Mwangi (2001a) looks at verb morphology in Gĩkũyũ within Marantz’s Merger theory and Baker’s Incorporation theory. The study looks at four derivational affixes considering them as Grammatical Function Changing processes in Gĩkũyũ: the applicative, the causative, the passive and the stative. The two theories were found to be lacking in explanatory adequacy. The study establishes a gap in the explanatory and descriptive adequacies of the theories in explaining the GFC processes. Mwangi (2001a) proves that the four criteria of: productivity, regularity in meaning, placement in the root, and relevance to syntax, used in distinguishing derivational affixes and inflectional affixes is inadequate as it returns conflicting results. She uses a modified criteria of: valence change, substantive change in meaning, and position of the verbal extensions when juxtaposed with inflection to determine the status of the affixes. She concludes the four are indeed derivational affixes. The current study looks at five extensions, their concatenation and employs the MP to account for the Gĩkũyũ verbal extensions.

Mwangi (2001b) focuses on the description of the syntactic and semantic features determining the distribution of the two causative affixes in four Central Kenya
Bantu languages and discusses the relevance of the distribution to the distinction made between lexical and non-lexical causatives. She observes that in many languages, causation is expressed morphologically by the use of affixes in the verb. In Central Kenya Bantu, there are three ways of coding causation, first, by use of two predicates, use of lexical verb and use of verbal affixes which is the main way in these languages. She concludes that the semantic parameter of control is the main factor determining the distribution of the two causative affixes. Her paper informed our study in the description of the causative construction.

Mugane (1997) gives a detailed account of Gĩkũyũ nouns, nominalization, deverbal noun extensions, tenses and aspect. Not much however is written on the verbal extensions. To the best of our knowledge only two studies, Gachomo (2004) and Njino (2004), have been done on Gĩkũyũ morphology within the Minimalist Program framework. However these studies focus on the inflectional features. This leaves a gap on Gĩkũyũ derivational morphology within the MP, which is the focus of the current study.

Gachomo (2004) focuses on verbal inflection for tense, aspect and mood. The study justifies the integration of morphology and syntax within the Minimalist Program. Under MP, tense and agreement are made to have their own heads. Given that aspect is grammaticalized through morphological markings on the verb, then the verb moves from its base position in the VP to an aspect head in order to
check its aspectual features. The structure building processes for tense, aspects and mood are the same. In conclusion, the study finds MP adequate in analysing tense, aspect and mood in Gĩkũyũ. The three are grammatically licensed heads marked on the verb through prefixation, suffixation and suprafiction. The verb moves to this head to have its features checked. The study proposes a detailed investigation of Gĩkũyũ verbal affixes within the Minimalist framework. The current research is a step in this direction.

Lastly, Njino (2004) investigates the adequacy of MP in describing agreement in Gĩkũyũ. The agreement markers occur as prefixes. The MP assumes that verbs and nouns are given their inflectional features in the lexicon and the already inflected verbs and nouns with their case morphology are put in the VP under their respective heads. In the MP, languages are described as having either weak or strong agreement (AGR). Strong AGR is visible at PF; weak AGR is not. A language with strong AGR forces verb movement to eliminate the abstract feature bundles before spell-out into PF. The ones with weak AGR do not force verb movement since there is no checking for any feature, thus the verb appears right away at LF. She observes that Gĩkũyũ has strong agreement which is visible at PF. The conclusion is that the MP is adequate in describing the agreement system of Gĩkũyũ noun phrase, verb form and simple sentences. The agreement markers in the verb structure are the subject agreement marker (SAM) and the object agreement marker (OAM). The SAM is obligatory in a tensed or aspectual verb,
while OAM occurs only when needed. Both are prefixes in the verb structure and they carry the feature of nominal/phenomenal subject and object in construction. Under MP, any additional morpheme bearing a head induces a new specifier-head relationship. The Agreement Phrase exists in Gĩkũyũ and is split into Agreement of Subject Phrase (AGRsP) and Agreement of Object Phrase (AGRoP).

2.2 Theoretical Framework

This section reviews the morphosyntactic theory employed in the study, namely the Minimalist Program (Chomsky 1993, 1995). MP is the latest of the Generative Grammar theories. This section also traces the development of Chomskyan theories also known as Generative Grammar from Phrase Structure Grammar to the Minimalist Program. Lastly, the section will discuss the Mirror Principle, a sub-theory within Generative Grammar. The Mirror Principle has been adopted by this study to help explain the order of affixes within the Minimalist Program.

2.2.1 Towards Minimalism

Chomsky (1995) acknowledges that the Minimalist Program shares several underlying factual assumptions with its predecessors back to the 1950s. Carnie (2002) observes that the dominant theory of syntax is due to Noam Chomsky and his colleagues starting in the mid 1950s and continues to date. The theory, he adds, has had many different names through its development: Transformational Grammar (TG), Transformational Generative Grammar, Standard Theory, Extended Standard Theory, Government and Binding (GB), Principles and
Parameters (P&P) and the Minimalist Program (MP). The theory is generally referred to as Generative Grammar.

Schroder (2002) notes that the different stages of the development of Generative Grammar culminating in the Minimalist Program were all triggered by deepening insight and new data. Chomsky (1995) acknowledges that the field of the theory is bound to change rapidly under the impact of new empirical materials and theoretical ideas. Many studies like the current one may provide new data and insight that may further change the theory. Generative Grammar was introduced in 1957 in Chomsky’s first book *Syntactic Structures*. He elaborates a set of rules expressed in the form of re-write rules which form the basis for sentence formation. The rules could only generate basic or kernel sentences. He further develops this theory in 1965 in his *Aspect of the Theory of Syntax*. The notions of deep structure, surface structure and transformation rules are further developed and expanded. The deep structure is a mental concept; sentences are seen as being formed in it then through the transformation rules turned into surface structure. It is in this model that he also made the distinction between competence and performance. The 1965 model was also known as ‘Standard Theory’.

The theory underwent significant changes in the eighties leading to Government and Binding Theory (GB), described in Chomsky’s (1981). GB is different from its predecessors in its emphasis upon the elucidation of an abstract universal
principle of grammar; it devotes little attention to the writing of the rules and construction of grammars for particular languages. Its proponents often maintain that there are no rules of grammar, only the principles and the parameters. Parameters have values that can vary from language to language within specific limits. The syntactic structure of a sentence is represented as an ordered series of trees. The model retains the concept of deep structure and surface structure and introduces the concept of Logical Form. The above representation makes extensive use of null elements called empty categories. There is a single very general transformation operation called alpha-movement whose intrinsic overgeneralization is constrained by the requirements of each of a large set of semi-autonomous modules. The modules are X-bar theory, Theta theory, Case theory, Bounding theory, Government theory and Binding theory.

The X-bar theory is concerned with the basic constituent structure. It projects the phrase structure from the lexicon onto deep-structure level. The projection is done with the help of several modules, namely case theory, theta theory, binding theory, bounding theory and government theory. The theta theory is concerned with the argument structure of verbs. The bounding theory is concerned with the constraints on movement. Case theory gives details on the distribution of anaphoric items and empty categories. Binding theory describes the relations of anaphors, pronouns, names and variables to possible antecedents: Government theory details the positioning of overt noun phrases and empty categories. Control
theory is concerned with the interpretation of clauses lacking overt subjects. Developed by Chomsky, the binding and case components were first presented in Chomsky (1980) and the first full description of the whole system came in Chomsky (1981). GB went through various modifications. Chomsky (1986b) discusses possible barriers to Government and movement in the sub-theoretical framework of X-bar theory, theory of movement and Government.

The goal of Generative Grammar is trying to figure out what we subconsciously know about the syntax of a language. To achieve this, the language data would be collected from the native speakers. Each speaker’s grammar is considered as a reflection of that language’s grammar and part of universal grammar. The earlier generative grammar theories were considered to be descriptively and explanatorily inadequate. The MP is a development in search of both levels of adequacy. The Minimalist Program differs from its predecessors as there is integration of morphology and syntax. The Minimalist Program addresses problems of inflectional morphology and integrates the Split Inflection Hypothesis (INFL) which leads to new projections of AGR and TNS. It proposes that all the information of the sentence is contained in the VP. The earlier forms of generative grammar are not appropriate for this study because, one, they approach verbal extensions as syntactic categories and two, the actual relationship shared by the verb and the extensions would not be fully captured as these kinds of relations
according to earlier generative grammar theories are determined by the positions the elements take on the tree diagrams.

2.2.2 The Minimalist Program

The Minimalist Program is a theory of grammar outlined in Chomsky (1995) whose core assumption is that grammar should be described in terms of a minimal set of theoretical and descriptive apparatus. Carnie (2002) adds that the Minimalist Program is motivated not only by the search for explanatory adequacy, but also for a certain level of formal simplicity and elegance.

Language and its use have been studied from varied points of view. The MP takes language to be part of the natural world. An assumption held in the MP and one that it shares with its predecessors back to the 1950s is that there is a component of the human brain dedicated to language, the language faculty- interacting with other systems. A component of the language faculty, generative procedures, generate Structural Description (SD) which refer to the expressions of the language.

Language is embedded in a performance system that enables its expression to be used for articulating, interpreting, referring, inquiring and reflecting. Structural descriptions or linguistic expressions can be thought of as a complex of instructions for these performance systems providing information relevant to the functions. The performance systems fall into two general types: articulatory –
perceptual (A-P) and conceptual – intentional (C-I), (Chomsky 1995:167). A linguistic expression contains instructions for each of these systems. Two of the linguistic levels are the interface level A-P and C-I level. Each language determines a set of pairs drawn from the A-P and C-I levels. Accordingly, these are two interface levels: Phonetic Form (PF) at the A-P interface and the Logical form (LF) at the C-I interface. This double interface specifies the language aspect of sound and meaning respectively. A language is assumed to consist of two components: a lexicon and a computational system. The lexicon specifies the item that enters into the computational system, with its idiosyncratic properties. The computational system uses these elements to generate derivations and SDs. The derivation of a particular linguistic expression, then, involves a choice of items from the lexicon and a computation that constructs the pair of interface representations. Several processes and guiding principles are involved in transporting lexical or morphological information from the lexicon to interface.

The lexicon is a set of lexical elements, each with an articulated system of features. It must specify, for each element, the phonetic, semantic, and syntactic properties that are idiosyncratic to it (Chomsky 1995:130). The lexicon has all the lexical and morph-syntactic information about verbs and nouns. A set of morphosyntactic and lexical items is taken from the lexicon through a process called numeration. After that, a computational process called merge, takes place. Merge combines the lexical items into a projection and a partial tree. Merge is part
of the structural building process that occurs to transport information from the
dlexicon to the interface level. The lexical items from the lexicon are typically
projected via the Bare Phrase Structure to the interface. Bare Phrase Structure is an
improvement of the standard X-bar theory (Chomsky, 1995).

An important part of the Minimalist Program is movement, though it predates
minimalism. The single transformation rule occurring in most versions of GB is
Alpha movement, also move-α. Move-α states move any category to a different
position. Move mediates between the deep structure and surface structure levels. In
MP, lexical items are moved around for checking purposes. Feature checking is
designed to ensure that the grammatical features carried by the different words in a
sentence are compatible with those of the other words in the same sentence.
Radford (1997) notes that words carry three sets of grammatical features: head
features which show intrinsic grammatical properties such as; tense, number, case
and person; complement features which describe the kinds of complements the
words take, and specifier features which show the kinds of specifiers the words
can have.

The MP considers sentences to have a phrase structure consisting of a lexical
domain, VP, and a functional domain. The commonly accepted functional
projections are the complementizer phrase (CP), agreement phrase for the subject
(AgrSP), tense phrase (TnsP) and agreement phrase for the object (AgrOP). The
VP is where there is insertion of the verb and its arguments. Features associated with inflectional morphology occupy the functional projections such as tense, aspect and agreement. The lexical elements move to the functional domain to check their features. The same holds for nouns. The case features of nouns are checked in the appropriate specifier position. Checking can take place at any stage of derivation.

Movement is directed by interacting Principle of Economy, the Minimal Link Condition, and the Principle of Procrastinate and Greed. The Minimal Link Condition requires ‘shorter moves’ at any given stage of derivation. It states that movement is only possible into the nearest relevant position (Chomsky 1993, 1995). The Principle of Economy states that there can be no superfluous symbols in representation. It requires that computation operations must be driven by some conditions on representation as a ‘last resort’ to overcome a failure to meet such conditions. Procrastinate makes sure that movement only takes place if there is need for it and if it is licensed by any morphosyntactic or lexical evidence from the language. The Greed principle specifies that constituents move only in order to satisfy their own morphological requirements.

The computational process further spells out the information of the lexicon onto PF and LF. The process of spell-out sorts the phonological and semantic information for the structural descriptions. Any kind of phonological information
is not allowed to appear at LF, neither is any logical information allowed at PF. If the conditions of PF and LF are met, the derivation converges. However, if the phonological or semantic information is mixed on the respective levels, the derivation crashes. Spell-out is guided by the principle of Full Interpretation (FI). The FI principle constrains the structure-building process, so that no superfluous element appears (Chomsky, 1986). FI specifies that the representation of an expression must contain all and only those features which are relevant to determining its interpretation at relevant LF or PF. This new concept of considering morphosyntax is reflected in the new basic sentence structure (Chomsky, 1993).
Movement is always leftwards since it is aimed towards head and specifier positions. Only the words with lexical content such as nouns and verbs are moved in order to have their features checked. In many languages, the morphology of verbs extends beyond AGR and TNS and has to deal with phenomena like benefactive and instrumental and causative constructions (Schröder, 2002). The Minimalist Program takes care of this double accusative case-assigning through the checking theory which determines that every affix has its own head. This part of the theory will be relevant in the study of Gĩkũỹũ Verbal extensions.
2.2.3 Justification for Choosing the Minimalist Program

The study found the Minimalist Program appropriate because it clearly explains the relationship between morphology and syntax, stating that syntax relies heavily on morphology. The theory is refined, discussing the generation of structures by employing optimally efficient derivations. In addition, the MP seeks to have explanatory adequacy in the description of human language. The Minimalist Theoretical Framework (Chomsky, 1995) is commonly referred to as a program because of its programmatic underpinnings. The MP operates like a program that is a general analytical tool. The language being analysed instructs the theory; therefore, what appears in the analysis is what is licensed by that particular language. The earlier theories (especially Government and Binding, and Principles and Parameters) had predetermined projections for the language in analysis to fit in. in the MP the bare phrase structure allows for the projections to be built as per the language of analysis. The morphological evidence of a language directs the computational process of the theory. This makes the theory appropriate to analyse a language with a rich morphology like Giküyũ. The theory informs the study on data analysis, interpretation and discussion.

2.2.4 The Mirror Principle

The Mirror Principle by Baker (1985), though generative grammar in orientation, came about as result of the mainstream generative grammar’s failure to adequately address concerns of morphology. According to Baker, the theory should be stipulated as a basic principle of grammar but it should be derived from the basic
aspects of the organization of the grammar. For this to happen, morphological and syntactic processes are considered to take place in the same component of the grammar. The Mirror Principle ties syntax and morphology together in such a way that any constraint in one system will automatically constitute a constraint on the other system. The key tenet and the one applied in the study states that morphological derivations must mirror or directly reflect the syntactic derivations and vice-versa. The general assumption is that the order of the affixes is inversely related to the order of the structures in the syntax. For derivational affixes like the five which are the focus of this study, this means that whatever suffix is closest to the stem in the surface realization of the structure is the closest to the VP; this means that the Gĩkũyũ reversive which is always next to the stem will be the lowest and the passive, which is the farthest from the stem is the highest in structures. Baker (2008) observes that the order of morphemes in a complex word reflects the natural syntactic embedding of the heads that correspond to those morphemes. The Mirror Principle is adopted as an analytical tool within the Minimalist Program. The Minimalist Program can only account for two post-verbal arguments; therefore, the Mirror Principle is used in this study to help account for the order of all the post-verbal arguments especially in the structure building process.

2.3 Summary

The chapter focused on the existing literature in the area of Bantu derivational morphology. It also focused on the theoretical framework used, the Minimalist
Program. The studies are reviewed from those on Bantu morphosyntax narrowing down to those on Gĩkũyũ. Though there seem to be many studies done in Bantu, there is need to focus more on individual languages and their uniqueness. The literature reviewed traces the development of the Generative Grammar theories from Phrase Structure Grammar to the Minimalist Program. The Mirror Principle has also been reviewed as a sub-theory within Generative Grammar that will be used in the analysis of the co-occurrences. The next chapter discusses the methodology used in this study.
CHAPTER THREE

METHODOLOGY

3.0 Research Design

This study employs the qualitative research design. Mugenda and Mugenda (2003) notes that a qualitative research design does not produce discrete numerical data. The data is in the form of words rather than numbers and these words are often grouped into categories. The qualitative design enables the researcher to explain phenomena more deeply and exhaustively as it involves description of observed patterns in the data. This design is appropriate for the current research. The data required is in form of words as explained in section 3.2 below. In addition, this is a descriptive study.

3.1 Sampling and Data Collection

The required data for the study was in the form of verb roots and the five extensions. The five extensions are the applicative, the causative, the reversive, the reciprocal and the passive. The causative and the applicative are argument increasing, the reversive, neutral; while the reciprocal and the passive are argument decreasing. Payne (1997) notes valence adjusting operators or verbal extensions are hosted by free verb roots. Therefore, with the affixes already pre-determined, the data required was in the form of verb roots which would host the affixes. According to the Minimalist Program, the verb contains all the information of a sentence. The list of the verb roots was compiled by the
researcher using two secondary sources, namely the Gĩkũyũ-English dictionary by Benson (1964) and Mwangi (2001a). The four hundred verb roots formed the sample.

The verb roots were then broadly categorized according to their transitivity status (discussed in 3.2 below). It is from these categories that the verbs roots used in the study were purposively sampled. The purposive sampling was required so as to identify the productive verb roots; verbs roots that would host all the affixes. The reversive and reciprocal are highly restrictive thus hosted by only a few verbs compared to the causative, the applicative and the passive. Therefore, two verbs that can pick up the reversive and the reciprocal were purposively sampled. For the reversive, the words were purposively sampled from categories ‘T’ and ‘I’, while for the reciprocal, the words were purposively sampled from category ‘T’.

The verbal extensions were attached to the sampled verb roots to give derived verbs. The derived verbs were used in sentences generated by the researcher. According to the MP, the verb contains all the information of a sentence. The researcher generated these structures. Verbs and verbal extensions do not occur in isolation in a language. In addition, it is difficult to find sentences with the co-occurrences from either written or oral sources because they are highly marked. Therefore, the researcher needed to use his native speaker intuitions to generate the structures. The starting point was a bare verb then the extensions were added.
This has to be done systematically and deliberately in order to establish the semantic and syntactic scope of the extensions, and their co-occurrences. Some sentences, especially those having the verbal extensions co-occurring, were marked. To confirm the status of the generated structures, the researcher consulted three informants who are native speakers of Gĩkũyũ. The three helped in determining what is possible and allowed in the syntax of Gĩkũyũ. According to Chomsky (1981, 1986) the central goal of linguistic inquiry is to determine the grammatical competence of a native speaker in a given language. Competence includes a person’s knowledge of what are and what are not sentences of a particular language. In addition, research has shown that from the age of fifteen speakers of a particular language are deemed proficient in that language. The researcher is also a native being a native speaker of Gĩkũyũ. The derived structures were then described and analysed.

3.2 Data Presentation and Analysis

The study begins by describing the five extensions giving examples of how they are realised and the possible combinations of the extensions. The examples are given in four line presentation also referred to as interlinear, as used in Wambua (2001), Mwangi (2001) and Friesen (2002).

1. Njeri niagũrithia mwana ibuku (orthography)

    Njeri ni-a-a-gũr-ithi-a mwana ibuku (underlying morphemic structure)
The morphosyntactic change observed in the generated sentences is explained step by step. The derived structures are analysed using the Minimalist Program. The most applicable tenets are the ones of structure building (merging) movement and feature checking processes.

The data analysis begins with the classification of the verbs according to their transitivity status to give four categories: ‘A’, ‘T’, ‘I’ and ‘T&I’. ‘A’ consisted of argumentless verbs, there were 7. ‘T’ consisted of transitive verbs; there were 235. ‘I’ consisted of intransitive verbs; there were 149 and ‘T&I’ consisted of those that can be used both transitively and intransitively; there were 9. Category ‘T’ was sub-categorized according to valence yielding the monotransitive and ditransitive (see appendix). The sampled verbs from these categories were used to make the generated structures.

The analysis of the generated structures is presented in tree diagrams (structural configuration). The tree diagrams present the morphosyntactic changes triggered by each extension. There are arrows to trace the movements. Within the MP, the five extensions are considered as morphological heads licensed by Gĩkũyũ morphology. The verb moves to these heads to have its features checked. The
arguments introduced by the extensions also move to have their features checked. The Mirror Principle was used as a sub-theory in the analysis of the co-occurrences of the verbal extensions to explain the order of the projections.

This marks the end of the preliminary chapters. The next three chapters deal with description, data analysis and presentation. The chapters are arranged thematically: argument increasing extensions, argument decreasing extensions, and the co-occurrences of the extensions. In chapter four, we present the description and analysis of the applicative, the causative, which are argument increasing, and the reversive which is neutral.
CHAPTER FOUR

THE APPLICATIVE, THE CAUSATIVE, AND THE REVERSIVE

4.0 Introduction

This chapter describes the Gĩkũyũ causative, applicative and reversive. The causative and the applicative are argument increasing affixes, while the reversive is neutral. Each affix is first described broadly, cross-linguistically then specifically in Gĩkũyũ. The description follows the categories of verbs based on transitivity status. After the description in each category, follows the minimalist analysis.

4.1 The Applicative

4.1.1 The Applicative Construction Cross-Linguistically

Jeong (2006) says the applicative is usually understood as a construction in which a verb bears a specific morpheme which licenses an oblique or non-core argument that would not otherwise be considered a part of that verb’s argument structure. O’Herin (2007) echoes Jeong’s description.

The term ‘applicative’ originated as early as the 17th century when missionary grammars of Uto-Aztecan languages designated as ‘verbos applicativos’ a verbal form which indicated that the verb was intended toward another person (Carochi, 1983:63). In later studies, the terms ‘applicative’ or ‘applied’ (Marantz, 1993:119) were used in the study of Bantu languages to refer to a special verbal
inflection adding an extra, ‘affected’ object to the argument structure of the verb. Payne (1997) describes the new object as an applied object. It is a peripheral participant given prominence by marking it a direct object.

Shibatani (1996) defines applicatives as “specific grammatical elements: verbal affixes that increase valence”. He says that there is no way to explain applicatives with rule-like derivations because a given verb is not always consistent in allowing an applicative in seemingly identical semantic role contexts.

If the base verb is transitive the applicative marker may supertransitivize it and produce a double object construction. On the other hand, if the base verb is intransitive, the applicative morpheme makes it transitive. The applicative construction is also referred to as prepositional, benefactive, indirective, and instrumental, depending on the type of applicative (Jeong, 2006). This study will settle for the term applicative which is more encompassing as it includes all the other meanings such as benefactive or instrumental.

Standard applicative constructions are those in which an affix is attached to the verb, allowing an extra nominal to appear in the VP in addition to those inherently selected by the verb (Jeong, 2006). Baker (1988), Bresnan and Moshi (1990), and Alsina and Mchombo (1993) interpret such arguments as benefactive or
instrumental. This interpretation is based on the semantic or thematic roles the applied objects play.

According to Haegeman (1994), Radford (1997) and Carnie (2002) there are ten common semantic roles or thematic roles. They are: agent or actor, patient, theme, experience, benefactive or beneficiary, goal, source, location or locative, instrument and motive. In addition to benefactive and instrument, the applicative construction is also associated with other thematic roles such as malefactive, goal, locative, source and motive. Benefactive, also referred to as beneficiary is the entity that benefits from the action expressed by the predicate. If the entity does not benefit, it is referred to as maleficiary. The semantic role instrument refers to the object with which an action is performed. Goal refers to the entity towards which the activity expressed by the predicate is directed. Location or locative refers to the place where the action stated takes place. Lastly, motive gives the reason for the action taking place.

Many Bantu languages use the applicative marker -i/-ir constantly regardless of the thematic roles applied objects bear (Jeong, 2006). However Kinyarwanda, a Bantu language spoken in Rwanda has several applicative markers depending on the thematic role of the applied object (Kimenyi, 1980).
4.1.2 Types of Applicatives

Using English and Chaga, Pylkkänen (2002) proposes that there are two different types of applicative heads\(^1\): *high applicatives*, which denote a relation between an event and an individual and *low applicatives*, which denote a relation between two individuals. Her proposal is based on lexical semantics. She points out that although applicative constructions express similar meanings across languages, not all applicative constructions are created equal in terms of semantic properties. For example, English and Chaga both have a double object construction with an applied benefactive argument but only in Chaga can an extra participant be added to an intransitive verb. While in English the applicative is marked by use of a prepositional phrase, in Chaga it is realised through affixation just like in Gĩkũyũ and other Bantu languages.

The meanings of the high and low applicative heads are different. High applicatives are very much like the external argument introducing head: they simply add another participant to the event described by the verb. In contrast, low applied arguments bear no semantic relation to the verb whatsoever: they only bear a transfer of possession relation to the direct object. However of concern in this study is the classification of the Gĩkũyũ applicative as either symmetrical or asymmetrical.

\(^1\) Heads refer to the applicative affix in languages like Chaga and Gĩkũyũ which have a derivational affix to mark the applicative.
Pylkkanen’s classification is built on Baker’s (1988) and Bresnan and Moshi’s (1990) classification of languages as either symmetric or asymmetric depending on the distribution of the applicative. Asymmetric applicatives are characterized by asymmetric behaviour between the direct object and the applied object in such a way that only the applied object shows true object properties such as passivization and object agreement. In contrast, in symmetric applicatives, both the applied object and direct object behave as true objects. Another difference between the two types of applicatives is in their transitivity properties. An applied argument in symmetric applicatives can be added to a transitive or intransitive predicate of Bantu language, while in asymmetric applicatives an applied argument can be added to a transitive predicate but not to an unergative one.

Pylkkanen (2002) guides the theoretical analysis of the applicative construction in this study. According to her, the elements that introduce non-core arguments into the argument structure must be syntactic heads. The Principles and Parameters theorizing holds that argument NPs must be licensed (Chomsky 1981.2000). The applicative is licensed by Gĩkũyũ hence the full projection in (4.1) below:

4.1. The Applicative Projection
The next section will now focus on the description and theoretical analysis of the applicative construction in Gikuyu.

4.1.3 The Gikuyu Applicative Construction

The applicative affix in Gikuyu is realised as –ı́r- or –er- with the distribution determined by the vowel within the verb base. If the preceding vowel is ‘a’, ‘i’, ‘i’, ‘u’, or ‘ũ’, then the applied affix is –ı́r-; if the vowel is ‘e’ or ‘o’ the applicative affix is –er-3. Consider the following verbs:

(a) bang-a (set/plan) bang-ı́r-a (set/plan for/at)
(b) cin-a (burn) cin-ı́r-a (burn for/at)
(c) thĩnj-a (slaughter) thĩnj-ı́r-a (slaughter for/at)
(d) thun-a (draw up legs) thun-ı́r-a (draw at/for)
(e) tũr-a (pierce/puncture) tũr-ı́r-a (pierce/puncture at/for)
(f) reeh-e (bring) reeh-er-a (bring for/through/at)
(g) oh-a (tie) oh-er-a (tie for/at)

Mwangi (2001) observes that the Gikuyu applicative is very productive since it can be hosted by almost all the verbs regardless of the type. The following section looks at how different verb types host the applicative affix and the number of arguments introduced.

---

2 The term ‘base’ means any unit to which affixes of any kind can be added, all roots are bases since affixes can be added (Katamba, 1993).
3 In many languages, the exact shape of the suffix may be subject to vowel height harmony (Ngonyani and Githinji, 2006).
4.1.3.1 Argumentless verbs

Argumentless verbs are also known as weather verbs (Payne, 1997; Mwangi, 2001). In the current study, out of the four hundred verbs sampled, the seven identified as argumentless are all weather verbs. These are verbs that do not require either an internal or external argument. However, they can take cognate nominals as either pre- or post-verbal nominals. The cognate nominals are not considered as obligatory arguments as they are morphologically related to the verb itself.

4.3a. Nī kwaura

nī-kū-a-ur-a

Foc-expl-tns-rain-fv

It has rained

4.3b. Mbura nīyaura

Mbura nī-i-a-ur-a

Rain foc-sm-tns-rain-fv

Rain has fallen or rained

4.3c. Nī kwaura mbura

nī-kū-a-ur-a mbura

Foc-expl-tns-rain-fv rain

It has rained (rain)
The three structures mean the same, the only difference being the absence of an argument in (4.3a). The argument (mbura) in (4.3b) and (4.3c) is cognate. This illustrates that the verb *ura* is argumentless just like *kīa* (dawn) and *ara* (shine).

When the applied affix is attached, an applied object, a theme, which becomes an obligatory argument, is introduced. An optional locative argument can also be introduced.

4.4a. Mbura nīyarīra mūthuri

Mbura nī-i-a-ur-īr-a mūthuri

Rain foc-sm-tns-rain-app-fv-man

Rain has fallen on the man

4.4b. Mbura nīyarīra mūthuri kīharoinī

Mbura nī-i-a-ur-īr-a mūthuri kīharoinī

Rain foc-sm-tns-rain-app-fv-man field

Rain has fallen on the man in the field

The two examples show that the arguments *mūthuri* (man) which is a theme, *kīharoinī* (field) which is a locative have been introduced by the applicative affix. Thus the applicative affix can change the argumentless verbs to two-argument verb or derived transitive verbs— one argument optional and the other obligatory.
4. 5a. Structural Configuration of Gikuyu Argumentless Verb

There are no arguments; therefore the diagram shows the movements of the verb alone. The verb moves to check for tense then check for agreement features at [AGRs/AGRs'] as it picks up the expletive kũ. The expletive is also a subject concord marker for class 15 that is why the verb stops to check for agreement. When the applicative is affixed in (4.3b) the changes that take place are shown in diagram (4.5b)
4.5b. Structural Configuration of Gĩkũyũ Argumentless Verb with the Applicative
Diagram (4.5b) shows the movement of the verb. In line with the tenets of
elegance and simplicity in the Minimalist Program the applicative affix and
extensions are plugged in directly, so that the verb can check its features in a local
configuration. The only argument that is not plugged in is the benefactive. When
the applicative introduces a benefactive, it has to be base-generated so that the
verb can assign it the thematic role, benefactive.

The verb moves from its place in the VP to [LOC/LOC’] to pick up the applicative
affix and check for applicative features with the locative argument. It then moves
to [APP/APP] to check for applicative features with the applicative object. The
derived verb now moves to [TNS/TNS’] to check for tense; moves to
[AGRs/AGRs’] to check for subject agreement features; finally moves to
[FOC/FOC’] to pick up the focus marker and spell out.

The NP *mbura* moves from [SPEC/VP] to [SPEC/AGRsP] to check for
nominative features then to the [SPEC/FOCP] to spell out. A major assumption is
that in the structure building process the applicative affix is realised as many
affixes, that is, each argument is introduced by an affix which is the head of each
projected structure that introduces an applied argument. The verb moves to each
head to check for respective applicative features. However only one applicative
affix is realised overtly, and that is the lowest affix which the verb picks up first.
4.1.3.2 Intransitive verbs

The applied affix introduces three different arguments when attached to intransitive verbs. The arguments are (1) goal (2) locative (3) motive. The above will be illustrated using the intransitive verb root `nyot-a (get thirsty)

4.6a. Mündû níanyota
Mündû ní-a-a-nyot-a
Person foc-sm-tns-grown thirsty-fv
A person has grown thirsty

4.6b. Mündû níanyotera chai
Mündû ní-a-a-nyot-er-a chai
Person foc-sm-tns-grown thirsty-app-fv tea
A person has thirsted for tea

4.6c. Mündû níanyotera mūgûnda³
Mündû ní-a-a-nyot-er-a mūgûnda
Person foc-sm-tns-grown thirsty-app-fv farm
A person has got thirsty in the farm

4.6d. Mündû níanyotera chai mūgûnda-inî
Mündû ní-a-a-nyot-er-a chai mūgûnda-inî

³ The structure can mean to yearn for land, when the verb nyot-a is used metaphorically.
Person foc-sm-tns-grown thirsty-app-fv tea farm

A person has thirsted for tea in the farm

4. 6e. * Mǔndũ nǐanyoter[a chai mǔgũnda ng’aragu

Mǔndũ nǐ-a-a-nyot-er-a chai mǔgũnda ng’aragu

Person foc-sm-tns-grown thirsty-app-fv tea farm hunger

A person has thirsted for tea in the farm because of hunger

In (4.6b) the goal argument chai (tea) is introduced. It is goal as that is the objective or aim of the person’s thirst. In (4.6c) the locative argument, mǔgũnda-inĩ (farm) is introduced. However, that structure can be used idiomatically to mean thirsting for a farm, in which case then farm would cease being a locative and become a goal. The locative meaning is clear in (4.6d). In (4.6e) a motive argument is introduced. The locative and goal can occur as the only arguments of the applied affix of this particular verb but the motive cannot. However, another intransitive verb, teng’era (run) can take motive as the only applied affix as seen in (4.7 below:

4.7. Mwanake ateng’er[a ngumo

Mwanake a-a-teng’er-a ngumo

Young man sm-run-app-fv fame

The young man has ran for fame:
(4.8a) Structural Configuration of an Underived Gĩkũyũ Intransitive Verb

The verb has one argument, the subject. When the applicative affix is attached the following changes take place as illustrated by diagram (4.8b).
4. 8b. Structural Configuration of a Gĩkũyũ Intransitive Verb with the Applicative

Diagram (4.8b) shows the changes that take place when the applicative is affixed. The applicative introduces two arguments: theme and locative. The two are directly plugged in. The subject and the verb are the only elements that move. The verb moves from its place in the VP to [LOC/LOC’] picks up the applicative affix and checks for locative features. The applicative affix heading the locative phrase is the lowest thus realised overtly. The verb moves to [APP/APP’] to check for applicative features with the theme argument. The applicative affix heading the APP P is realised covertly because Gĩkũyũ has only one applicative affix despite
the many applied arguments introduced. The subject *mũndũ* moves from its place as the SPEC of VP to [SPEC/AGRs] to check for subject agreement features. The subject moves to [SPEC/FOCP] to spell out.

### 4.1.3.3 Monotransitive verbs

The applied affix introduces three arguments, just like it does with intransitive verbs, when attached to monotransitive verbs. The above is illustrated below using the monotransitive verb *hinga* (close).

4.9a.  Karũga nǐathinga mûrango  
Karũga nî-a-a-hing-a mûrango  
Karũga foc-sm-tns-close-fv door  
Karũga has closed the door  
The verb *hinga* sub-categorises for two arguments *Karũga & mûrango* as illustrated in 4.9a. The following are the arguments introduced by the applied affix.

4.9b.  Karũga nĩaHINGIRA Wanjirũ mûrango  
Karũga nî-a-a-hing-IR-a Wanjirũ mûrango  
Karũga foc-sm-tns-close-app-fv Wanjirũ door  
Karũga has closed the door for/on behalf of Wanjirũ  

4.9c.  Karũga nĩathingIRA Wanjirũ mûrango thaa ici  
Karũga nî-a-a-hing-IR-a Wanjirũ mûrango thaa ici
Karũga foc-sm-tns-close-app-fv Wanjirũ door now
Karũga has closed the door for/on behalf of Wanjirũ now

The two arguments introduced are beneficiary in 4.10b Wanjirũ and temporal locative *thaa ici* in 4.9c. The order is fixed, an observation made by Mwangi (2001); the arguments cannot be interchanged like is the case in Kikamba as observed by Kioko (1994). The diagrams below show the structural configuration of the monotransitive structure.

4. 10a. Structural Configuration of an Underived Gĩkũyũ Monotransitive Sentence

The diagram (4.10a) shows the basic structure of an underived Gĩkũyũ monotransitive sentence. The verb has two arguments: the subject and the object. The verb checks for object agreement features, tense features, subject agreement
features then picks up the focus marker. When the applicative affix is attached the changes observed are illustrated by diagram (4.10b) below.
4. 10b. Structural Configuration of a Gikuyu Monotransitive Structure with the Applicative:
In diagram (4.10b) the NP Mürango is the only argument sub-categorised for by the verb. However, the first applied argument becomes part of the verb matrix because it is assigned the benefactive role. This is a role assigned by a verb, whether derived or underived as seen with the Gĩkũyũ ditransitive verbs in the following section. The NP Mürango moves from its place as the complement of the verb to [SPEC/AGRoP] to check object features.

The NP Wanjirũ the beneficiary, even though introduced by the applicative cannot be plugged in like the temporal locative and the motive arguments. The reason is that it is assigned a core thematic role, benefactive by the verb. The NP Wanjirũ moves from its position in the VP to [SPEC/BEN P] to check for benefactive features. The verb moves from its place to [TEMP LOC/TEMP LOC’] to check for temporal locative features. The verb then moves to [AGRo/AGRo’] to check for accusative features with the secondary object. The verb now then moves to [BEN/BEN’] to check for benefactive features. It then moves to [TNS/TNS’] for tense checking; moves to [AGRs/AGRs’] to subject agreement checking and finally moves to [FOC/FOC’] to pick focus marker.

The applicative introduces two arguments, one of which, the temporal locative is plugged in directly. The verb picks up the applicative affix at the lowest applicative phrase which is realised as the TEMPORAL LOCATIVE. This is the only applicative affix that is overt; the affix at [BEN/BEN’] is covert.
4.1.3.4 Ditransitive verbs

A ditransitive verb sub-categorises for three arguments. With the addition of the applied affix the derived verb base can take up three extra arguments.

4.11a. Wairimũ nīaiya Karienye karamu

Wairimũ nī-a-a-iy-a Karienye karamu
Wairimũ foc-sm-tns-steal-fv Karienye pen
Wairimũ has stolen a pen from Karienye

4.11b. Wairimũ nīayĩra Wangarĩ Karienye karamu

Wairimũ nī-a-a-iy-ĩr-a Wangarĩ Karienye karamu
Wairimũ foc-sm-tns-steal-app-fv Wangarĩ Karienye pen
Wairimũ has stolen a pen from Karienye on behalf/for Wangarĩ

When the locative is introduced, the structure becomes marked, see 4.11c below:

4.11c. Wairimũ nīayĩra Wangarĩ Karienye karamu daracaini

Wairimũ nī-a-a-iy-ĩr-a Wangarĩ Karienye karamu daracaini
Wairimũ foc-sm-a-tns-steal-app-fv Wangarĩ Karienye pen bridge
Wairimũ has stolen a pen from Karienye on behalf/for Wangarĩ at the bridge
The applied affix adds a beneficiary (4.11b.) and a locative (4.11c). Another ditransitive verb *he* (give) can also host two extra arguments when the applied affix is attached. With the ditransitive verbs unlike the other categories, if the applied affix is introduced without its requisite argument(s) the sentence would be grammatical, but have a different meaning:

4.12. Wairimū nīayīra Karienyē karamu

Wairimū nī-a-a-iy-īr-a Karienyē karamu

Wairimū foc-sm-tns-steal-app-fv Karienyē

Wairimū has stolen a pen on behalf/for Karienyē

The underived ditransitive verb *iya* (steal) would be changed to derived transitive verb *iyĩra* (steal for). From the discussion above we can conclude that the Gĩkũyũ applicative affix is associated with four semantic roles: beneficiary, goal, locative and motive.
4.13a. Structural Configuration of an Underived Gĩkũyũ Ditransitive Structure
In diagram (4.13a), the verb has three arguments, namely the subject, the primary object and a secondary object. The verb checks for respective object features with the two object because the verb has sub-categorised for both. Of note is that in a Gĩkũyũ ditransitive structure, the verb assigns the primary object, the maleficiary theta role. Maleficiary and beneficiary are mutually exclusive.
4.13b. Structural Configuration of a Gikuyu Ditransitive Structure with the Applicative:
As seen in the first diagram (4.13a), the verb subcategorises for two objects one which is primary and the other the secondary. In (4.13b) when the applicative is attached the two applied arguments are plugged in. The beneficiary is also plugged in directly unlike in the monotransitive verb, because with the ditransitive verb, the verb has already assigned the maleficiary thematic role to the NP Karienyé which was the primary object in the underived ditransitive sentence but now has now been relegated to secondary object by the beneficiary argument Wangari introduced by the applicative. Since the three applied arguments are plugged in, the verb moves to check for applicative features in a local configuration. The verb picks up the applicative affix at [TEMPORAL LOCATIVE’ / TEMPORAL LOCATIVE] as this is the lowest applicative and the only affix that is realised overtly.

In conclusion, the Gĩkũyũ applicative is a very productive extension since it is hosted by all the categories of verbs. There is one affix which can introduce two applied arguments. The theoretical analysis projects the applicative as a full projection for the verb to check features in a local configuration. It is only the benefactive applied argument that is base-generated; the other applied arguments are plugged in directly. The MP analyses the applicative adequately. However, the theory seems quiet on the structure building process if all the applied arguments were to be base-generated. The next section discusses the causative.
4.2. The Causative

4.2.1 The Causative Cross-Linguistically

Many languages have a morphological category called causative which conveys the meaning of causation and adds a new agent argument (the causer) to the valence pattern. According to Bybee (1985:29), the causative is the most common valence-changing category in her world-wide sample of 50 languages. The syntax and semantics of causatives has been studied extensively (cf. Xolodovic (ed.), 1969; Shibatani (ed.), 1976; Comrie, 1985; Baker, 1988; Song, 1996; Dixon, 2000 and Haspelmath & Müller-Bardey, 2001).

Payne (1997:176) defines causative or causative constructions as the linguistic instantiations of the conceptual notion of causation. It is a linguistic expression that contains in semantic or logical structure a predicate of cause, one argument of which is a predicate expressing an effect. The predicate of cause contains the notion of causation, while the predicate of effect expresses the effect of the causative situation.

Shibatani (1976:1-2) says a causative situation of two events only occurs if the following conditions hold:

(a) The relationship between the two events is such that the occurrence of one event, ‘the caused event’ has been realised T which is after the time of the ‘causing event T’.
(b) The relation between the ‘causing’ and the ‘caused event’ is such that the speaker believes that the occurrence of the ‘caused event’ is wholly dependent on the occurrence of the ‘causing event’

The causative, just like the applicative, adds another argument or increases the valence of the verb. The core arguments in the causative construction are ‘the causee’ and ‘the causer’. Payne (1997) defines the ‘causee’ as the agent of the caused event which is sometimes referred to as the coerced endpoint (Croft, 1990). ‘Causer’ is defined as the agent of the predicate of cause and is sometimes referred to as the ‘agent of cause’. The causative affix can be hosted by both intransitive and transitive verbs (Schadeberg, 2003). There are three types of causatives as outlined by Comrie (1981) and Payne (1997). These are: lexical, morphological and periphrastic.

(a) Lexical Causatives

Almost all languages have some lexical causatives. The notion of ‘cause’ is wrapped up in the lexical meaning of the verb itself; it is not expressed by an additional affix. Consider the (b) examples below from English and Gĩkũyũ:

4.15a. The pot broke
4.15b. Lewis broke the pot, (Lewis caused the pot to break)
4.16a. The player fell
4.16b. Amos felled the player. (Amos caused the player to fall)
4.17a. Nguo n iyatarūka (the dress has become torn)
4. 17b. Mwana nïataruña nguо (The child has caused the dress to tear)

(b) Morphological Causatives

Morphological causatives involve a productive change in the form of the verb, and most express causation and permission. A morphological causative is formed by attaching a causative affix to a bare verb or a base which yields a derived causative construction. This process of derivation is illustrated in detail in the discussion of the Gĩkũyũ causative in sub-section below.

(c) Periphrastic Causatives

Periphrastic causatives are also known as analytical as they involve a separate causative verb. In English most causatives are analytic:

4.18. He made her go to town

Causation is expressed by the use of two predicates: ‘made her’ and ‘go to town’. The causing event is contained in the first predicate while the effect or result of cause is in the second. In Gĩkũyũ, the periphrastic causative is marked by the verb ‘tũm-’ (cause) as illustrated in the second example below:

4.19a. Kaana nĩkagûra ibuku

The child has bought a book

4.19b. Kuria nĩatũma kaana kagũre ibuku

Kuria has caused the child to buy a book

In (4.19b), the causative there are two predicates. Kuria nĩatũma is the predicate with the causing event whereas the second predicate, kaana kagũre ibuku is the
predicate of effect or result of the causation. Many languages, including English, have two or more causative constructions. Gĩkũyũ, the subject of this study, has the periphrastic and the morphological, with the morphological being the more productive.

A further distinction is made in the realisation of the morphological causatives, namely the long and the short causative (Hyman, 2002: Kula, 2000). This classification is based on the length of the causative affix. The long causative has in its structure a consonant and a vowel while the short causative affix is just a vowel. Good (2005) refers to the short causative as transitive and reconstructs it as the super high front vowel in Proto-Bantu /i/. Good calls it transitive for two reasons; one, it causes direct causativisation and, two it is hosted mostly by intransitive verbs thus making them transitive. It is important to note that both causatives add another agent.

In the theoretical analysis, the Gĩkũyũ causative is considered as licensing an extra argument like the applicative. However, the one introduced by the causative cannot be plugged in. The argument introduced by the causative cannot check its features in a causative local configuration; therefore, the argument introduced has to be subcategorized for by the verb. The Gĩkũyũ causative is represented as a full projection, with the causative affix being the head of the causative phrase. The structure building process and the Principle of Full Interpretation (F1) build a
causative head and a specifier for the causative head where the accusative case-checking takes place. The causative licenses an extra argument in a full causative projection (4.20)

4. 20. The Causative Projection

4.2.2 The Gĩkũyũ Causative

The Gĩkũyũ causative is marked by two morphemes -i- and -ithi-. The -i- is the short causative or the transitive while -ithi- is the long causative. -ithi- is highly productive both in distribution and in meaning; it is associated with many verb types and has the meaning of coercion. -i- on the other hand is less productive, only occurring with intransitive verbs and a few transitive verbs. -i- is associated with the non coercive meaning (Mwangi, 2001). We will now apply the causative morpheme to different verb types to see how the valence of each verb is increased.

4.2.2.1 Argumentless verbs

4.21a. Nikwara

Nĩ-kũ-a-ar-a

Foc-expl-tns-shine -fv
It has shone

When the causative affix is attached, an obligatory argument is introduced as the subject and the cognate object is recovered:

4. 21b. Ngai nĩaria riũa

Ngai nĩ-a-a-ar-i-a riũa

God foc-sm-tns-shine-caus-fv sun

God has caused the sun to shine

The act of the sun shining is achieved directly, that is, the causer (God) has directly caused the sun to shine. The affix –ithi- cannot be hosted by the argumentless verb as it is not possible to coerce an inanimate like the sun to do anything. This explains the ill-formedness of (4.20c)

4.21c. *Ngai nĩarithia (riũa)

Ngai nĩ-a-a-ar-ithi-a (riũa)

Ngai foc-sm-tns-shine-caus-fv (sun)

God has caused the sun to shine
4.22a. Structural Configuration of Gĩkũyũ Argumentless Sentence

4.22b. Structural Configuration of a Gĩkũyũ Argumentless Structure with the Causative

The causative object riũa moves from its place in the VP to [SPEC/CAUSP] to check its causative features and becomes the primary object of
the verb. The underived verb moves from its place in the VP to [CAUS/CAUS’] to pick up the causative affix and check for causative features. The now derived verb moves to [TNS/TNS’] to check its tense features. The verb then moves to [AGRS/AGRS’] to check subject agreement features; and lastly moves to [FOC/FOC’] to pick the focus marker, and finally, spell out. The argument Ngai introduced by the causative, also referred to as the causer becomes the subject of the sentence; it moves from [SPEC/VP] to [SPEC/AGRsP] to check its agreement features. Lastly, it moves to [SPEC/FOCP] to spell out.

4.2.2.2 Intransitive verbs

4.23a. Mwana nǐanyota

Mwana nī-a-a-nyot-a

Child foc-sm-tns-get thirsty-fv

The child has grown thirsty

4.23b. Njambi nǐanyotia mwana

Njambi nī-a-a-nyot-i-a mwana

Njambi foc-sm-tns-get-thirsty-caus-fv child

Njambi has caused the child to be thirsty

The use of the short causative triggers direct causation by introducing a new argument which is the causer thus transitivizing the verb nyota. Once again the long causative cannot be hosted by the intransitive verb as it is not possible to
force a person to get thirsty, the coercive meaning embodied in the long causative. However, it can be hosted by an intransitive stem in expressing self causation like in (4.24) below:

4.24. **Enyotithia** nīguo aheo soda

_e-nyot-i thi- _a nīguo aheo soda

Refl-get thirsty-caus-fv so that given soda

He has caused himself to be thirsty so that he can be given a soda

(He is pretending so that he can be given a soda)

### 4.2.2.3 Intransitive verbs II

4.25a. Mwana nīahūma

Mwana nī-a-a-hūm-a

Child foc-sm-tns-grow weary-fv

The child has grown weary

4.25b. Mambo nīahūmithia mwana

Mambo nī-a-a-hūm-ithi-a mwana

Mambo foc-sm-tns-grow weary-fv child

Mambo has made the child grow weary

Sentence (4.25b) shows the long causative –_thi_– hosted by a intransitive stem. This goes on to show how the long causative is productive because it can be hosted by both intransitive and transitive stems.
4.26a. Structural Configuration of a Gĩkũyũ Underived Intransitive Structure
In diagram (4.26b), what was the subject in the underived structure *mwana* becomes the causative object, also the primary object of the verb. As the primary object, it is subcategorised for by the verb; therefore it moves from its place as a complement of the verb in the VP to [SPEC/CAUSP] to check for causative features. The verb moves from its place in the VP to [CAUS/CAUS’] to pick up the causative affix, check for causative features and check for object agreement features. The verb moves on to check for tense, subject agreement features then spells out after picking up the focus marker. Since the causative transitivises the intransitive structure making it a derived monotransitive structure, the causer
Njambi becomes the subject of the derived structure. The causer moves from [SPEC/VP] to [SPEC/AGRsP] to check its agreement features. Lastly, it moves to [SPEC/FOCP] to spell out.

4.2.2.4 Monotransitive verbs

4.27a. Karanja nĩatega huko

Karanja nĩ-a-a-teg-a huko
Karanja foc-sm-tns-trap-fv mole
Karanja has trapped a mole

4.27b. Mũngirigaca nĩategithia Karanja huko

Mũngirigaca nĩ-a-a-teg-thi-a Karanja huko
Agricultural officer foc-sm-tns-trap-caus-fv Karanja mole
An agricultural officer has made//forced Karanja to trap a mole

4.28a. Structural Configuration of a Gĩkũyũ Underived Monotransitive Structure
The movements of the verb and the two arguments are the same as explained for the monotransitive structure in the analysis of the applicative. When the causative is attached the following changes occur.

4.28b. Structural Configuration of a Gikuyu Monotransitive Structure with the
The second object of the sentence also known as the secondary object *huko* moves from [NP/VP] to [SPEC/AGRoP] to check its object features. The causee *Karanja* which was the subject in the underived sentence becomes the primary object or the causative object. It moves from its place in the VP to [SPEC/CAUSP] to check its causative/object features. The underived verb moves from its place in the VP to [AGRo/AGRo’] to check secondary object features and then moves [CAUS/CAUS’] to pick up the causative affix and check for accusative agreement features. The now derived verb moves to [TNS/TNS’] to check its tense features. The verb then moves to [AGRS/AGRS’] to check agreement features. Lastly
moves to [FOC/FOC’] to pick up the focus marker, and finally, spell out. The causative argument introduced by the causative, the causer mūngirigaca becomes the subject of the sentence; it moves from [SPEC/VP] to [SPEC/AGRsP] to check its subject agreement features. Lastly, it moves to [SPEC/FOCP] to spell out.

4.2.2.5 Ditransitive verbs

4.29a. Mūrangĩri niïaiya andũ mbeca

Mūrangĩri nĩ-a-iy-a andũ mbeca
Guard foc-sm-tns-steal-fv people money
A guard has stolen money from the people

4.29b. Mūici niïayithia mūrangĩri andũ mbeca

Mūici nĩ-a-iy-ithi-a mūrangĩri andũ mbeca
Thief foc-sm-tns-steal-caus-fv guard money people
The thief has forced the guard to steal money from the people

The diagram (4.30) below shows the analysis of causative derivations on a ditransitive verb.

4.30a. Structural Configuration of a Gikũyũ Underived Ditransitive Structure
When the causative is affixed the changes take place are explained in (4.30d).
4.30b. Structural Configuration of a Gikuyu Ditransitive Structure with the Causative
The verb *iya* has four arguments: a subject and three objects. There is one primary object and two secondary objects. The subject of the underived ditransitive structure *mūrangīrī* becomes the new primary object as the former primary object *ândū* is demoted to the first secondary object. The verb subcategorises for the three objects. The three objects will move from their positions as complements of the verb to their respective specifier positions. The verb will move to the head positions of each object projection to check for object features. However, the verb checks for accusative object features with primary object or causee *ândū* at [CAUS/CAUS’] as it picks up the causative affix. In addition, the verb will check for tense features, accusative agreement features and eventually spell out after picking up the focus marker.

The Gĩkũyũ causative affix is a transitiveising agent. It adds an extra participant to the argument structure of the verbs. The added argument, the causer, is introduced in the subject position as the former subject moves to the position after the verb. Thus, intransitive verbs change to transitive verbs, see (4.21b), monotransitive verbs to ditransitive verbs as in (4.22b); and ditransitive ones to tritransitive verbs like in (4.23b).

Having considered the two causative affixes, the long and the short, it is imperative to consider the factors that determine the choice of affix. The parameter that distinguishes the two is the one on directness. The causer of a short causative
construction acts directly, thus direct causation but the causer of a long causative construction may or may not act directly. In other words, in direct causation there is only one entity which causes the causation.

The long causative is highly productive. Semantically, the long causative expresses the coercive meaning whereas the short causative expresses the non-coercive meaning otherwise referred to as direct causation (Good, 2005). The last determinant of which causative to use is the shape of the verb root. If a verb root ends in a vowel then the long causative will always be used e.g. the verb gũa (fall) will be gũithia (cause to fall). If the verb root ends in a consonant then, it can host the short causative. Once again the theory adequately explains the Gĩkũyũ causative.

### 4.3 The Reversive

There are very few studies on the reversive as compared to the other affixes. A reversive indicates an entire reversal of an action (Lodhi, 2002). At times it is also referred to as the converse or reversative. Quirk et al. (1985) refers to it as the privative. However for consistency it will be referred to as the reversive in this study. The affix is restrictive in that it licences some verbs but not others. The reversive does not affect the valence of the verb for it neither increases nor decreases the arguments. An analysis of the English reversive by Kemmerer and Wright (2002), indicates that the verbs that host the reversive share the property of
designating events in which an agent causes something to enter a constricted, potentially reversible spatial configuration. These semantic constraints are revealed by the different uses of the verb *cross*: one can cross one’s arms and then uncross them (because a constricted spatial configuration is created and then reversed), but if one crosses a street and then walks back again, it cannot be said that one has uncrossed the street (because no constricted spatial configuration is involved (Kemmerer, 2006). In English, the reversive is marked by the prefixes *un-*, *dis-*, *de-* as in unfold, disarrange and defreeze respectively. In Gĩkũyũ it is marked by the suffix *-or* or *–ũr* as will be illustrated in a section below.

4.3.1 Status of the Reversive Affix

Cocchi (2008) in the study of Tshiluba (a Bantu language) verbal extensions classifies extensions into two broad classes: syntactic and lexical extensions. She describes syntactic suffixes as those that change the semantic meaning of a verb and also add a new argument to the clause or remove one. Syntactic affixes are more productive than the lexical ones. There are four syntactic affixes, namely the causative, the applicative, the reciprocal and the passive. She describes lexical extensions as simply affixes which add an extra significance to the semantic import of the verb. In addition the semantic contribution provided by these extensions is rather constant. Lexical extensions are always adjacent to the verb; this is seen in the co-occurrences of the reversive and other affixes as described in chapter six. The change they cause is semantic and morphological, but not
syntactic. However in rare cases the influence of the lexical extension does extend to the syntax though not in a very productive sense like the syntactic extensions. Cocchi (2008) refers to the lexical extensions that affect the argument structure as the lexical-argument extension. The Bantu reversive is regarded as a lexical extension. The Gĩkũyũ Reversive Construction is also considered a lexical extension.

### 4.3.2 The Gĩkũyũ Reversive Construction

The Gĩkũyũ reversive affix is –or/ũr-. The affix –or- occurs with a base whose last vowel is ‘o’, while –ũr- attaches to the rest of the bases that can host the reversive:

- 4.31a. rog-a (bewitch) - rog-or-a (‘unbewitch’)
- 4.31b. git-a (roof) – git-ũr-a (unroof)

The Gĩkũyũ reversive affix is highly restrictive; it is only hosted by a few dynamic transitive verbs and even fewer intransitive ones. The reversive is widely studied as a neutral affix, that is, it does not affect the argument structure of the stem it is attached to and that it is only hosted by monotransitive verbs. The examples below show the isolated cases in which the Gĩkũyũ reversive is hosted by an intransitive verb and transitivising a monotransitive verb.

- 4.32a. Mũahunjia nĩanyota
  
  Mũahunjia nĩ-a-a-nyot-a

  Mũahunjia foc-sm-tns-thirst-fv
The preacher has become thirsty

4.32b. Mai nǐmanyotora mūhunjia

Mai nī-ma-a-nyot-or-a mūhunjia

Mai foc-sm-tns-thirst-rev-fv preacher

The (drinking) water has quenched the preacher’s thirst

4.33a. Kang’ethe nōoha njau

Kang’ethe nī-a-a-oh-a njau

Kang’ethe foc-sm-tns-tie-fv calf

Kang’ethe has tied the calf.

4.33b. Kang’ethe nōhora njau

Kang’ethe nī-a-a-oh-or-a njau

Kang’ethe foc-sm-tns-tie-rev-fv calf

Kang’ethe has untied the calf.

4.34a. Wang’ombe nīaka nyūmba

Wang’ombe nī-a-a-ak-a nyūmba

Wang’ombe foc-sm-tns-build-fv house

Wang’ombe has built a house

4.34b Wang’ombe nīakūra nyūmba

Wang’ombe nī-a-a-ak-ūr-a nyūmba

Wang’ombe foc-sm-tns-build-rev-fv house

Wang’ombe has unbuilt a house
With the monotransitive verbs (4.26b and 4.27b), the effect of the reversive is limited to the verb only; the arguments are not affected in any way. This makes the Gĩkũyũ reversive a lexical extension and specifically a lexical-argument extension because of its transitivising effect with the intransitive verb in 4.25b. However, those cases are so rare for the reversive to be considered productive. The few instances when the reversive transitivises will be considered as the rare cases Cocchi (2008) mentions where the effect of the affix extends to the syntax.

In passing, we wish to note that there are words in the Gĩkũyũ lexicon that express the reversive meaning even though they lack an explicit reversive affix. The following are some of the words:

- Comora-unsheath
- Konyora-dehusk
- Konora-detach
- Ŭnũra-peel
- Amũra-set apart
- Atũra-split

The words do not have underived equivalents: that is, there are no words like coma, ũna or kona. Although konya is a word in Gĩkũyũ, meaning ‘pull up or pluck’; it is unrelated to konyora. Of interest in the study of the reversive is the presence of reversive affixes -or and -ŭr incorporated as part of the verb and bearing a perceived reversive meaning. The current study proposes that they are inherent reversives or lexical reversives. In the study of verbal extensions there are
two elements that form the basics, namely the morphological extension and the semantic extension of the verb.

In the theoretical analysis of the reversive, Cocchi (2008) proposes that the reversive be analysed as a lexical extension, so that it is incorporated into the verb while still in the lexicon. Her justification is based on the fact that the reversive is always next to the verb stem, and it is not a syntactic extension as it has no effect on the argument structure of the verb. The study proposes to analyse the reversive as a verbal extension because of two reasons: for uniformity in analysis with the other extensions and to show the position of the affix especially with the co-occurrences.

4.35. The reversive projection
4.36. Structural Configuration of a Gĩkũyũ Monotransitive Structure with the Reversive.

The reversive does not introduce an argument; therefore only the head (the reversive affix) is projected. The verb will pick up the reversive affix at [REV/REV'] and check for reversive features. All the other movements are as described above for monotransitive structures.

4.4 Summary

The applicative and the causative are both argument increasing. The reversive to a large extent is neutral but in a few isolated cases it transitivizes. Both the causative and the applicative are very productive, they can be hosted by many verbs. The reversive is quite restrictive. The causative introduces an argument, the causer, which then becomes the new subject as the subject of the sentence is pushed to
object position becoming the causative object, also known as the causee. The causee checks its accusative features under the [SPEC/CAUSP]. The verb marks accusative agreement with the causee. The Gĩkũyũ applicative introduces up to a maximum of three arguments. The common ones are the benefactive, locative and motive. In the analysis, it is possible to plug in the affixes for features to be checked in a local configuration. The Gĩkũyũ reversive is a lexical extension; extending the morphological structure of the word and meaning but not affecting the argument structure. So far the theory has explained the three affixes adequately. However, the theory is quiet on the status of the affix leaving it as a matter of preference between incorporating it and base-generating it. The next chapter discusses Gĩkũyũ reciprocal and passive; both of which are argument decreasing.
CHAPTER FIVE

THE RECIPROCAL AND THE PASSIVE

5.0 Introduction

The chapter gives a detailed account of the Gĩkũyũ reciprocal and the passive, which are argument decreasing affixes. The chapter has two broad sections, one on the reciprocal and the other on the passive. The reciprocal section begins with a description of the Reciprocal construction cross-linguistically, followed by a description and theoretical analysis of the Gĩkũyũ reciprocal. The next section begins with a description of the passive construction cross-linguistically, followed by a description and theoretical analysis of the Gĩkũyũ passive.

5.1 The Reciprocal

5.1.1 The Reciprocal Construction Cross-Linguistically

Reciprocals have attracted considerable attention within the past few decades, both in syntax and in semantics; see for example, (Kimenyi, 1980; Dembetembe, 1981; Bokamba, 1991; Heim, et. al., 1991; Mchombo, 1993, 1995; Dupleissis & Visser, 1992; Maslova, 2004). Such studies have given rise to a syntactic and semantic characterization of the reciprocal in general (Mudzingwa, 2008). The reciprocal is a de-transitivizing morpheme; it derives intransitive verbs from transitive verbs. For this reason it is said to be a valence or argument reducing operator.
In terms of meaning, the reciprocal shows that the NP subject is both agent and patient. This is because the action or activity is mutually done between the participants. The participants act on each other (Payne, 1997). Mchombo & Nguga (1994) observe that the effect of the reciprocal construction is that of ascribing the members of a group the property that they are involved in an activity such that each member is performing the action on the other. They further point out that this is the commonest reading and it is clearest when the group consists of two members. Although the construction is syntactically intransitive, it is semantically transitive. The construction is semantically transitive since two participants are doing some action on each other. The participants are both subjects (agents) and objects at the same time.

Another feature of the reciprocal which is closely related to the loss of an argument is subjectivization (Kimenyi, 1980). The direct object of the basic sentence is promoted to subject position in the reciprocal construction. The two then form a coordinated NP subject as in Shona, a Bantu language (Mudzingwa, 2008).

According to Dimitriadis (2003), a number of different principled schemes for the classification of reciprocal constructions have been proposed. Morphologically, a distinction is made based on whether a reciprocal predicate is formed using a pronominal or quantificational argument with reciprocal meaning, or using an
argument structure operation on the verb; and if the latter, whether the argument structure operation occurs productively ‘in the syntax’ or ‘in the lexicon’ (Reinhart, 2000; Siloni, 2001; Plank, 2002).

Interpretatively, we consider whether we are dealing with a dedicated reciprocal construction, or with one that is polysemous between a reciprocal and a reflexive, collective, or other meaning (Frajzyngier, 1999). In addition, the reciprocals can also be classified according to the reciprocal and reciprocal-like situation types they allow (Lichtenberk, 1985 and 1999). Finally, consideration should be made whether a reciprocal construction is the primary means of expressing reciprocal semantics in that language.

Bantu reciprocals systematically cut across the expected categories. They are formed by a derivational verbal morpheme but share properties that are usually associated with each of the three morphological types; they do not show reflexive-reciprocal polysemy, but they allow many of the same constructions (such as discontinuous reciprocals) as polysemous reflexive-reciprocal verbs in same constructions (such as discontinuous reciprocals) as polysemous reflexive-reciprocal verbs in Greek, Serbian and Hebrew (Dalrymple et al, 1994; Dimitriadis, 2002). The Gĩkũyũ reciprocal does not, however allow for discontinuous construction.
5.1.2 The Gĩkũyũ Reciprocal Construction

The Gĩkũyũ reciprocal construction is formed by adding the affix –an to a verb root. This is the same affix used for generalising, associative and divisive in Gĩkũyũ. In some works the reciprocal is referred to, and used as the associative (Barlow, 1960). For consistency, the current study will use –an strictly as the reciprocal affix with the reciprocal meaning. A syntactic way of distinguishing between the two is the subject markers used. If the subject marker is plural the ‘-an’ used is a reciprocal affix; but if it is singular, then it is used as an associative affix (Mũgane 1997). Structure (5.1a) below is associative; the subject marker a is singular as opposed to the plural in (5.1b) which is a reciprocal. Another distinction between the two is in the meaning. Reciprocity is the meaning of acting on each other mutually while associative is the meaning of an action extending to other parties without there being reciprocity.

5.1a. Nǐahũrana

Nǐ-a-a-hũr-an--a
Foc-sm-tns-beat-assoc-fv
He has beaten others

5.1b. Nĩmahũrana

Nĩ-ma-a-hũr-an--a
Foc-sm-tns-beat-assoc-fv
They have beaten each other
The reciprocal affix is not very productive as it is only hosted by transitive verbs whose arguments are animate or the few inanimate capable of motion. The reciprocal is not hosted by the argumentless and intransitive verbs because they do not have two participants that can mutually act on each other. However, it must be noted that some intransitive verbs can host the reciprocal morpheme but only after they are transitivised through processes like causativisation. The examples below illustrate the transitivisation and the eventual adding of the reciprocal:

5.2a.  Njogu nǐahūma

Njogu nĩ-a-a-hūm-a
Elephant foc-sm-tns-strained-fv
An elephant has strained

5.2b.  Ngarĩ nǐahūma

Ngarĩ nĩ-a-a-hūm-a
Leopard foc-sm-tns-strained-fv
Leopard has strained

5.2c.  Njogu nǐahūmía Ngarĩ

Njogu nĩ-a-a-hūm-i-a ngarĩ
Elephant foc-sm-tns-strained-caus-fv leopard
An elephant has caused a leopard to strain
5.2d. Ngarĩ nǐahũmia Njogu

Ngarĩ nĩ-a-a-hũm-i-a njogu

Leopard foc-sm-tns-strained-**caus**-fv elephant

A leopard has caused an elephant to strain

5.2e. Njogu na Ngarĩ nǐmahũmania

Njogu na ngarĩ nĩ-ma-hũm-an-i-a

An elephant and leopard foc-sm-strained-**rec-caus**-fv

An elephant and leopard have caused each other to strain

Structures 5.2a and 5.2b are underived and intransitive. The introduction of an extra participant *ngarĩ* in 5.2c and *njogu* in 5.2d by the causative affix allows the intransitive verb *hũma* to host the reciprocal affix as is evident in 5.2e. The reciprocal can also occur with intransitive reflexive structures in which there is polysemy between the reciprocal and the reflexive. Consider (5.2f) and (5.2g) below:

5.2f. Nierũma

(He/She has bitten himself/herself)

5.2g. Niemena

(He/She has hated himself/herself)

The structures (5.2f) and (5.2g) are intransitive. The presence of the reflexive means that we one entity acting on itself (the agent is the patient) hence the reflexive-reciprocal polysemy.
5.1.2.1 Monotransitive verbs

5.3a. Mũnyua nĩarũma Kamau

Mũnyua nĩ-a-a-rũm-a Kamau
Mũnyua foc-sm-tns-beat-fv Kamau
Mũnyua has bitten Kamau

5.3b. Kamau nĩarũma Mũnyua

Kamau nĩ-a-a-rũm-a Mũnyua
Kamau foc-sm-tns-beat-fv Mũnyua
Kamau Mũnyua has bitten Mũnyua

5.3c. Mũnyua na Kamau nĩmarũmana

Mũnyua na Kamau nĩ-ma-a-rũm-an-a
Mũnyua and Kamau foc-sm-tns-bite-rec-fv
Mũnyua and Kamau have bitten each other

Structures 5.3a and 5.3b are underived. In 5.3a Mũnyua is the subject or agent and Kamau the object or the patient, and in 5.3b Kamau is the subject and Mũnyua the object. The subject/agent comes before the verb and object/patient comes after the verb for the correct semantic interpretation of the sentences. When the reciprocal affix is attached, the syntactic and semantic interpretations of subject-object and agent-patient respectively do not obtain as whatever argument remains becomes both.
In the structural configuration of the reciprocal only the head (affix) is projected since the reciprocal does not introduce an argument just like the reversion above and the passive below. The verb moves to the reciprocal projection to pick up the reciprocal affix and check for reciprocal features. When the reciprocal is attached to a monotransitive structure the changes that take place are shown in diagram (4)

5.4. Structural Configuration of a Gĩkũyũ Monotransitive Structure with the Reciprocal

The reciprocal detransitivises the monotransitive structure making it intransitive. The verb does not subcategorise for any object. The verb moves from its place in the VP to [REC/REC’] to pick up the reciprocal affix and check for reciprocal features. The verb then moves on to check for tense features, subject agreement features and spells out after picking up the focus marker. The reciprocal binds the
subject and object to a compound subject. The compound subject moves from its place in the VP to [SPEC/AGRsP] to check for subject agreement features then spells out at [SPEC/FOCP].

5.1.2.2 Ditransitive verbs

5.5a. Wamae nǐahe Chege mbeca

Wamae nī-a-a-he Chege mbeca

Wamae foc-sm-tns-give Chege money

Wamae has given Chege money

5.5b. Chege nǐahe Wamae mbeca

Chege nī-a-a-he Wamae mbeca

Chege foc-sm-tns-give Wamae money

Chege has given Wamae money

5.5c. Wamae na Chege nǐmahe\text{ana} mbeca

Wamae na Chege nī-ma-a-he-\text{an}-a mbeca

Wamae and Chege foc-sm-tns-give-\text{rec}-fv money

Wamae and Chege have given each other money

As noted in the previous chapter, ditransitive verbs have three basic arguments: the subject and two objects. The first object after the verb (in this case Chege in (5.4a) and Wamae in (5.4b) forms the reciprocal meaning with the subject the same way.
the reciprocal construction is formed with monotransitive verbs. The second object remains in its post-verbal position. The structures 5.4a-5.4c illustrate this. According to Dimitriadis’ (2003) classification of reciprocals, the Gĩkũyũ reciprocal is an argument structure operation that occurs productively in the syntax as the examples above illustrate how the participants are reduced. In Gĩkũyũ, the reciprocal construction is the primary means of expressing reciprocal semantics in the language.

5.6. Structural Configuration of a Gĩkũyũ Ditransitive Structure with the Reciprocal

The sentence (diagram 5.6) is monotransitive; the reciprocal has detransitivised it. The NP *mbeca* which was a secondary object (see 5.5a and 5.5b above) becomes the new primary object as the former primary object is bound together with the subject by the reciprocal. It moves from its complement position in the VP to [SPEC/AGRsp] to check for object agreement features. The verb moves from its
place in the VP to [AGRo/AGRo’] for checking object agreement features. The V moves to [REC/REC’] to pick up the reciprocal affix and check for reciprocal features, then moves to [TNS/TNS’] to check for tense ; [AGRs/AGRs’] to check for subject agreement features and ,lastly, moves to [FOC/FOC’] to pick up the focus marker then spell out. The compound subject is realised as a compound NP (Wamae and Chege). This NP moves from [SPEC/VP] to [SPEC/AGRsP] to check for nominative features then spells out at [SPEC/FOCP].

5.2 The Passive

5.2.1 The Passive Cross-Linguistically

According to Comrie (1989), Givon (1984) and Shibatani (1985), a prototypical passive structure is characterised both morphosyntactically and in terms of its discourse function. Morphosyntactically a passive is semantically transitive (it has two arguments or participants) for which the following properties hold according to Payne (1997:185):

(a) The agent or most agent like participant is either omitted or demoted to oblique case

(b) The other core participant possesses all the properties of subject relevant for all the languages as a whole

(c) The verb possesses any and all language specific formal properties of intransitive verbs
Keenan (1985) sees the formation of a passive as a fore-grounding process. The object of the active sentence is raised to the subject position as the subject gets demoted to an oblique position. According to Marten and Kula (2007) the two main functions of the passive are to change the argument structure and encode agency.

There are two major classifications of passive constructions, namely: personal and impersonal passives. Personal passives are constructions for which some specific agent is implied, but either is not expressed or is expressed in an oblique role. Personal passives can be lexical, morphological or periphrastic. Lexical passives are not common. A lexical passive is a verb that is inherently passive. It is a verb that must express a scene that includes the presence of a causing agent, but the patient being the grammatical subject. Morphological passives are the most common. They involve the attaching of a passive affix to a transitive verb root as is evident in many Bantu languages. Periphrastic passives require an auxiliary verb as is the case with English passives.

Impersonal passives, unlike personal ones can be formed from both intransitive and transitive verbs. Personal passives are formed from transitive verbs. Impersonal passives downplay the importance of an agent. Comrie (1977) notes that there is no raising of the object as the agent/subject gets relegated. Payne (1997) observes that no language employs specific morphology just for impersonal
passives and one for personal passives. Bantu passives are frequent and their grammatical structure resembles passive formation in languages like English. The reasons given for the high frequency of occurrence is that Bantu languages can passivize both accusative and dative arguments, as well as many stative verbs (Demuth, 1989).

5.2.2 The Gĩkũyũ Passive Construction

The Gĩkũyũ Passive construction is realised by the addition of -w- to a verb immediately before the final vowel if the verb root ends in a consonant. The affixed passive morpheme changes the final vowel of the verb from -a to -o, for example: tum-a (send); tumw-o (be sent). If the stem ends in a vowel, the passive marker, -w- is deleted leaving a changed final vowel to -o like in: rĩ-a (eat); rĩ-o (be eaten). The following section illustrates how the passive affix is hosted by the different verb types.

5.2.2.1 Argumentless verbs

The argumentless verbs, also known as weather verbs, do not host the passive affix. These verbs do take cognate nominals as either subject or object. Consider mbura in (5.7b) and (5.7c) respectively:

5.7a. Nĩ kwaura

Nĩ-kũ-a-ur-a
Foc-expl-tns-rain-fv
It has rained

5.7b. Mbura nǐyaura
Mbura nǐ-i-a-ur-a
Rain foc-sm-tns-rain-fv
Rain has fallen or rained

5.7c. Nī kwaura mbura
Nī-kū-a-ur-a mbura
Foc-expl-tns-rain-fv rain
It has rained (rain)

When the passive affix is attached, the following semantically anomalous structures are derived.

5.8a. *Nī kwaurwo
Nī-kū-a-ur-w-o
Foc-expl-tns-rain-pas-fv
It has been rained

5.8b. *Mbura nīyaurwo
Mbura nǐ-i-a-ur-w-o
Rain foc-sm-tns-rain-pas-fv
Rain has been fallen or rained
5.8c. *Nî kwaurwo mbura

Nî-kū-a-ur-w-o mbura

Foc-expl-tns-rain-pas-fv rain

It has been rained (rain)

The reason for the argumentless verbs not hosting the passive may be explained by the presence of a cognate nominal and the absence of a substantive argument. The absence of a substantive argument means there is no argument to be demoted or fore-grounded. In addition the cognate nominals function as either subject or object with their status (in terms of fore-grounding and demotion) not changing.

5.2.2.2 Intransitive verbs

Intransitive verbs have one argument only, the subject. There is no object to be fore-grounded to the subject position; therefore the expletive kū is introduced to occupy the subject position when the subject gets demoted. With the verbs that host the passive affix, impersonal passives are formed as illustrated below:

5.9a. Ciana nîcianyota

Ciana nî-ci-a-nyot-a

Ciana foc-sm-tns-become thirsty-fv

The children have become thirsty
5.9b. Nikwanyotwo

Nǐ-kū-a-nyot-w-o (nǐ ciana)

Foc-expl-tns-grown thirsty-pas-fv (by ciana)

Thirst has been felt (by the children)

The children have grown thirsty

In the analysis of the Gĩkũyũ passive only the head (affix) is projected since the passive does not introduce an argument just like the reversive and the reciprocal. The verb moves to the passive projection [PAS/PAS’] to pick up the passive affix and check for passive features. When the passive is attached to an intransitive structure the changes that take place are shown in diagram (5.10)

5.10. Structural Configuration of a Gĩkũyũ Intransitive Structure with the Passive.

The tree diagram (5.10) shows the movement of the verb only. The verb moves from its place in the VP to [PAS/PAS’] to pick up the passive affix and check for
passive features. The derived verb now moves to [TNS/TNS’] to check for tense. It then moves to [AGRs/AGRS’] to pick up the expletive and mark for subject agreement since the expletive doubles up as class 15 subject concord marker. Lastly the verb moves to [FOC/FOC’] to pick the focus marker. As this is an argumentless, verb, no specifier and complement positions are projected in the VP.

5.2.2.3 Monotransitive verbs

Passives formed with the monotransitive verbs are the commonest across languages. Monotransitive verbs have two arguments, a subject and an object. When the passive is attached, the object gets foregrounded as the subject gets demoted to an oblique position or is omitted. Unlike English, the Gĩkũyũ monotransitive verbs can form both personal and impersonal passives as illustrated below:

5.11a. Kaař nĩahinga mũrango

Kaař nĩ-a-a-hing-a mũrango

Kaař foc-sm-tns-close-fv door

Kaař has closed the door

5.11b. Mũrango nĩwahingwo (nĩ Kaař)

Mũrango nĩ-ũ-a-hing-w-o (nĩ Kaař)

Door foc-sm-tns-close-pas-fv (by Kaař)

The door has been closed (by Kaař)
5.11c. Nikwahingwo műrango (nî Kaarî)

Nî-kû-a-hing-w-o műrango (nî Kaarî)

Foc-expl-tns-close-pas-fv door (by Kaarî)

There has been closed a door (by Kaarî)

In (5.11a.) we have the underived active structure with the subject as Kaarî and the object as műrango (door). When the passive is attached in (5.11b.), a personal passive is formed. The object műrango (door) is promoted to the subject as the subject is demoted to an oblique which is optional. Structure (5.11c.) is an impersonal passive. The object does not raise to the subject position. It remains in its object position; instead we have an expletive occupying the subject slot. The subject of the active sentence, however, still gets relegated to an oblique participant or nominal. The status of the ‘object’ is also oblique; object is peripheral and may be omitted totally.

In the analysis of Gîkûyũ monontransitive verbs within The Minimalist Program two diagrams have been used to show the analysis. The first diagram (5.12a) shows the structure of an underived Gîkûyũ monontransitive has been analysed in the previous sections. Diagram (5.12b) shows the changes that take place when the passive is attached.
5.12a. Structural Configuration of a Gĩkũyũ Underived Monotransitive Structure
5.12b. Structural Configuration of a Gĩkũyũ Monotransitive Structure with the Passive

The NP *mũrango* starts off as the complement of the verb as it is assigned the theme role, then rises to the specifier position of the VP to become the syntactic subject of the sentence. The NP moves to [SPEC/AGRsP] to check for nominative features, then moves to [SPEC/FOCP] to spell out. The verb moves from its place in the VP to [PAS/PAS’] to pick up the passive affix and check for passive features; then moves to [TNS/TNS’] to check for tense features; moves to [AGRS/AGRS’] to check subject agreement features; and lastly moves to [FOC/FOC’] to pick up the focus marker, and finally, spell out.
5.2.2.4 Ditransitive verbs

There are few ditransitive verbs in Gĩkũyũ, an observation made too by Mwangi (2001a). Ditransitive verbs have three arguments: a subject and two objects. As noted previously in the classification of the verbs, locative objects were not considered as almost all the verb classes can take locative objects. The following examples show how the Gĩkũyũ ditransitive verbs form passives.

5.13a. Gakii nǐahe Nyawǐra mǔgate

Gakii nǐ-a-a-he Nyawǐra mǔgate
Gakii foc-sm-tns-give Nyawǐra bread
Gakii has given Nyawǐra bread.

5.13b. Nyawǐra nǐaheo mǔgate (nǐ Gakii)

Nyawǐra nǐ-a-a-he-o mǔgate (nǐ Gakii)
Nyawǐra foc-sm-tns-give-pas bread (by Gakii)
Nyawira has been given bread (by Gakii)

5.13c. Nǐkwaheo Nyawǐra mǔgate (nǐ Gakii)

Nǐ-kū-a-he-o Nyawǐra mũgate (nǐ Gakii)
Foc-expl-tns-give-pas Nyawǐra bread ( nǐ Gakii)
There has been given bread to Nyawǐra bread (by Gakii)
Structure (5.13a) is a basic active structure. When the passive affix is attached, two possible structures are derived (see 5.13b and 5.13c). In (5.13b) the first object (dative argument) after the verb is the one that gets foregrounded as the subject gets demoted to form a personal passive. In 5.13c the two objects remain in their position but an expletive takes the subject position to form an impersonal passive.

Structure 5.13d below illustrates what happens when the secondary object is preposed.

5.13d. *Mūgate nīwaheo Nyawīra (nī Gakii)

Mūgate nī-wa-a-he-o Nyawīra (nī Gakii)

Mūgate foc-sm-tns-give-pas Nyawīra (by Gakii)

Bread has been given to Nyawīra (by Gakii).

The derived structure in (5.13d) is ill-formed because the secondary argument has been preposed. This shows the asymmetric nature of Gīkūyū, that is, only the primary object can be passivised. The following is the diagrammatic representation of the configuration of the ditransitive verb with the passive.
5.14a. Structural Configuration of a Gikuyu Underived ditransitive Structure
5.14b. Structural Configuration of a Gikuyu Ditransitive Structure with the Passive
The NP *mũgate* which was a secondary object in the underived ditransitive structure becomes the only object of the verb. It moves to [SPEC/AGRoP] to check for object features. The verb moves from its place in the VP to [AGRo/AGRo’] to check for accusative agreement features. The verb then moves to [PAS/PAS’] to pick up the passive affix and check for passive features; moves to [TNS/TNS’] to check for tense features; moves to [AGRs/AGRs’] to check subject agreement features; and lastly moves to [FOC/FOC’] to pick up the focus marker, and finally spell out. The NP *Nyawĩra* starts off as the primary object of the verb where it is the benefactive. It rises to the specifier position of VP to become the syntactic subject of the sentence. The NP, now the subject, moves from [SPEC/VP] to [SPEC/AGRsP’] to check for nominative features, then moves to [SPEC/FOC P] to spell out.
5.14c. Structural Configuration of a Gikuyu Impersonal Passive
The diagram shows the movement of the verb is an impersonal passive. The verb moves from its place in the VP to \([\text{AGR}_o/\text{AGR}_o']\) to check object features with the secondary object, then moves to \([\text{BEN}/\text{BEN}']\) to assign benefactive role to the primary object, and also check for agreement features. The VP moves to the \([\text{PAS}/\text{PAS}']\) to pick up the passive affix and check for passive features; moves to \([\text{TNS}/\text{TNS}']\) for marking. Finally the verb moves to \([\text{FOC}/\text{FOC}']\) to pick up the focus marker.

5.3 Summary

The chapter focused on the Gĩkũyũ reciprocal and the passive. The two extensions are argument reducing. The reciprocal is quite restrictive for it is only hosted by a few monotransitive and ditransitive verbs. The reciprocal binds the subject and the object to form a compound subject which is based-generated under the SPEC/VP and checks for nominative agreement features under \([\text{SPEC}/\text{AGR}_{SP}]\). The Gĩkũyũ passive can form two types of passives: personal and impersonal. In the theoretical analysis, the passive is projected as a head only, for the verb to pick up the affix and check passive features. The theory has adequately explained the derivations of the Gĩkũyũ reciprocal and passive verbal extensions. This is the end of description and analysis of the verbal extensions. The next chapter is, discusses the co-occurrences of the verbal extensions.
CHAPTER SIX
CO-OCCURRENCES OF VERBAL EXTENSIONS

6.0 Introduction

The chapter gives a detailed description and analysis of the co-occurrences of the five Gĩkũyũ verbal extensions. The chapter begins with a discussion of the determinants of the order of affixes. This is followed by description of the co-occurrences of Gĩkũyũ verbal extensions. The description of each co-occurrence of Gĩkũyũ verbal extensions is followed by the theoretical analysis within the Minimalist Program.

6.1 The Order and Co-occurrence of Verbal Extensions

The order and co-occurrence of affixes can be explained by three broad perspectives, namely: syntactic, semantic, and morphological. The syntactic view is attributed to Baker (1985) (see section 2.2.5 for details). The derivational affixes marked on the base are each affiliated to a syntactic operation. Baker states that the order of the derivational affixes reflects the corresponding order of the syntactic derivational steps. Affix order is not strictly fixed.

The semantic perspective is attributed to Bybee (1985) and Rice (2000). According to them, affix order is determined by the semantic function and scope of each affix; the affixes having greater relevance to the action of the verb root appear closer to it. Bybee’s classification was on the inflectional affixes. Rice’s
view of the semantic scope is broad and seeks to explain the cases in which affixes are not rigidly ordered, and where alternative order is possible.

Lastly, the morphological view postulates a template where affixes are inserted in specific slots which are not directly motivated by either syntactic or semantic considerations. This view is attributed to Hyman (2002). According to Hyman, affix ordering is determined by the morphology; languages impose specific morphotactic constraints for which there is no synchronic extra-morphological explanation. The morphotactic constraints can represent a relation between pairs of specific morphs or they might define a template by which multiple affixes are automatically ordered.

Hyman (2002) proposes a Pan-Bantu default template, CARP (Causative, Applicative, Reciprocal and Passive) for the Bantu suffixes. According to Hyman, the morpheme order CAUSE-APPL was part of the Proto-Bantu verbal template, and due to this, it is still the "default" morpheme order in most Bantu languages. The element of a fixed template motivated by morphology is supported by (Good, 2006; Buell & Sy, 2004).

Hyman (2002) acknowledges that the different perspectives can be a source of potential conflict in the explanation of affix ordering in Bantu. He says that the potential conflicts between these principles are resolved differently across the Bantu languages.
It is evident that the three approaches give some explanations on the distribution of Bantu derivational affixes though not conclusive. The three perspectives deal with a few selected affixes; for instance, Hyman’s proposed template is based on the analysis of four affixes. The three approaches will guide the descriptive part of the Gĩkũyũ verbal extensions. In the theoretical analysis of the co-occurrence within the theory, the Mirror Principle (see section 2.2.4) is used to explain the order of the projections.

The following section describes the distribution of the five Gĩkũyũ derivational affixes. It will be of interest to establish how the introduction of the reversive would or would not affect the order of the other much researched affixes. Emphasis will be on how they are ordered when they co-occur. The section also discusses the analysis of the co-occurrences of Gĩkũyũ verbal extensions within the Minimalist Program.

6.2 Co-occurrences of Gĩkũyũ Verbal Extensions

The following section discusses the possible combinations of co-occurrences of Gĩkũyũ verbal extensions. These combinations are in three broad categories, namely co-occurrences of two extensions, of three extensions, and of four extensions.
6.2.1 Co-occurrences of Two Extensions

There are nine possible combinations of co-occurrence of two Gikuyu verbal extensions.

A. The Causative and the Applicative

An underived transitive structure:

6.1a. Kamau nǐamba hema

Kamau has pitched a tent

The transitive with the causative:

6.1b. Kuria nǐambahıthia Kamau hema

Kuria has made Kamau pitch a tent

The transitive structures with the causative and the applicative:

6.1c. Kamau nǐambıra Njoroge hema

Kamau has pitched a tent for/on behalf of Njoroge

6.1d. Kuria nǐambahıthırıa Njoroge hema

Kuria nǐ-a-a-amb-ith-ı-r-i-a Njoroge hema

Kuria foc-sm-tns-pitch-caus-app-caus-fv Njoroge tent

Kuria has made someone pitch a tent for or on behalf of Njoroge

6.1e. Kamau nǐambahıthırıa Njoroge hema

Kamau nǐ-a-a-amb-ith-ı-r-i-a Njoroge hema

Kamau foc-sm-tns-pitch-caus-app-caus-fv Njoroge tent

Kamau has made someone pitch a tent for or on behalf of Njoroge
Structure (6.1d) is a causative that is applicativized while (6.1e) is a causativized applicative. In (6.1c) the causative affix comes before the applicative while in 1e the causative affix is attached after the applicative affix. The order of affixes does not change in both cases but the meaning does. The two are transitivising affixes; they both add participants to the verb, therefore logically we might expect to see two arguments added to the verb when the causative and the applicative co-occur. However, when they co-occur only one participant is overtly marked and the other is implied. In (6.1d) and 1e the causee is implied. The causative adds a causer: *Kuria* in (6.1b) and (6.1c). In (6.1b) *Kamau* becomes the causee but in (6.1d) when the applicative affix is added, *Njoroge* becomes the applied object, leaving the causee to be implied. In (6.1e) when the causative is attached *Kamau* becomes the causer as the causee is still implied.

The structures below illustrate the co-occurrence of the short causative with the applicative.

An underived transitive structure:

6.2a. Mwana nǐakoma

   The baby has slept

6.2b. Njeri nǐakomnia mwana

   Njeri has put the baby to sleep

The transitive structure with the causative and the applicative:

6.2c. Njeri nǐakomeria Karanja mwana
Njeri nî-a-a-kom-er-i-a Karanja mwana

Njeri foc-sm-tns-app-caus-fv Karanja baby

Njeri has caused the baby to sleep on behalf of Karanja

(Njeri has put the baby to bed on behalf of Karanja or Njeri has lain
the baby on Karanja,)

On the surface the order seems to be app-caus. This surface realisation is
phonologically determined; metathesis has occurred to avoid a situation where one
affix ends in a vowel and the next begins in a vowel. The order is the same as for
the long causative: caus-app. Sentence (6.1e) is analysed below using the MP to
show how the theory interprets the co-occurrence of Gîkûyû causative and
applicative.

Diagram (6.3) shows the co-occurrence of the causative and the applicative. The focus in the configuration is on the position and structure building of the causative and the applicative. The causative comes first on the verb stem therefore it is lower on the tree as the merging process is bottom-up. The structure for the causative [CAUS/CAUS'] is enough to account for the causative affix which is the head. There is no specifier position for the causative object because it is implied and in its position there is the applicative object. The applicative has a full projection because it has a specifier, the benefactive argument. The benefactive is not plugged in; instead it is base-generated so that it can be assigned the theme role.
B. The Applicative and the Passive

An underived transitive structure:

6.4a. Hutia nǐandika marūa

Hutia has written a letter

With the applicative:

6.4b Hutia nǐandikīra Maina marūa

Hutia has written a letter to Maina

With the passive:

6.4c. Marūa nǐmandikwo (nī Hutia)

A letter has been written (by Hutia)

With the applicative and the passive:

6.4d. Maina nǐandikīrwo marūa (nī Hutia)

Maina nī-a-a-andīk-īr-w-o marūa (nī Hutia)

Maina foc-sm-tns-write-app-pass-fv letter (by Hutia)

A letter has been written for/to/on behalf of Maina (by Hutia)

6.4e. *Marūa nǐmandikīrwo Maina (nī Hutia)

Marūa nī-ma-a-andīk-īr-w-o Maina (nī Hutia)

A letter foc-sm-tns-write-app-pass-fv Maina (by Hutia)

A letter has been written for/on behalf

The passive comes after the applicative affix. The applied object, Maina gets foregrounded as the subject, Hutia, gets demoted to the oblique position. The marked
structure (6.4e) illustrates the asymmetric nature of Gĩkũyũ; only one object can be passivised. The nature of the Gĩkũyũ objects is still a contentious issue Diagram (6.5) below shows the minimalist interpretation of the Gĩkũyũ applicative-passive co-occurrence.

6.5. Structural Configuration of Gĩkũyũ Applicative-Passive Co-occurrence

The applied argument is foregrounded to be the subject of the sentence because of passivisation. There is no specifier position for the applicative; there is only the head, the affix. This is the same for the passive. The subject of the underived sentence is relegated to an optional oblique, so it is not represented in the diagram. The new subject of the sentence (Maina) starts as an object, the benefactive. The
object raises from its position as the complement of the verb where it is assigned accusative case to the specifier of the VP so that it can check its nominative case under [SPEC/ARsP].

C. The Applicative and the Reversive

An underived transitive structure:

6.6a. Wanjiru nĩoha njau
Wanjiru has tied the calf

With the reversive:

6.6b. Wanjiru nĩohora njau
Wanjiru has untied the calf

With the applicative:

6.6c. Wanjiru nĩohera Mami njau
Wanjiru has tied the calf for Mother

With the applicative and the reversive:

6.6d. Wanjiru nĩohorera Mami njau
Wanjiru nĩ-a-a-oh-or-er-a Mami njau
Wanjiru foc-sm-tns-tie-rev-app-fv Mother calf
Wanjiru has untied the calf for Mother

The reversive comes before the applicative with the transitive verbs both morphologically and semantically. Now that the study has established that the reversive has a transitivising effect with the intransitive verbs in a few isolated
cases, it is important to look at the co-occurrence of the two on an intransitive verb.

An intransitive structure affixed with the reversive and the applicative:

6.7a. Mwana nǐahata

The baby has got stuck

The intransitive structure with the reversive:

6.7b. Mwana nǐehatūra

The baby has unstuck himself/herself

6.7c. Mwangi nǐahatūra mwana

Mwangi has ‘unstuck’ the baby

(Mwangi has freed the baby)

With the reversive and the applicative:

6.7d. Mwangi nǐahatūrīra Njeri mwana

Mwangi nī-a-hat-ūrīr-a Njeri mwana

Mwangi foc-sm-tns-stuck-rev-app-fv Njeri baby

Mwangi has ‘unstuck’ the baby for Njeri

(Mwangi has freed the baby on behalf of Njeri)

The intransitive structure affixed with the applicative first then the reversive:

6.7e. Kūgūrū nǐkwaimba

The leg has swollen
With the applicative:

6.7f. Kūgūrū nǐkwaimbīra njīra

The leg has swollen on the way

With the applicative and the reversive:

6.7g. *Kūgūrū nǐkwaimbūrīra njīra

The leg has ‘unswollen’ on the way

6.7h. Kūgūrū nǐkwaimbūkīra njīra

Kūgūrū nī-kū-a-imb-ūr-k-īr-a njīra

Leg foc-expl-sm-swell-rev-stative-app-fv way

The leg has ‘unswollen’ on the way

(The swelling on the leg has disappeared)

When the reversive and the applicative co-occur on an intransitive base, the order of the affixes does not change but there is a semantic constraint on the arguments. Structures (6.7b) and (6.7c) illustrate how the reversive combines with an intransitive verb by transitivising the verb by either introducing an argument or introducing the reflexive. When the reversive transitivises first it is possible to combine with the applicative and still have the applied affix (6.7d, 6.7f, and 6.7h). However when the applicative transitivises the verb first, the stative affix –k- is needed as a stem extender to allow the reversive and the applicative to co-occur. Sentence (6.6d) is used in the MP analysis of the rev-app co-occurrence.
6.8. Structural Configuration of Gĩkũyũ Applicative-Reversive Co-occurrence

The two derivational affixes (applicative and reversive) come between tense and the object of the verb. As the reversive has no effect on the sentence arguments, only the head is projected. The applicative introduces a benefactive argument, which is subcategorized for by the verb so as to be assigned the benefactive theta role.
D. The Applicative and the Reciprocal

An underived transitive structure:

6.9a. Mbata yakanya ngūkū
A duck has pecked a hen

6.9b. Ngūkū niyiakanya mbata
A hen has pecked a duck

With the applicative:

6.10a. Mbata yakanyĩra ngūkū tūhū
A duck has pecked a hen because for no reason

6.10b. Ngūkū yakanyĩra mbata tūhū
A hen has pecked a duck for no reason

With the reciprocal and the applicative:

6.11a. Ngūkū na mbata nǐciakanyiŋra kīaga
Ngūkū na mbata nǐ-ci-a-kany-an-ĩr-a kīaga
Hen and duck foc-sm-tns-peck-rec-app-fv coop
A hen and duck have pecked each other in the coop

6.11b. Mbata na ngūkū nǐciakanyiŋra kīaga tūhū
Mbata na ngūkū nǐ-ci-a-kany-an-ĩr-a kīaga tūhū
duck and hen foc-sm-tns-peck-rec-app-fv coop no reason
A duck and hen have pecked each other in the coop for no reason
The reciprocal comes before the applicative. Logically, it would be expected that the applicative, a transitive affix should come before the reciprocal which is a detransitive affix; this would also be in line with the CARP template. The order is determined by the semantic consideration. The reciprocal appears first to indicate what the participants did to each other before we can consider the place (locative) and motive. It can be argued that the semantic features that make the reciprocal restrictive constrain the applicative.

6.12a. Mùthoni niaraka
Mùthoni has got annoyed

6.12b. Kîmani niaraka
Kîmani has got annoyed

With the applicative:

6.12c. Mùthoni niarakarîra Kîmani
Mùthoni has got annoyed with Kîmani

6.12d. Kîmani niarakarîra Mùthoni
Kîmani has got annoyed with Mùthoni

With the applicative and the reciprocal:

6.12e. Mùthoni na Kîmani niânarakarîra
Mùthoni na Kîmani nî-ma-rakar-anîr-a
Mùthoni and Kîmani foc-sm-tns-annoy-rec-app-fv
Mùthoni and Kîmani have got annoyed with each other
As noted earlier (section 5.1) the reciprocal affix is not hosted by intransitive verbs. However, the reciprocal affix can be hosted when it co-occurs with the applicative on an intransitive base because of the transitivising effect of the applicative. The order still remains rec-app despite the applicative process applying first. This is thought-provoking given that we cannot invoke metathesis for it is unmotivated. We have to transitivize the verb with the applicative before we can add the reciprocal. A possible explanation for this unique order would be to assume that the reciprocal has greater relevance to the verb than the applicative. Diagram (6.13) below shows the minimalist analysis of the app-rec co-occurrence.

When the applicative and the reciprocal co-occur, the applicative introduces a locative argument. The applicative adds an argument before the reciprocal can take away the same. But in the order of the affixes the reciprocal comes before the applicative due semantic considerations and not syntactic ones. This is probably a weakness of the theory: the discrepancy between syntax and semantics in the affix order. According to the MP, the order of the affixes in Gĩkũyũ is determined syntactically, but in actual sense the order of the affixes is determined by semantics to a large extent. In the diagram, the reciprocal projects the head only, for the verb to pick up the affix and check for reciprocal features, while the applicative realised as the locative projects the specifier and head positions for the argument and the verb to check features respectively.

E. The Causative and the Passive

An underived transitive structure:

6.14a. Nathaniel nĩataha maai

Nathaniel has drawn water

The transitive structure with the causative:

6.14b. Shane nĩatahithia Nathaniel maai

Shane has made Nathaniel draw water

The transitive structure with the causative and the passive:

6.14c. Nathaniel nĩatahithio maai (nĩ Shane)

Nathaniel nĩ-a-a-tah-ithi-o maai (nĩ Shane)
Nathaniel foc-sm-tns-draw-caus-pas water (by Shane)

Nathaniel has been made/forced to draw water (by Shane)

The passive comes after the causative just like it does when it co-occurs with the applicative. Morphologically the order is caus-pas. Semantically the order is still caus-pas as the causer is the participant who gets relegated to the oblique after passivisation of a causative structure. Syntactically, the order is still caus-pas; the causer is introduced first and becomes the subject. After passivisation, it is the causer that gets relegated.

6.15. Structural Configuration of Gĩkũyũ Causative-Passive Co-occurrence

When the causative and the passive occur only the head positions are projected.

The passive, just like the reciprocal and the reversive, does not introduce an argument; therefore no specifier position is needed. The causative introduces an
argument (Shane) which is relegated to oblique as the causee is foregrounded to become the subject of the sentence when the passive is introduced. The causee checks its features under specifier of the causative phrase as the causative object, but now it will check its features as the specifier of the subject agreement phrase.

**F. The Causative and the Reversive**

An underived transitive structure:

6.16a. Mūtongoria nīahinga cukuru

A leader has closed the school

With the reversive:

6.16b. Mūtongoria nīahingūra cukuru

A leader has opened the school

With the causative:

6.16c. Mūthamaki nīahingithia Mūtongoria cukuru

The king has caused the leader to close the school

With the causative and the reversive:

6.16d. Mūthamaki nīahingūrithia Mūtongoria cukuru

Mūthamaki nī-a-a-hing-ūr-ithi-a Mūtongoria cukuru

The king foc-sm-tns-close-rev-caus-fv leader school

The king has caused the leader to open the school

The reversive comes before the causative both morphologically and semantically.

With the transitive structures, the reversive behaves like a lexical extension as it...
has no effect on the argument structure, thus it has no effect on the syntax of the structure. The fact that the reversive has no effect on the syntax helps us account for the semantic order of the affixes. Looking at (6.16c) and (6.16d) above, the presence of the reversive does not affect the position of the participants, causer and causee.

An intransitive structure:

6.17a. Ûcûrû nîwamata

The porridge has become thick

With the reversive:

6.17b. Iria nîrîamatûra Ûcûrû

The milk has thinned the porridge

With the causative:

6.17c. Mûtu wa ūgîmbî nîwamatiâ Ûcûrû

Finger-millet flour has made the porridge thick

With the reversive and the causative:

6.17d. *Mûtu wa ūgîmbî nîwamâtûria Ûcûrû

Finger-millet flour has made the porridge thin

Semantically the reversive and the short causative cannot co-occur on an intransitive base. In (6.17b) and (6.17c) above, both affixes have a transitiveizing effect adding ‘îria’ (milk) in the former and ‘mûtu wa ūgîmbî’ (Finger-millet flour) in the latter. The causative introduces a causer and the reversive introduces
an agent. If the two are to co-occur, it means the arguments introduced will be competing for the same slot and possibly same function, thus the semantic constraint of redundancy. In addition, the semantics of the verb does not allow the co-occurrence since you cannot thicken and thin the porridge simultaneously. However it is possible to thin porridge that has thickened.

6.18. Structural Configuration of Gĩkũyũ Causative-Reversive co-occurrence

In diagram (6.18) the reversive is more of a place holder showing the position of the affix in the order. Its presence does not affect the argument structure of the verb. The verb will check object features with the secondary object then move to
pick up and check features with the reversive and the causative affixes. The causative has a full projection so that the causee argument can check its features under the specifier position.

G. The Causative and the Reciprocal

An underived transitive structure:

6.19a. Gachara nǐahũra Kamau
Gachara has beaten Kamau

6.19b. Kamau nǐahũra Gachara
Kamau has beaten Gachara

With the reciprocal:

6.19c. Gachara na Kamau nǐmahũranana
Gachara and Kamau have beaten each other

With the causative:

6.19d. Mwirigi nǐahũrithi Gachara Kamau
Mwirigi has caused Kamau to beat Gachara

With the causative and the reciprocal:

6.19e. Mwirigi nǐahũrithania Gachara na Kamau
Mwirigi nĩ-a-a-hũr-ith-an-i-a Gachara na Kamau
Mwirigi foc-sm-tns-beat-caus-rec-caus-fv Gachara and Kamau
Mwirigi has caused Gachara and Kamau to beat each other
The causative comes before the reciprocal. The causative affix is split by the reciprocal affix through metathesis.

An intransitive structure:

6.20a. Mbugua nĩarakara
Mbugua has become annoyed

6.20b. Wambui nĩarakara
Wambui has become annoyed

With the short causative:

6.20c. Wambui nĩarakari Mbugua
Wambui has caused Mbugua to get annoyed

6.20d. Mbugua nĩarakari Wambui
Mbugua has caused Wambui to get annoyed

With the causative and the reciprocal:

6.20e. Wambui na Mbugua nĩmarakarania
Wambui na Mbugua nĩ-ma-a-rakar-an-i-a
Wambui and Mbugua foc-sm-tns-become annoyed-rec-caus-fv
Wambui and Mbugua have caused each other to get annoyed

On the intransitive base the presence of the causative makes it possible for the reciprocal to be hosted. The introduced participant, the causer makes the structure transitive thus reciprocal is formed by the causer and the cause being bound just as the reciprocal is formed with the underived transitive structures. The causative
again comes first, but on the surface it appears after the reciprocal because of its morpho-phonological structure \([v]\). The short causative gets metathesised. The basic verb root ends in a consonant; the reciprocal has the structure \([vc]\) hence the metathesis to maintain the syllable structure \([cv]\). Syntactically and semantically the order is still caus-rec.

6.21. Structural Configuration of the Co-occurrence of Gĩkũyũ Causative and Reciprocal

The presence of the reciprocal subsumes the causee to form a compound object for the sentence \([Gachara na Kama]\). It is this compound object that becomes the primary object and will check accusative agreement. Since there is no specifier for the causative only the head, the affix is projected. The verb picks up the causative
affix as it checks for causative features then it moves to pick up the reciprocal as it checks for reciprocal features.

H. The Reversive and the Passive

An underived transitive structure:

6.22a. Kinyua nīahinga ithandūkū

Kinyua has closed the box

With the reversive:

6.22b. Kinyua nīahingūra ithandūkū

Kinyua has opened the box

With the passive:

6.22c. Ithandūkū nīrīahingwo (nī Kinyua)

The box has been closed (by Kinyua)

With reversive and the passive:

6.22d. Ithandūkū nīrīahingūrwo (nī Kinyua)

Ithandūkū nī-rī-a-hing-ūr-w-o (nī Kinyua)

The box foc-sm-tns-close-rev-pas-fv (by Kinyua)

The box has been opened (by Kinyua)

An intransitive structure:

6.23a. Andū nīmanyota

People have become thirsty
With the reversive

6.23b. Maaï nîmanyotora andû

Water has quenched the people’s thirst

With the passive:

6.23c. Nîkûanyotwo (nî andû)

There has been suffered thirsty (by people)

With the reversive and the passive:

6.23d. Andû nîmanyotorwo (nî maî)

Andû nî-ma-a-nyot-or-w-o (nî maî)

People foc-sm-tns-become thirsty-rev-pas-fv

People have had their thirsty quenched (by the water)

The passive comes after the reversive in both the transitive and intransitive structures. In the transitive structure, the reversive has no effect on the arguments but with the intransitive, the reversive introduces an agent which gets relegated to the oblique when the passive is introduced. The Structural configuration is represented in the tree diagram (6.24).

The two affixes do not introduce new arguments of the verbs; only the affixes are projected. The verb picks the reversive affix followed by the passive. The new subject of the sentence ‘ithandũkũ’ starts as an object, the theme. The object raises from its position as the complement of the verb where it is assigned accusative case to the specifier of the VP so that it can check its nominative case under [SPEC/AGRsP].
I. The Reversive and the Reciprocal

An underived transitive structure:

6.25a. Mwanake nǐaroga mūrītu

A young man has bewitched a young woman

With the reversive:

6.25b. Mwanake nărūgora mūrītu

A young man has unbewitched the young woman

With the reciprocal:

6.25c. Mwanake na mūrītu nīmarogana

A young man and the young woman have bewitched each other

With the reversive and the reciprocal:

6.25d. Mwanake na mūrītu nīmarogorna

Mwanake na mūrītu nī-ma-a-rog-or-an-a

Young man and young woman foc-sm-tns-bewitch-rev-rec-fv

A young man and the young woman have unbewitched each other

The order is rev-rec. As noted this far the reversive has minor effect on the syntax. However, being a lexical extension it attaches first to the verb base, thus altering the morphological structure of the verb and the semantic scope before the reciprocal is hosted.

The reciprocal affix binds the subject and the object, leaving the sentence with a compound subject which checks its nominative features under the [SPEC/AGRsP] having moved from [SPEC/VP]. The verb picks up the reversive affix followed by the reciprocal one then checks for tense, agreement features and picks up the focus marker.

Those are the nine possible combinations of co-occurrence of two verbal extensions. From the discussion of the co-occurrences of two affixes, only two conclusions can be made. The reversive comes first as it is always next to the verb root. The passive on the other hand comes last. The next section discusses the co-occurrence of three verbal extensions.
6.2.2 Co-occurrence of Three Verbal Extensions

There are also nine possible combinations of co-occurrence of three Gĩkũyũ verbal extensions.

A. The Causative, the Applicative, and the Passive

A transitive structure:

6.27a. Chege nĩaruga irio

Chege has cooked food

With the applicative:

6.27b. Chege nĩarugĩra mwana irio

Chege has cooked food for the baby

With the applicative and the causative:

6.28c. Chege nĩarugithĩria mwana irio

Chege has made someone cook food for the child

With the applicative, causative and the passive

6.29d. Mwana nĩarugithĩrio irio (nĩ Chege)

Mwana nĩ-a-a-rug-ith-i-r-i-o irio (nĩ Chege)

Child foc-sm-tns-cook-caus-app-caus-pas (by Chege)

Someone has been made to cook food for the child by Chege

The morphological order of the affixes is caus-appl-passive just as the affixes are realised on the surface in the structure. The syntactic and semantic order is not that straightforward because of the many derivations; the order is still caus-app-pas.
The causative introduces a causative object (causee) which becomes implicit when the applicative introduces the applied object. The applied argument, ‘mwana’ gets fore-grounded as the causer is relegated to the oblique position when the passive occurs.

The primary object ‘irio’ of the verb remains despite the numerous derivations and its status changing (being relegated to secondary object) in the course of the derivations. When the causative and the applicative co-occur the causee (causative argument) is implied as the newly introduced applicative argument, the
benefactive, takes up that position. The passive foregrounds the benefactive to
become the new subject as the causer is relegated to oblique. This means that both
the causative and the applicative (benefactive in this sentence) do not have
specifier positions. The benefactive starts off as an object of the verb then raises to
[SPEC/VP] to become the subject of the derived sentence. The verb picks up the
causative affix first, followed by the applicative then the passive.

B. The Causative, the Applicative, and the Reciprocal

An underived transitive structure:

6.31a. Njoroge nǐamena Njeri
Njoroge has hated Njeri

6.31b. Njeri nǐamena Njoroge
Njeri has hated Njoroge

With the reciprocal:

6.31c. Njoroge na Njeri nǐmamenana
Njoroge and Njeri have hated each other

With the causative and the reciprocal:

6.31d. Gǐchũkĩ nǐamenithanja Njoroge na Njeri
Gǐchũkĩ has caused Njoroge and Njeri to hate each other

With the causative, applicative and the reciprocal:

6.31e. Gǐchũkĩ nǐamenithanĩria Njoroge na Njeri mũciĩ
Gǐchũkĩ nĩ-a-a-men-ith-an-ĩr-i-a Njoroge na Njeri mũciĩ
Gĩchũkĩ foci-sm-tns-hate-caus-rec-app-caus-fv Njoroge and Njeri home

Gĩchũkĩ has caused Njoroge and Njeri to hate each other at home.

The morphological order is caus-rec-app while the semantic order is caus-app-rec. This order is consistent with the co-occurrence of applicative and reciprocal. The reciprocal comes before the applicative because it is deemed to have more relevance to the action of the verb. The co-occurrence of the reciprocal and the applicative restricts the applicative to introduce a locative argument. The locative argument is not as important semantically as the causee because the locative describes the setting of the action instigated on the causee. If the applicative introduces a beneficiary, the causee becomes implied. This semantic hierarchy determines the syntactic order of the affixes and arguments.
6.32. Structural Configuration of the Co-occurrence of Gĩkũyũ Causative, Applicative and Reciprocal

The verb picks up the affixes in the order of causative, applicative and reciprocal. The applicative introduces a locative argument which is directly plugged in above the causative. The reciprocal in this structure projects a full phrase with a specifier position so as to avoid building a superfluous object projection. This is in line with the principle of economy. The bound object and causer ‘Njeri and Njoroge’ move to this position. The verb will check for both reciprocal features and accusative features as it picks up the reciprocal affix.
C. The Causative, the Reversive, and the Applicative

An underived transitive structure:

6.33a. Mwarimũ nĩahinga cukuru
   A teacher has closed the school

With the reversive:

6.33b. Mwarimũ nĩahingũra cukuru
   A teacher has opened the school

With the reversive and the causative:

6.33c. Mũtongoria nĩahingũrithia mwarimũ cukuru
   A leader has caused the teacher to open the school

With the reversive, causative and applicative:

6.33d. Mũtongoria nĩahingũrithiri ciana cukuru
   Mũtongoria nĩ-a-a-hing-ũr-ith-ír-i-a ciana cukuru
   A leader foc-sm-tns-close-rev-caus-app-caus-fv children school
   A leader has caused the school to be opened for the children

The order is rev-caus-app morphologically and syntactically. The causative affix gets split by the applicative because the causative ends in a vowel, and the applicative begins in a vowel. As is the case with the co-occurrences between the causative and the applicative, the causee, causative object is implied as the applied object takes up that slot. Semantically the order is caus-rev-app. The causer is the one who instigates the reversal of the action. It is the causer who causes the
reversal of the action of the verb, without the causer there would be no need for reversing.

6.34. Structural Configuration of the co-occurrence of Gikuyu Causative, Reversive and Applicative.
After checking for object features at \([\text{AGR}o/\text{AGR}o']\), the verb moves to pick up the reversive followed by the causative and lastly the applicative. The applicative introduces a benefactive. The causative does not have a specifier position because the causative object is implied therefore it is not realised overtly. Once again the benefactive introduced by the applicative is not plugged in.

D. The Causative, the Reversive, and the Passive

An underived transitive structure:

6.35a. Mwarimù nìahinga cukuru

The teacher has closed the school

With the reversive:

6.35b. Mwarimù nìahingũra cukuru

The teacher has opened the school

With the reversive and the causative:

6.35c. Mùtongoria nìahingũrithia mwarimù cukuru

A leader has caused the teacher to open the school

With the reversive, causative and the passive:

6.35d. Mwarimù nìahingũrithio cukuru (nì mùtongoria)

Mwarimù nì-a-a-hing-ũr-ithi-o cukuru (nì mùtongoria)

Teacher foc-sm-tns-open-\text{rev-caus-pas} school (by a leader)

A teacher has been made to open the school the a leader
The order here is rev-caus-pas morphologically and syntactically. Semantically, the order is caus-rev-pas. The causer instigates the reversal of the action, thus causative meaning coming before the reversible one. The verb takes up the reversible affix first followed by the causative which introduces a causer. The causer is relegated to oblique position when the passive is introduced as the causee becomes the new subject.


The derivations don’t affect the argument structure, the sentence remains monotransitive. It seems that the causative (argument increasing) and passive
(argument decreasing) cancel each other out. The former subject ‘mwarimū’ and object ‘cukuru’ remain, with the only change being in the semantics of the verb, and this as a result of the reversive. The causer introduced by the causative is relegated to oblique by the passive as the causee is restored as the subject. Since the causee ‘mwarimū’ was the original subject [SPEC/VP], it doesn’t have to raise like is the case with other objects that are foregrounded by the passive. The verb picks up the affix in the order: rev-caus-pas. The causative projects a head only because the causative object or causee ‘mwarimū’ is foregrounded by the passive to become the subject of the derived structure.

E. The Causative, the Reciprocal, and the Passive

An underived transitive structure:

6.37a. Gachara nīahūra Kamau
    Gachara has beaten Kamau

6.37b. Kamau nīahūra Gachara
    Kamau has beaten Gachara

With the reciprocal:

6.37c. Gachara na Kamau nīmahūranā
    Gachara and Kamau have beaten each other

With the causative:

6.37d. Mwicigi nīahūrithia Gachara Kamau
    Mwicigi has caused Kamau to beat Gachara
With the causative and the reciprocal:

6.37e. Mwicigi nīahūrithania Gachara na Kamau

Mwicigi has caused Gachara and Kamau to beat each other

With the causative, the reciprocal and the passive:

6.37f. Gachara na Kamau nīmahūrithanio (nī Mwicigi)

Gachara na Kamau nī-ma-a-hūr-ith-an-i-o (nī Mwicigi)

Gachara and Kamau foc-sm-tns-beat-caus-rec-caus-pas (by Mwicigi)

Gachara and Kamau have been caused to beat each other by Mwicigi

The order is caus-rec-pas morphologically, syntactically, and semantically. The causative affix is split for the same reason it is split when it co-occurs with the applicative: to avoid a situation where the last vowel in the causative combines with the beginning vowel of the reciprocal. Once again the causer is relegated to oblique when the passive is introduced as the compound object bearing reciprocity becomes the new subject.

The presence of the two argument decreasing affixes renders the monotransitive sentence intransitive despite the presence of the causative. The causative introduces a causer ‘mwirigi’ which is relegated to an oblique position by the passive. The causative object ‘Gachara’ is bound to the subject by the reciprocal. The verb moves to check features and pick up the causative affix, followed by the reciprocal and lastly the passive.
F. The Causative, the Reversive, and the Reciprocal

An underived transitive structure:

6.39a. Kamau nĩoha Chege
Kamau has tied Chege

6.39b. Chege nĩoha Kamau
Chege has tied Kamau

With the reversive:

6.39c. Kamau nĩohora Chege
Kamau has untied Chege

6.39d. Chege nĩohora Kamau
Chege has untied Kamau

With the reversive and the reciprocal:

6.39e. Kamau na Chege nĩmohorana
Kamau and Chege have untied each other

With the reversive, the causative, and the reciprocal:

6.39f. Mũmbi nĩohorithania Kamau na Chege
Mũmbi nĩ-a-a-oh-or-ith-an-i-a Kamau na Chege
Mũmbi foc-sm-tns-tie-rev-caus-rec-caus-fv Kamau and Chege
Mũmbi has caused Kamau and Chege to untie each other

The order is rev-caus-rec morphologically and syntactically. The reversive affix is next to the verb root. As we have already seen, this is because it has no effect on
the syntax. The causee and the object of the verb form the compound object of the syntax. However, the semantic order is caus-rev-rec. The causative introduces a causer pushing the subject to the object position; becomes the causee which in turn pushes the primary object to be the secondary object. The causee and the secondary object are bound to form a compound primary object when the reciprocal is introduced. The causer instigates the reversal of the action, thus the causative coming first semantically.

The order of the affixes is rev-caus-rec. The verb picks up the affixes and checks for the respective features in that order. The reciprocal has a specifier, although it does not introduce an argument. This is the case so as to allow the compound object to check its features there instead of building a superfluous object agreement node. The compound object cannot check its features under the [SPEC/CAUSP] because the causative introduces only one argument.

G. The Applicative, the Reversive, and the Passive

An underived transitive structure:

6.41a. Kînyua nîahinga ithandũkũ

Kînyua has closed the box

With the reversive:

6.41b. Kînyua nîahingũra ithandũkũ

Kînyua has opened the box

With the reversive and the applicative:

6.41c. Kînyua nîahingũrĩra Mwaniki ithandũkũ

Kînyua has opened the box for Mwaniki

With the reversive, applicative and the passive:

6.41b. Mwaniki nîahingũrĩrwo ithandũkũ (nî Kînyua)

Mwaniki nî-a-a-hing-ũr-ĩr-w-o ithandũkũ (nî Kînyua)

Mwaniki foc-sm-tns-close-rev-app-pas-fv box (by Kînyua)
A box has been opened for Mwaniki (by Kĩnyua)

The order of the affixes is rev-app-pas. The reversive takes up its position next to the verb. The applied affix follows and introduces an applied object, a benefactive which is fore-grounded to be the new subject of the sentence as the subject is relegated to an oblique when the passive is introduced.

After checking for object features at [AGRo/AGRo’], the verb moves to pick up the reversive followed the applicative and lastly the passive. The applied benefactive object is foregrounded to become the subject by the passive, so there is no specifier position in the benefactive phrase. However, the benefactive starts as the object of the verb raises to [SPEC/VP] to become the new subject of the derived structure. The verb picks up the affixes in the order: rev-app-pas.

**H. The Applicative, the Reciprocal, and the Passive**

An underived transitive structure:

6.43a. Kïnyua nïahûra Gachara

Kïnyua has beaten Gachara

6.43b. Gachara nïahûra Kïnyua

Gachara has beaten Kïnyua

With the reciprocal:

6.43c. Kïnyua na Gachara nïmahûrana

Kïnyua and Gachara have beaten each other

With the applicative:

6.43d. Kïnyua nïahûrîra Gachara mûîrîtu

Kïnyua has beaten Gachara because of a girl

6.43e. Gachara nïahûrîra Kïnyua mûîrîtu

Gachara has beaten Kïnyua because of a girl
With the applicative and the reciprocal:

6.43f. Kényua na Gachara nǐmahũranĩra mũirũtu

Kényua and Gachara have fought over a girl

With the applicative, reciprocal, and the passive:

6.43g. Mũirũtu nǐahũranĩrwo (nǐ Kényua na Gachara)

Mũirũtu nī-a-a-hūr-an-ĩr-w-o (nī Kényua na Gachara)

Girl foc-sm-tns-beat-rec-app-pas-fv (by Kényua and Gachara)

A girl has been fought for (by Kényua and Gachara)

(Kényua and Gachara have fought/beaten each other because of a girl)

The morphological order of the affixes is rec-app-pas. The varied order is determined largely by the semantic scope of the affixes. The applicative affix introduces a motive argument which in terms of relevance to the action of the verb is ranked low as compared to an animate argument. The reciprocal comes first. It binds together two arguments that are capable of motion, and in many cases they are animate. Semantically, the type of argument introduced by the applicative is restricted by the reciprocal. The entities first act on each other then the reason/motive is given. The semantic scope equally determines the syntactic order of the arguments.

The diagram shows the order of the three affixes as rec-app-pas. Once again there is no convincing syntactic explanation offered by the MP. The Mirror Principle determines the order of the affixes but the plausible explanation seems to be more semantic: the applied object which is now the subject of the sentence is a motive. Motive objects rank lower in the hierarchy of objects. The action which is reciprocated takes place before the reason (motive) is given. The motive starts as a
complement of the verb then raises to [SPEC/VP] to become the subject of the derived sentence. It moves to [SPEC/AGRsP] to check for subject agreement features.

I. The Reversive, the Applicative, and the Reciprocal

An underived transitive structure:

6.45a. Kamau nĩoha Chege

Kamau has tied Chege

With the reversive:

6.45b. Kamau nĩohorë Chege

Kamau has untied Chege

With the reversive and the applicative:

6.45c. Kamau nĩohorëra Chege njaũ

Kamau has untied the calf for Chege

With the reversive and the reciprocal:

6.45d. Kamau na Chege nĩmohorana

Kamau and Chege have untied each other

With the reversive, the applicative and the reciprocal:

6.45e. Kamau na Chege nĩmohoranĩra njaũ

Kamau na Chege nĩ-ма-а-oh-orum-}<irc-a njaũ

Kamau and Chege foc-sm-tns-tie-<rev-rec-app-fv calf

Kamau and Chege have untied the calf for each other
The morphological and syntactic order of the affixes is rev-rec-app. Once again we see the varied order between the reciprocal and the applicative. The morphological order mirrors the syntactic order of the arguments. The applicative introduces a theme argument ‘njau’.


The order of the affixes is rev-appl-rec. the applicative introduces a theme applied object which is directly plugged in. The reciprocal binds the primary object and
the subject to form a compound subject which is the only argument of the verb. The verb picks up the affixes in the order they occur in the diagram: rev-app-rec.

The above nine are the possible combinations of the co-occurrences of three Gĩkũyũ verbal extensions. The next section discusses the possible combinations of four verbal extensions.

6.2.3 Co-occurrence of Four Verbal Extensions

There are only two possible combinations of the co-occurrence of four Gĩkũyũ verbal extensions. These are: (a) caus-app-rec-pas and (b) caus-rev-app-pas. They are discussed below in detail.

A. The Causative, the Applicative, the Reciprocal, and the Passive

An underived transitive structure:

6.47a. Njoroge nǐamena Njeri
Njoroge has hated Njeri

6.47b. Njeri nǐamena Njoroge
Njeri has hated Njoroge

With the reciprocal:

6.47c. Njoroge na Njeri nǐmamenana
Njoroge and Njeri have hated each other
With the causative and the reciprocal:

6.47d. Gíchũkĩ níameníthania Njoroge na Njeri

Gíchũkĩ has caused Njoroge and Njeri to hate each other

With the causative, applicative and the reciprocal:

6.47e. Gíchũkĩ níamenítháníria Njoroge na Njeri műciĩ

Gíchũkĩ has caused Njoroge and Njeri to hate each other at home

With the causative, applicative, reciprocal, and the passive:

6.47f. Njoroge na Njeri nímameníthanírio műciĩ (nĩ Gíchũkĩ)

Njoroge na Njeri nĩ-ma-a-men –íth-an-ĩr-i-o műciĩ (nĩ Gíchũkĩ)

Njoroge and Njeri foc-sm-tns-hate-caus-rec-app-caus-pas home
(by Gíchũkĩ)

Njoroge and Njeri have been caused to hate each other at home (by Gíchũkĩ)

The order of the affixes is caus-rec-app-pas. The order goes against the proposed template of CARP. The derivation is semantically motivated. The causative introduces a causer which becomes the subject of the new sentence. When the causative and the applicative co-occur, the causee becomes implied. However for the reciprocal to co-occur with the causative, the applicative and the passive, it seems that the causee has to be realized overtly and implicitly. Thus there is a restriction on the type of argument the applicative can introduce. In the structure above the applicative introduces a locative argument ‘műciĩ’ which is peripheral to
the action of the verb. The reciprocal comes first because it binds the object and the subject.


The order of the affixes is caus-app-rec-pas. Only the applicative projects a specifier position for the locative argument ‘mũcĩi’ which is directly plugged in. The causative does not project a specifier because the causative arguments are subsumed by the numerous derivations. The causer is relegated to oblique by passive. The causee is bound to the primary object by the reciprocal then gets
foregrounded to be the subject of the sentence. The verb moves from its position and picks up the affixes in the order they appear.

B. Causative, Reversive, Applicative, and Passive

An underived transitive structure:

6.49a. Mwarimũ nĩahinga cukuru

A teacher has closed the school

With the reversive:

6.49b. Mwarimũ nĩahingũra cukuru

A teacher has opened the school

With the reversive and the causative:

6.49c. Mũtongoria nĩahingũrithia mwarimũ cukuru

A leader has caused the teacher to open the school

With the reversive, causative, and applicative:

6.49d. Mũtongoria nĩahingũrithiria ciana cukuru

A leader has caused the school to be opened for the children

With the reversive, causative, applicative, and the passive

49e.Ciana nĩciahingũrithirio cukuru (nĩ mũtongoria)

Ciana nĩ-ci-a-hing-ũr-ith-ir-i-o cukuru (nĩ mũtongoria)

Children foc-sm-tns-open-rev-caus-app-caus-pas school (by the leader)

The children have had the school opened for (by the leader)
The morphological and syntactic order of the affixes is rev-caus-app-pas. The causative introduces the causer ‘mütongoria’ which is relegated to oblique after the passive is introduced. The benefactive argument ‘ciana’ introduced by the applicative becomes foregrounded to become the new subject. Semantically, the order of the affixes is caus-rev-app-pas. The causer introduced by the causative is the entity that instigates the reversal of the action.
The order of the affixes is rev-caus-app-pas. The verb checks object features with the secondary object then moves up to pick up the affixes in the order rev-caus-app-rev. The causative and the applicative phrases do not project specifier positions. The causative object is implied while the applied object ‘ciana’ is foregrounded to become the new subject. However, it starts as the primary object then raises to [SPEC/VP] to become the subject of the derived subject. Since it is a benefactive argument, it is not plugged in, it is base-generated.

The five affixes cannot co-occur on the same base. Hypothetically from the possible combinations we can argue that if the five were to co-occur, the order would be rev-caus-rec-app-pas. The reversion’s position; adjacent to the verb is fixed just like the passives position as the last after all the affixes. To a large extent the order of the Gĩkũyũ verbal affixes can be accounted for by CARP. The fixed slots for the reversion, the causative and the passive attest to this. The reversion is always next to the verb stem, the causative is the next affix, the last affix, and the one furthest from the verb stem is the passive. The variable positioning can be accounted for by Rice’s (2000) semantic scope. We can conclude that underlying the order is app-rec in accordance with CARP. However semantic considerations, vary the order both morphologically and syntactically because of the semantic constraints the reciprocal imposes on the applicative when the two co-occur. The varied order is also evident in the co-occurrence of the causative and the reversion.
The CARP template determines the morphological and syntactic order: rev-caus. The two affixes fit into their slots in the template. However, the semantic order is caus-rev. The causer introduced by the causative instigates the reversal of the action of the verb. The two determinants of affix order in Gĩkũyũ are the CARP template and the semantic scope.

6.3 Summary

The greatest determinant of the order of the Gĩkũyũ affixes is the morphological template by Hyman (2003). The variations observed in the order like that between the applicative and the reciprocal are semantically motivated. It is evident that some restrictions based on the inherent property of some extensions, the reciprocal for example, extend to the other extensions when they co-occur. The reciprocal seems to restrict the type of argument the applicative can introduce when they co-occur. The co-occurrence of the affixes reveals there is competition for the primary object slot. The Minimalist Program allows for heads to be introduced as long as they are licensed by a language. However the maximum number of heads that can be introduced is not clear.
CHAPTER SEVEN

SUMMARY OF FINDINGS, CONCLUSIONS AND AREAS FOR FURTHER RESEARCH

7.0 Introduction

The thesis presented a feature-checking approach to the study of Gĩkũyũ verbal extensions within the theoretical framework of Chomsky’s Minimalist Program (1993, 1995). Gĩkũyũ is considered to have complex morphology like other Bantu languages as it is agglutinating in nature. This is evidenced more in the co-occurrences of the verbal extensions.

The study had three objectives: to describe Gĩkũyũ verbal extensions, to describe the co-occurrences of the Gĩkũyũ verbal extensions, and to analyse both the individual occurrences and co-occurrences of Gĩkũyũ verbal extensions using the Minimalist Program. Five verbal extensions were studied: two argument increasing, the causative and the applicative; two argument decreasing, the reciprocal and the passive; one neutral, the reversive. The affixes were described and analysed individually then concatenated so as to analyse their order.

7.1 Summary of Findings

7.1.1 Individual Occurrences of the Gĩkũyũ Verbal Extensions

The Gĩkũyũ applicative is highly productive both in distribution and meaning. The single affix can introduce two applied arguments on a single stem and in a few
marked structures three. The common applied arguments are the benefactive, goal, locative and motive. The order in which they occur is fixed. In the theoretical analysis, the applicative is treated as a full projection. To avoid the monotony of naming all the applied projections ‘applicative’ each projection is named after the thematic role of the argument it introduces. The verb moves to check features in a local configuration. All the applied arguments are plugged in except for the benefactive which is base-generated so that it can be assigned the beneficiary thematic role by the verb.

The Gĩkũyũ causative is equally productive in distribution and meaning. There are two causative affixes, namely the short -i- and long causative -ithi-. The short causative is hosted by a few intransitive verbs while the long causative is more productive. It can be hosted by both intransitive and transitive verbs. One major distinguishing feature between the two is in their semantics. The short causative is associated with direct causation and non-coercive meaning while the long causative is associated with the coercive and indirect meaning. Both introduce a causer which pushes the subject of the sentence to become an object referred to as the causative object or the causee.

The Minimalist analysis explains the causative as a full projection licensed by Gĩkũyũ. The causer introduced by the causative becomes the new subject of the derived sentence thus checking its features under the specifier of subject
agreement. The former subject becomes the causee and checks its object features under the specifier of the causative phrase.

The Gĩkũyũ reversive is restrictive only hosted by a few verbs. The reversive has no effect on the valence but instead affect the morphological structure and semantics of the verb. In the minimalist analysis the reciprocal interpreted as a projection. The head (affix) is projected to pick up and check for reversive features. This theory seems quiet on the reversive. Since the reversive has no effect on the syntax of the language it can also be interpreted as an affix that is incorporated into the verb in the lexicon.

The first argument decreasing extension described in the study is the reciprocal. The reciprocal is not very productive; it is hosted by a few transitive verbs whose arguments are animate or capable of motion. The reciprocal detransitivises the verb by binding the object and subject to form a compound subject. In the minimalist analysis, the reciprocal is projected as a head only.

The last extension discussed in the study is the passive. The passive is an argument decreasing extension. It also detransitivises the verb by foregrounding the object of a sentence and relegating the subject to an oblique position. In Gĩkũyũ, there are two types of affixes: personal and impersonal. Personal passives have a subject while the impersonal do not, instead there is an expletive. In the
minimalist analysis, the passive is projected as a head only just like the rerversive and the reciprocal.

7.1.2 Co-occurrences of the Gĩkũyũ Verbal Extensions

The affixes were concatenated to establish the various combinations and their order. In the concatenation of two affixes, nine possible combinations were established; in the concatenation of three affixes again there were nine combinations. There were only two possible combinations of co-occurrence of four affixes. It emerged that the five affixes cannot co-occur on one stem. The two major determinants of the order of the Gĩkũyũ verbal affixes are the morphological template espoused by Hyman (2002) and semantic scope attributed to Rice (2000).

To a greater extent the Gĩkũyũ verbal extensions obey the CARP template, but semantic restrictions on the reciprocal offer a varying order of affixes and more so with the applicative. The semantic motivation vary the order of the causative and the reversive when the two co-occur. To fully determine the order of affixes in Gĩkũyũ, we need to combine the semantic scope and the morphological template.

In the analysis of co-occurrences, the Mirror Principle, which is syntactic in nature, determines the order of the heads introduced. The order has to allow the verb to stick to the principles guiding movement when checking its features.
7.2 Conclusions

The theory was adequate in explaining the verbal extensions. However, the theory is quiet on a few issues. The status of the reversive affix is not clear. The choice between incorporating it and base-generating it is not explained by the theory. The theory is also quiet on what should be projected. It is not clear whether all argument decreasing affixes should not project a specifier position. In our analysis, any extension that does not introduce an argument does not project a specifier position. However, in the analysis of the co-occurrence of the causative-applicative-reciprocal, the reciprocal projects a specifier position for the compound object. The justification is in the principle of economy; however, a more syntactically motivated reason is needed. A possible way would be to establish the expected projections then now the structure of each can be fully described.

One of the major claims of the Minimalist Program is that derivations are determined by the morphological strength of a language; what is allowed to be projected has to be licensed by a language. The theory seems to inherently restrict the number of objects to two. When there are three or four objects as is the case with Gikuyu applicatived structures, the question of chaining arises. How many VPs can one chain if all the objects are base-generated? The current study proposed the plugging in of secondary objects. In the analysis of the co-occurrences, the Mirror Principle is adopted. The determinants of the Gikuyu
verbal extensions are morphological and semantic; what is needed for the Minimalist Program is an approach that is all encompassing; an approach that will include the syntactic, morphological and semantic motivations.

7.3 Areas for Further Research

The study adopted a morphosyntactic approach which focuses more on the structure. More studies that will focus on language use are needed. There is need for studies to determine the full semantic scope, the discourse and pragmatic functions of the affixes. With the many revisions in the Minimalist Program, a comparative study can be carried out so that it compares how the different versions of the Minimalist Program handle specific aspects of Bantu languages.
Bibliography


Blaisdell.


Reciprocals and Reflexives: Cross-Linguistic and Theoretical Explorations, Berlin: Mouton de Gruyter.


Göteborg University.


Appendix 1: Gĩkũyũ Verbs

### Argumentless Verbs

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ara</td>
<td>shine</td>
</tr>
<tr>
<td>2. cimana</td>
<td>become dark</td>
</tr>
<tr>
<td>3. hiũha</td>
<td>become hot</td>
</tr>
<tr>
<td>4. ira</td>
<td>become dark</td>
</tr>
<tr>
<td>5. Kĩa</td>
<td>dawn/stop raining</td>
</tr>
<tr>
<td>6. tuka</td>
<td>become dark</td>
</tr>
<tr>
<td>7. ura</td>
<td>rain</td>
</tr>
</tbody>
</table>

### Transitive Verbs

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. aka</td>
<td>build, make</td>
</tr>
<tr>
<td>2. akia</td>
<td>light</td>
</tr>
<tr>
<td>3. amba</td>
<td>erect, pitch</td>
</tr>
<tr>
<td>4. ambata</td>
<td>go up/go up</td>
</tr>
<tr>
<td>5. ambia</td>
<td>begin/start</td>
</tr>
<tr>
<td>6. amũra</td>
<td>set apart</td>
</tr>
<tr>
<td>7. amũra</td>
<td>set apart</td>
</tr>
<tr>
<td>8. andika</td>
<td>write</td>
</tr>
<tr>
<td>9. anika</td>
<td>spread</td>
</tr>
<tr>
<td>10. atha</td>
<td>rule, command</td>
</tr>
<tr>
<td>11. atũra</td>
<td>split</td>
</tr>
<tr>
<td>12. baara</td>
<td>look/look at</td>
</tr>
<tr>
<td>13. bangar</td>
<td>set/plan/arrange</td>
</tr>
<tr>
<td>14. batara</td>
<td>need/require</td>
</tr>
<tr>
<td>15. batithia</td>
<td>baptise</td>
</tr>
<tr>
<td>16. bũra</td>
<td>twirl, spin, stir</td>
</tr>
<tr>
<td>17. boca</td>
<td>rock/shake/rattle</td>
</tr>
<tr>
<td>18. bokera</td>
<td>load</td>
</tr>
<tr>
<td>19. botia</td>
<td>irritate</td>
</tr>
<tr>
<td>20. bunja</td>
<td>break/dismantle</td>
</tr>
<tr>
<td>21. bura</td>
<td>strip</td>
</tr>
<tr>
<td>22. buta</td>
<td>flap/defeather</td>
</tr>
<tr>
<td>23. buutha</td>
<td>to pull resulting in fraying out</td>
</tr>
<tr>
<td>24. cagũra</td>
<td>choose, pick</td>
</tr>
<tr>
<td>25. camũra</td>
<td>boil</td>
</tr>
<tr>
<td>26. cera</td>
<td>prune</td>
</tr>
<tr>
<td>27. ciara</td>
<td>give birth, bear fruit</td>
</tr>
<tr>
<td>28. cimba</td>
<td>dig</td>
</tr>
<tr>
<td>29. cina</td>
<td>burn</td>
</tr>
<tr>
<td>No.</td>
<td>Word</td>
</tr>
<tr>
<td>-----</td>
<td>-------</td>
</tr>
<tr>
<td>30</td>
<td>cocora</td>
</tr>
<tr>
<td>31</td>
<td>cogotha</td>
</tr>
<tr>
<td>32</td>
<td>comora</td>
</tr>
<tr>
<td>33</td>
<td>congac</td>
</tr>
<tr>
<td>34</td>
<td>cora</td>
</tr>
<tr>
<td>35</td>
<td>cuca</td>
</tr>
<tr>
<td>36</td>
<td>cūna</td>
</tr>
<tr>
<td>37</td>
<td>cunga</td>
</tr>
<tr>
<td>38</td>
<td>curia</td>
</tr>
<tr>
<td>39</td>
<td>cuka</td>
</tr>
<tr>
<td>40</td>
<td>egeeka</td>
</tr>
<tr>
<td>41</td>
<td>enda</td>
</tr>
<tr>
<td>42</td>
<td>endia</td>
</tr>
<tr>
<td>43</td>
<td>enja</td>
</tr>
<tr>
<td>44</td>
<td>etha</td>
</tr>
<tr>
<td>45</td>
<td>gaatha</td>
</tr>
<tr>
<td>46</td>
<td>gana</td>
</tr>
<tr>
<td>47</td>
<td>gata</td>
</tr>
<tr>
<td>48</td>
<td>gaya</td>
</tr>
<tr>
<td>49</td>
<td>gera</td>
</tr>
<tr>
<td>50</td>
<td>getha</td>
</tr>
<tr>
<td>51</td>
<td>gia</td>
</tr>
<tr>
<td>52</td>
<td>gīa</td>
</tr>
<tr>
<td>53</td>
<td>giria</td>
</tr>
<tr>
<td>54</td>
<td>gita</td>
</tr>
<tr>
<td>55</td>
<td>gitīra</td>
</tr>
<tr>
<td>56</td>
<td>goca</td>
</tr>
<tr>
<td>57</td>
<td>gonya</td>
</tr>
<tr>
<td>58</td>
<td>gooca</td>
</tr>
<tr>
<td>59</td>
<td>gūma</td>
</tr>
<tr>
<td>60</td>
<td>guna</td>
</tr>
<tr>
<td>61</td>
<td>gūra</td>
</tr>
<tr>
<td>62</td>
<td>gūtha</td>
</tr>
<tr>
<td>63</td>
<td>gūtha</td>
</tr>
<tr>
<td>64</td>
<td>guucia</td>
</tr>
<tr>
<td>65</td>
<td>gwata</td>
</tr>
<tr>
<td>66</td>
<td>gweta</td>
</tr>
<tr>
<td>67</td>
<td>haara</td>
</tr>
<tr>
<td>68</td>
<td>haata</td>
</tr>
<tr>
<td>69</td>
<td>haka</td>
</tr>
<tr>
<td>70</td>
<td>hakūra</td>
</tr>
<tr>
<td>71</td>
<td>hambata</td>
</tr>
<tr>
<td>72</td>
<td>handa</td>
</tr>
<tr>
<td>Number</td>
<td>Word</td>
</tr>
<tr>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>73.</td>
<td>hangīra</td>
</tr>
<tr>
<td>74.</td>
<td>hara</td>
</tr>
<tr>
<td>75.</td>
<td>he</td>
</tr>
<tr>
<td>76.</td>
<td>hehenja</td>
</tr>
<tr>
<td>77.</td>
<td>hera</td>
</tr>
<tr>
<td>78.</td>
<td>hiha</td>
</tr>
<tr>
<td>79.</td>
<td>hihinya</td>
</tr>
<tr>
<td>80.</td>
<td>hīīhia</td>
</tr>
<tr>
<td>81.</td>
<td>hinga</td>
</tr>
<tr>
<td>82.</td>
<td>hīta</td>
</tr>
<tr>
<td>83.</td>
<td>hoota</td>
</tr>
<tr>
<td>84.</td>
<td>hooya</td>
</tr>
<tr>
<td>85.</td>
<td>humba</td>
</tr>
<tr>
<td>86.</td>
<td>hurunja</td>
</tr>
<tr>
<td>87.</td>
<td>hūūrā</td>
</tr>
<tr>
<td>88.</td>
<td>hūūthīra</td>
</tr>
<tr>
<td>89.</td>
<td>huuha</td>
</tr>
<tr>
<td>90.</td>
<td>hūūra</td>
</tr>
<tr>
<td>91.</td>
<td>huura</td>
</tr>
<tr>
<td>92.</td>
<td>huutia</td>
</tr>
<tr>
<td>93.</td>
<td>icūhia</td>
</tr>
<tr>
<td>94.</td>
<td>iga</td>
</tr>
<tr>
<td>95.</td>
<td>igua</td>
</tr>
<tr>
<td>96.</td>
<td>īka</td>
</tr>
<tr>
<td>97.</td>
<td>ikia</td>
</tr>
<tr>
<td>98.</td>
<td>ikūrūka</td>
</tr>
<tr>
<td>99.</td>
<td>ima</td>
</tr>
<tr>
<td>100.</td>
<td>ina</td>
</tr>
<tr>
<td>101.</td>
<td>ingata</td>
</tr>
<tr>
<td>102.</td>
<td>īra</td>
</tr>
<tr>
<td>103.</td>
<td>iriga</td>
</tr>
<tr>
<td>104.</td>
<td>īta</td>
</tr>
<tr>
<td>105.</td>
<td>īta</td>
</tr>
<tr>
<td>106.</td>
<td>iya</td>
</tr>
<tr>
<td>107.</td>
<td>iyīra</td>
</tr>
<tr>
<td>108.</td>
<td>kaana</td>
</tr>
<tr>
<td>109.</td>
<td>kaaya</td>
</tr>
<tr>
<td>110.</td>
<td>kahūra</td>
</tr>
<tr>
<td>111.</td>
<td>kama</td>
</tr>
<tr>
<td>112.</td>
<td>kamūra</td>
</tr>
<tr>
<td>113.</td>
<td>kanja</td>
</tr>
<tr>
<td>114.</td>
<td>kanya</td>
</tr>
<tr>
<td>115.</td>
<td>karanga</td>
</tr>
<tr>
<td>116.</td>
<td>kima</td>
</tr>
<tr>
<td>117.</td>
<td>kinya</td>
</tr>
<tr>
<td>118.</td>
<td>konora</td>
</tr>
<tr>
<td>119.</td>
<td>konya</td>
</tr>
<tr>
<td>120.</td>
<td>konyora</td>
</tr>
<tr>
<td>121.</td>
<td>koomba</td>
</tr>
<tr>
<td>122.</td>
<td>kora</td>
</tr>
<tr>
<td>123.</td>
<td>koroga</td>
</tr>
<tr>
<td>124.</td>
<td>kūihoka</td>
</tr>
<tr>
<td>125.</td>
<td>kumia</td>
</tr>
<tr>
<td>126.</td>
<td>kumutha</td>
</tr>
<tr>
<td>127.</td>
<td>kunīka</td>
</tr>
<tr>
<td>128.</td>
<td>kūnja</td>
</tr>
<tr>
<td>129.</td>
<td>kunya</td>
</tr>
<tr>
<td>130.</td>
<td>kuua</td>
</tr>
<tr>
<td>131.</td>
<td>kuuha</td>
</tr>
<tr>
<td>132.</td>
<td>memenda</td>
</tr>
<tr>
<td>133.</td>
<td>mena</td>
</tr>
<tr>
<td>134.</td>
<td>menya</td>
</tr>
<tr>
<td>135.</td>
<td>menyera</td>
</tr>
<tr>
<td>136.</td>
<td>meria</td>
</tr>
<tr>
<td>137.</td>
<td>minja</td>
</tr>
<tr>
<td>138.</td>
<td>monda</td>
</tr>
<tr>
<td>139.</td>
<td>mooya</td>
</tr>
<tr>
<td>140.</td>
<td>munda</td>
</tr>
<tr>
<td>141.</td>
<td>mundia</td>
</tr>
<tr>
<td>142.</td>
<td>munya</td>
</tr>
<tr>
<td>143.</td>
<td>mūrika</td>
</tr>
<tr>
<td>144.</td>
<td>nengera</td>
</tr>
<tr>
<td>145.</td>
<td>nina</td>
</tr>
<tr>
<td>146.</td>
<td>noora</td>
</tr>
<tr>
<td>147.</td>
<td>nyita</td>
</tr>
<tr>
<td>148.</td>
<td>nyua</td>
</tr>
<tr>
<td>149.</td>
<td>ogotha</td>
</tr>
<tr>
<td>150.</td>
<td>oha</td>
</tr>
<tr>
<td>151.</td>
<td>ona</td>
</tr>
<tr>
<td>152.</td>
<td>onga</td>
</tr>
<tr>
<td>153.</td>
<td>ongerera</td>
</tr>
<tr>
<td>154.</td>
<td>ota</td>
</tr>
<tr>
<td>155.</td>
<td>oya</td>
</tr>
<tr>
<td>156.</td>
<td>raathima</td>
</tr>
<tr>
<td>157.</td>
<td>rama</td>
</tr>
<tr>
<td>158.</td>
<td>ramata</td>
</tr>
<tr>
<td>159.</td>
<td>ranga</td>
</tr>
<tr>
<td>160.</td>
<td>ratha</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>161.</td>
<td>reehe</td>
</tr>
<tr>
<td>162.</td>
<td>rega</td>
</tr>
<tr>
<td>163.</td>
<td>rekia</td>
</tr>
<tr>
<td>164.</td>
<td>rera</td>
</tr>
<tr>
<td>165.</td>
<td>rīa</td>
</tr>
<tr>
<td>166.</td>
<td>riba</td>
</tr>
<tr>
<td>167.</td>
<td>rigiica</td>
</tr>
<tr>
<td>168.</td>
<td>rīha</td>
</tr>
<tr>
<td>169.</td>
<td>rīma</td>
</tr>
<tr>
<td>170.</td>
<td>rinda</td>
</tr>
<tr>
<td>171.</td>
<td>ringa</td>
</tr>
<tr>
<td>172.</td>
<td>roga</td>
</tr>
<tr>
<td>173.</td>
<td>roora</td>
</tr>
<tr>
<td>174.</td>
<td>ruga</td>
</tr>
<tr>
<td>175.</td>
<td>ruma</td>
</tr>
<tr>
<td>176.</td>
<td>rūma</td>
</tr>
<tr>
<td>177.</td>
<td>rumia</td>
</tr>
<tr>
<td>178.</td>
<td>rūmīrīra</td>
</tr>
<tr>
<td>179.</td>
<td>rūnda</td>
</tr>
<tr>
<td>180.</td>
<td>rūga</td>
</tr>
<tr>
<td>181.</td>
<td>taara</td>
</tr>
<tr>
<td>182.</td>
<td>taha</td>
</tr>
<tr>
<td>183.</td>
<td>tahīka</td>
</tr>
<tr>
<td>184.</td>
<td>tamūka</td>
</tr>
<tr>
<td>185.</td>
<td>tamūra</td>
</tr>
<tr>
<td>186.</td>
<td>tanga</td>
</tr>
<tr>
<td>187.</td>
<td>tanuka</td>
</tr>
<tr>
<td>188.</td>
<td>tara</td>
</tr>
<tr>
<td>189.</td>
<td>te</td>
</tr>
<tr>
<td>190.</td>
<td>tega</td>
</tr>
<tr>
<td>191.</td>
<td>teithia</td>
</tr>
<tr>
<td>192.</td>
<td>tema</td>
</tr>
<tr>
<td>193.</td>
<td>temba</td>
</tr>
<tr>
<td>194.</td>
<td>thaaka</td>
</tr>
<tr>
<td>195.</td>
<td>thara</td>
</tr>
<tr>
<td>196.</td>
<td>thathaya</td>
</tr>
<tr>
<td>197.</td>
<td>theca</td>
</tr>
<tr>
<td>198.</td>
<td>thegetha</td>
</tr>
<tr>
<td>199.</td>
<td>thīa</td>
</tr>
<tr>
<td>200.</td>
<td>thika</td>
</tr>
<tr>
<td>201.</td>
<td>thikīrīria</td>
</tr>
<tr>
<td>202.</td>
<td>thinga</td>
</tr>
<tr>
<td>203.</td>
<td>thīnja</td>
</tr>
<tr>
<td>204.</td>
<td>thitūra</td>
</tr>
<tr>
<td>No.</td>
<td>Verb</td>
</tr>
<tr>
<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>205</td>
<td>thondeka</td>
</tr>
<tr>
<td>206</td>
<td>thooma</td>
</tr>
<tr>
<td>207</td>
<td>thooora</td>
</tr>
<tr>
<td>208</td>
<td>thooria</td>
</tr>
<tr>
<td>209</td>
<td>thuka</td>
</tr>
<tr>
<td>210</td>
<td>thŭkŭma</td>
</tr>
<tr>
<td>211</td>
<td>thuna</td>
</tr>
<tr>
<td>212</td>
<td>thūngūtha</td>
</tr>
<tr>
<td>213</td>
<td>thuura</td>
</tr>
<tr>
<td>214</td>
<td>thūūra</td>
</tr>
<tr>
<td>215</td>
<td>tīga</td>
</tr>
<tr>
<td>216</td>
<td>tīīa</td>
</tr>
<tr>
<td>217</td>
<td>tindīka</td>
</tr>
<tr>
<td>218</td>
<td>tinia</td>
</tr>
<tr>
<td>219</td>
<td>tobora</td>
</tr>
<tr>
<td>220</td>
<td>tongoria</td>
</tr>
<tr>
<td>221</td>
<td>tua</td>
</tr>
<tr>
<td>222</td>
<td>tuga</td>
</tr>
<tr>
<td>223</td>
<td>tūgūta</td>
</tr>
<tr>
<td>224</td>
<td>tuūria</td>
</tr>
<tr>
<td>225</td>
<td>tūma</td>
</tr>
<tr>
<td>226</td>
<td>tūngā</td>
</tr>
<tr>
<td>227</td>
<td>tūra</td>
</tr>
<tr>
<td>228</td>
<td>twara</td>
</tr>
<tr>
<td>229</td>
<td>uga</td>
</tr>
<tr>
<td>230</td>
<td>ūmba</td>
</tr>
<tr>
<td>231</td>
<td>ūnūra</td>
</tr>
<tr>
<td>232</td>
<td>ura</td>
</tr>
<tr>
<td>233</td>
<td>uraga</td>
</tr>
<tr>
<td>234</td>
<td>ūria</td>
</tr>
<tr>
<td>235</td>
<td>uruga</td>
</tr>
</tbody>
</table>

**Intransitive Verbs**

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. agūra</td>
<td>become good</td>
</tr>
<tr>
<td>2. anīa</td>
<td>low/bray</td>
</tr>
<tr>
<td>3. anīrīra</td>
<td>shout</td>
</tr>
<tr>
<td>4. araha</td>
<td>come to rest/flood</td>
</tr>
<tr>
<td>5. arama</td>
<td>widen</td>
</tr>
<tr>
<td>6. bara</td>
<td>go wrong</td>
</tr>
<tr>
<td>7. buca</td>
<td>be loose</td>
</tr>
<tr>
<td>8. buūra</td>
<td>disappear from the range</td>
</tr>
<tr>
<td>9. butha</td>
<td>rot</td>
</tr>
<tr>
<td>10. camba</td>
<td>be ashamed</td>
</tr>
<tr>
<td>11. cangarara</td>
<td>sparkle</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----</td>
</tr>
<tr>
<td>12.</td>
<td>cekeha</td>
</tr>
<tr>
<td>13.</td>
<td>cemania</td>
</tr>
<tr>
<td>14.</td>
<td>cendũka</td>
</tr>
<tr>
<td>15.</td>
<td>ciira</td>
</tr>
<tr>
<td>16.</td>
<td>cooka</td>
</tr>
<tr>
<td>17.</td>
<td>cũga</td>
</tr>
<tr>
<td>18.</td>
<td>cũnga</td>
</tr>
<tr>
<td>19.</td>
<td>cũnjũma</td>
</tr>
<tr>
<td>20.</td>
<td>cura</td>
</tr>
<tr>
<td>21.</td>
<td>egetha</td>
</tr>
<tr>
<td>22.</td>
<td>eka</td>
</tr>
<tr>
<td>23.</td>
<td>gaca</td>
</tr>
<tr>
<td>24.</td>
<td>gagata</td>
</tr>
<tr>
<td>25.</td>
<td>gamba</td>
</tr>
<tr>
<td>26.</td>
<td>ganda</td>
</tr>
<tr>
<td>27.</td>
<td>gega</td>
</tr>
<tr>
<td>28.</td>
<td>gema</td>
</tr>
<tr>
<td>29.</td>
<td>gena</td>
</tr>
<tr>
<td>30.</td>
<td>goma</td>
</tr>
<tr>
<td>31.</td>
<td>goromoka</td>
</tr>
<tr>
<td>32.</td>
<td>gũa</td>
</tr>
<tr>
<td>33.</td>
<td>gũrũka</td>
</tr>
<tr>
<td>34.</td>
<td>gũũka</td>
</tr>
<tr>
<td>35.</td>
<td>gũũthũka</td>
</tr>
<tr>
<td>36.</td>
<td>hagara</td>
</tr>
<tr>
<td>37.</td>
<td>hahũka</td>
</tr>
<tr>
<td>38.</td>
<td>hanyũka</td>
</tr>
<tr>
<td>39.</td>
<td>hata</td>
</tr>
<tr>
<td>40.</td>
<td>heha</td>
</tr>
<tr>
<td>41.</td>
<td>heha</td>
</tr>
<tr>
<td>42.</td>
<td>hĩa</td>
</tr>
<tr>
<td>43.</td>
<td>hĩhĩa</td>
</tr>
<tr>
<td>44.</td>
<td>hika</td>
</tr>
<tr>
<td>45.</td>
<td>hĩnja</td>
</tr>
<tr>
<td>46.</td>
<td>hĩtia</td>
</tr>
<tr>
<td>47.</td>
<td>hĩũka</td>
</tr>
<tr>
<td>48.</td>
<td>hiũha</td>
</tr>
<tr>
<td>49.</td>
<td>homa</td>
</tr>
<tr>
<td>50.</td>
<td>hona</td>
</tr>
<tr>
<td>51.</td>
<td>hoorera</td>
</tr>
<tr>
<td>52.</td>
<td>hora</td>
</tr>
<tr>
<td>53.</td>
<td>hota</td>
</tr>
<tr>
<td>54.</td>
<td>hũa</td>
</tr>
<tr>
<td>55.</td>
<td>hũgũya</td>
</tr>
<tr>
<td>Number</td>
<td>Transliteration</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------</td>
</tr>
<tr>
<td>56.</td>
<td>hūhita</td>
</tr>
<tr>
<td>57.</td>
<td>huka</td>
</tr>
<tr>
<td>58.</td>
<td>huna</td>
</tr>
<tr>
<td>59.</td>
<td>hunja</td>
</tr>
<tr>
<td>60.</td>
<td>hūtha</td>
</tr>
<tr>
<td>61.</td>
<td>hūcūka</td>
</tr>
<tr>
<td>62.</td>
<td>hūūna</td>
</tr>
<tr>
<td>63.</td>
<td>hūūta</td>
</tr>
<tr>
<td>64.</td>
<td>igana</td>
</tr>
<tr>
<td>65.</td>
<td>ikara</td>
</tr>
<tr>
<td>66.</td>
<td>imba</td>
</tr>
<tr>
<td>67.</td>
<td>inama</td>
</tr>
<tr>
<td>68.</td>
<td>ingīha</td>
</tr>
<tr>
<td>69.</td>
<td>inūka</td>
</tr>
<tr>
<td>70.</td>
<td>īrua</td>
</tr>
<tr>
<td>71.</td>
<td>iyūra</td>
</tr>
<tr>
<td>72.</td>
<td>kayā</td>
</tr>
<tr>
<td>73.</td>
<td>kena</td>
</tr>
<tr>
<td>74.</td>
<td>kīīga</td>
</tr>
<tr>
<td>75.</td>
<td>kinyaa</td>
</tr>
<tr>
<td>76.</td>
<td>kira</td>
</tr>
<tr>
<td>77.</td>
<td>koma</td>
</tr>
<tr>
<td>78.</td>
<td>korora</td>
</tr>
<tr>
<td>79.</td>
<td>kua</td>
</tr>
<tr>
<td>80.</td>
<td>kūga</td>
</tr>
<tr>
<td>81.</td>
<td>kuhīha</td>
</tr>
<tr>
<td>82.</td>
<td>kunia</td>
</tr>
<tr>
<td>83.</td>
<td>kuruma</td>
</tr>
<tr>
<td>84.</td>
<td>kūūra</td>
</tr>
<tr>
<td>85.</td>
<td>maka</td>
</tr>
<tr>
<td>86.</td>
<td>mata</td>
</tr>
<tr>
<td>87.</td>
<td>mema</td>
</tr>
<tr>
<td>88.</td>
<td>mira</td>
</tr>
<tr>
<td>89.</td>
<td>negena</td>
</tr>
<tr>
<td>90.</td>
<td>neneha</td>
</tr>
<tr>
<td>91.</td>
<td>ng’ung’ua</td>
</tr>
<tr>
<td>92.</td>
<td>noga</td>
</tr>
<tr>
<td>93.</td>
<td>nora</td>
</tr>
<tr>
<td>94.</td>
<td>nunga</td>
</tr>
<tr>
<td>95.</td>
<td>nyiha</td>
</tr>
<tr>
<td>96.</td>
<td>nyota</td>
</tr>
<tr>
<td>97.</td>
<td>ogoma</td>
</tr>
<tr>
<td>98.</td>
<td>ora</td>
</tr>
<tr>
<td>99.</td>
<td>raiha</td>
</tr>
<tr>
<td>100.</td>
<td>raka</td>
</tr>
<tr>
<td>101.</td>
<td>rara</td>
</tr>
<tr>
<td>102.</td>
<td>rarama</td>
</tr>
<tr>
<td>103.</td>
<td>rera</td>
</tr>
<tr>
<td>104.</td>
<td>rīika</td>
</tr>
<tr>
<td>105.</td>
<td>riita</td>
</tr>
<tr>
<td>106.</td>
<td>rīra</td>
</tr>
<tr>
<td>107.</td>
<td>ritūha</td>
</tr>
<tr>
<td>108.</td>
<td>riūka</td>
</tr>
<tr>
<td>109.</td>
<td>rooka</td>
</tr>
<tr>
<td>110.</td>
<td>roota</td>
</tr>
<tr>
<td>111.</td>
<td>rūgama</td>
</tr>
<tr>
<td>112.</td>
<td>rūra</td>
</tr>
<tr>
<td>113.</td>
<td>rura</td>
</tr>
<tr>
<td>114.</td>
<td>tanaaha</td>
</tr>
<tr>
<td>115.</td>
<td>teng’era</td>
</tr>
<tr>
<td>116.</td>
<td>thaama</td>
</tr>
<tr>
<td>117.</td>
<td>thamaka</td>
</tr>
<tr>
<td>118.</td>
<td>thamara</td>
</tr>
<tr>
<td>119.</td>
<td>ther</td>
</tr>
<tr>
<td>120.</td>
<td>therūka</td>
</tr>
<tr>
<td>121.</td>
<td>thigina</td>
</tr>
<tr>
<td>122.</td>
<td>thi</td>
</tr>
<tr>
<td>123.</td>
<td>thīna</td>
</tr>
<tr>
<td>124.</td>
<td>thinga</td>
</tr>
<tr>
<td>125.</td>
<td>thira</td>
</tr>
<tr>
<td>126.</td>
<td>thirīka</td>
</tr>
<tr>
<td>127.</td>
<td>thita</td>
</tr>
<tr>
<td>128.</td>
<td>thonja</td>
</tr>
<tr>
<td>129.</td>
<td>thua</td>
</tr>
<tr>
<td>130.</td>
<td>tinda</td>
</tr>
<tr>
<td>131.</td>
<td>tithia</td>
</tr>
<tr>
<td>132.</td>
<td>toboka</td>
</tr>
<tr>
<td>133.</td>
<td>togota</td>
</tr>
<tr>
<td>134.</td>
<td>tonga</td>
</tr>
<tr>
<td>135.</td>
<td>tooga</td>
</tr>
<tr>
<td>136.</td>
<td>tūgūga</td>
</tr>
<tr>
<td>137.</td>
<td>tuka</td>
</tr>
<tr>
<td>138.</td>
<td>tūnda</td>
</tr>
<tr>
<td>139.</td>
<td>tunguha</td>
</tr>
<tr>
<td>140.</td>
<td>tūngūra</td>
</tr>
<tr>
<td>141.</td>
<td>tuuha</td>
</tr>
<tr>
<td>142.</td>
<td>tūūra</td>
</tr>
<tr>
<td>143.</td>
<td>ūhīga</td>
</tr>
</tbody>
</table>
144. ūka       come
145. ūkīra    wake up
146. uma      come out
147. umagara  become hard
148. ūmba     to perch
149. ūnūha    act maliciously

Verbs Used Both Transitively and In transitively

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. cama</td>
<td>taste</td>
</tr>
<tr>
<td>2. ceema</td>
<td>approach with stealth</td>
</tr>
<tr>
<td>3. haica</td>
<td>climb</td>
</tr>
<tr>
<td>4. kīra</td>
<td>exceed, pass</td>
</tr>
<tr>
<td>5. mera</td>
<td>grow</td>
</tr>
<tr>
<td>6. theka</td>
<td>laugh</td>
</tr>
<tr>
<td>7. tuma</td>
<td>mend/seal</td>
</tr>
<tr>
<td>8. una</td>
<td>break/burst</td>
</tr>
<tr>
<td>9. ūra</td>
<td>get lost/lose</td>
</tr>
</tbody>
</table>