A PHONOLOGICAL STUDY OF DERIVED WORDS IN KIKUYU WITH REFERENCE TO NOUNS AND ADJECTIVES

BY

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DECLARATION

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

MUTHUI JOB W.

This dissertation has been submitted for examination with our approval as university supervisors.

DR. F. ESHUN

DR. ALFRED BUREGEYA

DEDICATION

TO MUM AND DAD

Without whose moral, financial and spiritual

Support, this far would be illusory

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ABSTRACT

This study is an attempt to investigate the phonological processes in Kikuyu nouns and adjectives derived from verbs.

Chapter one provides some background information on the language, a brief discussion of the analytical tool (theory) and the methodology. The study proceeds to investigate the sound system of Kikuyu, by presenting examples of sounds at word initial and medial position for consonants and word initial, midial and final for vowels, to establish their phonemic status. The study established that Kikuyu has eighteen consonant phonemes and seven vowel phonemes.

In Chapter Three is a discussion of the phonological processes in nouns derived from verbs, where all sound changes have been accounted for in terms of phonological rules. A discussion of the phonological processes involved in the derivation of Kikuyu adjectives, from verbs, follows in Chapter Four. The study then summarises the changes occurring in the N C clusters in the underlying representation, and establishes a sequence structure condition.

This study proved that although derivation is a morphological process there are changes involved which can only be accounted for phonologically.

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LIST OF SIGNS AND SYMBOLS

C	Consonant
V	Vowel
Φ	Indication for insertion or deletion
#	Word boundary
A→B/ — C	A becomes B before C
A→B/C—	A becomes B after C
A→B/C —D	A becomes B between C and D

CHAPTER ONE

1.0 INTRODUCTION TO THE STUDY

1.1 BACKGROUND

1.1.1 The people

The Kikuyu community is the largest ethnic group in Kenya with a population of about 5,302,479. (Census 1999). The Kikuyu mainly live in Central Province, a region with numerous rivers running eastwards from the Aberdare mountains and westwards from Mount Kenya, giving the region a characteristic river-ridge landscaped. It is administratively divided into seven districts, namely, Nyeri, Muranga, Nyandarua, Maragwa, Thika, Kirinyaga and Kiambu.

Being mainly an agricultural community the Kikuyu engage in cash crop farming and horticulture. They also grow food crops such as maize, beans, and potatoes. Their main cash crops include coffee, tea, rice and sisal, while their horticultural products are French beans, cabbages, tomatoes, onions and fruits. These are both for domestic consumption and export, thus serve as a major source of income.

The original name of the people is 'Agikuyu' and that of their language is 'Gikuyu' which derives from their mythical ancestor's name Gikuyu. The present form Kikuyu was adopted by the early Europeans from the Swahili inhabitants of the coast (cf Barlow 1960).

1.1.2 The Language

The language to be studied in this work is Kikuyu, a north eastern Bantu language. According to Mutahi (1977), the language comprises seven dialects. These dialects are the Northern, Southern, Ki-mathira, Ki-ndia, Ki-gichugu, Ki-embu and Ki-mbeere. The Northern dialect is spoken both in Nyeri, and Murang'a and its area lies between Chania river to the south and N. Mathioya river to the North. The Southern dialect is spoken in

the area that lies between N. Mathioya river and the city of Nairobi. The Ki-mathira dialect is spoken mainly in Mathira division of Nyeri district. It is found west of Ragati river and between Mount Kenya and Tana river. The native speakers of this dialect are found mainly around Karatina town. The Ki-ndia dialect is spoken in Ndia division of Kirinyaga district, with speakers living between rivers Thiba to the east, Tana to the south and Ragati to the west. Ki-gichugu dialect area lies between river Rupingazi and Thiba. Ki-embu is spoken in Embu district and its area lies between four rivers. To the north is river Thuci, to the east, river Tana to the south, river Ena and to the west, river Rupingazi. Ki-mbeere is also spoken in Embu district and their area lies between three rivers. These are Tana which lies east and south of the region, Rupingazi which lies to the west and Ena which separates Mbeere from Embu. The dialect of study will be the Northern dialect spoken in Nyeri and Murang'a. The reason for choosing this dialect is because it is the one I am most familiar with.

1.2 STATEMENT OF THE PROBLEM

This study is geared towards providing a phonological analysis of derived nouns and adjectives. I will set out to investigate the changes (Processes) occurring in such derivations and attempt to account for them in terms of phonological rules.

To understand this, it is important to be familiar with the term 'derivation'. Derivation is one of the principal devices speakers use to produce a new word from another that already exists in their vocabulary. Malkiel (1978) says derivation is,

> "the interplay of a root morpheme with at least one grammatical morpheme as the typical mechanism used to extract the new word from the available resources"

The form of derivation best known from modern European languages is affixation; the addition of an affix to a root or stem to form a new word.

The process of derivation could be class changing or class maintaining. Class maintaining derivation does not change the syntactic category of a word. For example, one could form a noun from another noun or an adjective from another adjective. However, this process does not occur in Kikuyu. The nouns for example, belong to a particular class denoted by a prefix.

Class changing derivation as the term suggests, changes one part of speech to another. For example, a verb to a noun, an adjective, to a noun, verb to adjective etcetera. In this study I will focus on nouns and adjectives formed from verbs. In Kikuyu, a large proportion of nouns is derived from verbs. (cf Barlow 1960). Below I present examples in standard Kikuyu orthography.

Verb	Gloss	Noun	Gloss
roga	'to poison'	mũrogi	'witch'
tura	'to smith'	mũturi	'smith'
rĩma	'to cultivate'	mũrĩmi	'farmer'
enda	'to love'	wendo	'love'
onja	'become handicapped'	wonje	'handicap'
aka	'build'	mwaki	'builder'
endia	'sell'	mwendia	'seller'
toga	'to smoke'	ndogo	'smoke'
rwara	'become ill'	ndwari	'disease'
rĩa	'eat'	ndĩa	'party'(with a lot of eating)

Adjectives in Kikuyu can also be derived form verbs as in the following examples.

Verb	Gloss	Adjectives	Gloss
hokeka	'be trustworthy'	mwĩhokeku	'trustworthy'

onja	'become handicapped'	mwonju	'handicapped'
thoma	'read'	mũthomu	'educated'
ũma	'become dry'	mũũmu	'dry' (eg tree)
enyũka	'to break'	nyenyũku	'broken'
ora	'rot'	njoru	'rotten'
agana	'become naughty'	njaganu	'naughty'
raiha	'become tall/long'	ndaihu	'tall/long'
kĩga	'become stupid'	ngĩgu	'stupid'
kũra	'grow'	ngũrũ	'old'

In the derivation of both nouns and adjectives there are some sound changes involved. Therefore I hope to be able to investigate and account for these sound changes.

1.3 GOAL AND OBJECTIVES

This study aims at providing a phonological analysis of words derived from verbs within the framework of Generative Phonology. I will be guided by the following objectives

1. To investigate the sound system of Kikuyu.
2. To investigate the phonological changes involved in the derivation of both nouns and adjectives in Kikuyu.
3. To establish possible phonological factors influencing or motivating the changes.
4. To account for the changes in both nouns and adjectives in terms of phonological rules.
5. To verify whether the theory of Generative Phonology can be used to account for the sound changes in Kikuyu.

1.4 HYPOTHESES

The working hypotheses for this study are that,

1. Kikuyu nouns and adjectives can be derived from verbs.
2. Although derivation is a morphological process, it also involves sound

changes which can be accounted for, phonologically.

3. Generative Phonology has been used to describe other languages, hence it is an adequate theory to describe the phonology of Kikuyu.

1.5 JUSTIFICATION

Generally not much has been done on Kikuyu phonology, although there have been a number of studies done on other aspects of the language such as, phonetics, morphology and syntax. For example, Armstrong (1940), Njogu (1978), Gathenji (1981) and Mwangi (1992).

Derivation, for instance has been studied in morphology by Njogu (1978), and in a section by Barlow (1960). Our Study is however justified in that it attempts to further analyse Kikuyu derivations from a phonological point of view.

The study will provide insights into the phonological structure of Kikuyu, benefiting Kikuyu speakers as well as non-Kikuyu speakers who may wish to learn the language as a second language. It will be helpful in that it will show the different ways of deriving nouns and adjectives from verbs. It is therefore a major contribution to the study of Kikuyu and to the study of Bantu linguistics.

Most linguistic theories have been applied in the description of Indo-European languages, which have no genetic relationship with Kikuyu. It will be interesting to check if the theory of Generative Phonology will be adequate to describe the phonology of an African language like Kikuyu.

1.6 SCOPE AND LIMITATIONS

This study is an attempt to investigate and account for the sound changes involved in the derivation of Kikuyu nouns and adjectives. The study will therefore be phonological. However, since one cannot study one aspect of language in isolation, I will make reference to the morphology whenever the need arises.

Kikuyu nouns may be formed from other syntactic categories, that is, from verbs and adjectives. Adjectives on the other hand may only be derived from verbs. This study will be limited to those words which are derived from verbs.

In phonology there is a distinction between segmental and supra-segmental elements. The segmentals are individual sounds; phonemes, divided into consonants and vowels. The supra-segmentals are those phonological units above and beyond these phonemic units. For example tone and intonation. In this study I shall solely deal with the segmental elements.

As mentioned earlier Kikuyu comprises seven dialects. The dialect of study will be the Northern dialect spoken in Nyeri and Murang'a.

1.7 LITERATURE REVIEW

The review of literature will be divided in to two sections namely, review of studies done on Kikuyu and review of other related studies done on other languages.

1.7.1 KIKUYU STUDIES

There have been a number of attempts in the study of Kikuyu, one of the earliest being Armstrong (1940). In her work, published after her death, she explores the phonetic and tonal structure of Kikuyu by setting out an ordered selection of data, an area that had not been studied before. She has also attempts to document the vowel and consonant phonemes, and the acceptable and unacceptable sequences in the language. Ford (1974) says that had she finished her work before she died, " there is no doubt she could have expanded her range of data and probably presented some rigorous analysis, which is sadly lacking in the published work".

Barlow (1960) is another scholar who has done work on Kikuyu. In his book he has dealt with most of the outstanding aspects of grammar with reference to the various syntactic categories. In a section, Barlow presents a discussion of nouns showing the various noun classes in Kikuyu. The forms he studies could be thought to be the 'common' forms since there is a whole lot of other nouns which are derived from verbs. Infact he acknowledges that "a large proportion of Kikuyu nouns are those formed from verbs" In his discussion, he does not go into the phonological aspect of such derivations, but limits himself to their morphological form.

Barlow also discusses Kikuyu adjectives showing the various types of adjectives such as adjectives of quality, quantity, demonstrative adjectives, interrogative adjectives, distributive adjectives, etcetera. He however does not mention that adjectives may be derived from verbs. Nonetheless, his work is representative of Kikuyu grammar despite that fact that it was written many years ago. A native speaker may disagree with him in only a few instances.

Ford (1974), deals with two aspects of intonation in Kikuyu, viz the tone system and the chief intonational uses of tone in helping distinguish chief moods and the two polarities. In one of his sections he discusses Kikuyu nouns and states that:

> "there are many ways of forming nouns from verbs though they vary greatly in their productivity...."

Mutahi (1977) is the first study done by a native speaker of Kikuyu, in a Ph.D dissertation. Mutahi attempts to classify the dialects of Southern Mount Kenya on the basis of sound change. He generally discusses phonological changes in the dialects and especially those that play a major role in dialect classification.

Njogu (1978) deals with Kikuyu deverbatives and other norminalizations. He presents the morphological form of nouns derived from verbs and those formed from

adjectives. In a section of his work he discusses Kikuyu sounds. He concludes that Kikuyu has a total of eighteen consonants and fourteen vowels; seven long and seven short.

Gathenji (1981) analyses the morphology of Kikuyu verbal extensions using a functional approach.

Mwangi (1992) attempts to provide a typological classification of empty categories in Kikuyu. In one of her chapters however she states that nouns in Kikuyu can be formed form other syntactic categories.

1.7.2 OTHER RELATED WORKS

Schane (1973) discusses phonological processes with reference to various world languages - mainly Indo-European. He classifies phonological processes into four categories namely, assimilation; where segments become more alike, syllable structure; involving alteration in the distribution of consonants and vowels, weakening and strengthening and neutralisation. Schane notes that:

> "When morphemes are combined to form words, the segments of neighbouring morphemes become juxtaposed and sometimes undergo change."

He gives the example of 'electric'; an adjective and electricity; a noun. In his example the final [k] of electric becomes [s] after addition of the derivational suffix –{ity} - a phonological change.

Lidonde (1978) investigates rules involving consonant alternation in Lwitakhu; a Luhya dialect, within the framework of Generative Phonology. She discusses assimilation processes such as homorganic nasal assimilation, palatalization and nasalization. She also discusses phonological rules of vowels such as vowel deletion, and glide formation.

Othiambo (1981) deals with major phonological processes in dholuo vowels. He discusses vowel deletion, glide formation and vowel harmony. Although his study is based on a language genetically unrelated to Kikuyu, his work offers useful insights to this study.

1.8 THEORETICAL FRAMEWORK

The framework of description to be used in this account derives from the theory of Generative Phonology developed by Chomsky and Halle in **The Sound Pattern of English** (1968). In this model, the Lexicon, the syntactic component and readjustment rules provide the 'phonological component' with information. The syntactic component consists of a string of minimal elements called 'formatives.' Each of these is assigned to various categories which determine its abstract underlying form, its semantic properties and the syntactic functions it can fulfil. For example, the formative 'boy' belongs to the category of elements with initial voiced stops, category 'noun', 'animate' 'male' etc. This information about formatives will be presented in the lexicon. The syntactic component thus enumerates abstract structures which underlie the meaning and which are related to Surface structures by means of transformations. In this model, the role of the phonological component, which consists of a system of rules (phonological rules) is to relate such Surface structures to phonetic representations.

Phonological rules constitute the formalised representation of the phonological processes of a language and apply to phonological Surface structures. These rules account for the alternations that occur in the phonetic representation of morphemes joined together to form words. For example in the pair 'electric and electricity' where there is alternation between [k] and [s]. The abstract form of a phonological rule is
$A \rightarrow B / C - D$. This rule will necessarily apply to all A's in the environment C— D at the point in derivation. The phonological rules modify phonological representations in diverse ways. To indicate a few:

- Phonological rules change the feature specification of columns in classificatory matrices to agree or disagree with adjacent segments. The rules affecting such agreement formalise the process of assimilation.
- Entire phonetic segments absent from classificatory matrices are inserted by phonological rules into the appropriate positions in the phonetic representations; a process referred to as insertion
- Phonological rules may also delete entire phonological segments from classificatory matrices. The rules represent the process of elision.
- The ordering of phonological segments relative to each other can be altered by phonological rules; a process of metathesis.

The application of phonological rules, is considered to be ordered in a linear sequence. In this linear ordering, a rule may apply to some given string and yield an appropriate output string. The next rule in the sequence will have access to the output string derived from the preceding rule. This output string may serve as the input in the next rule. In a language for example, if we have consonants palatalized before the high front vowel [i], this theory provides that all consonants palatalize before an [i], whether an underlying [i] or an [i] derived from, say [e] by some vowel raising rule. If all consonants that appear phonetically before [i] are palatalized this fact is accounted for by ordering the vowel-raising rule; which merges underlying [i] and [e] to [i], before the palatalization rule. If however, there were sequences of palatalized consonants, before [i] and sequences of non-palatalized consonants before [i], this fact would likely be accounted for by ordering the palatalization rule before that of vowel raising (i.e. the rule that raises [e] to [i].)

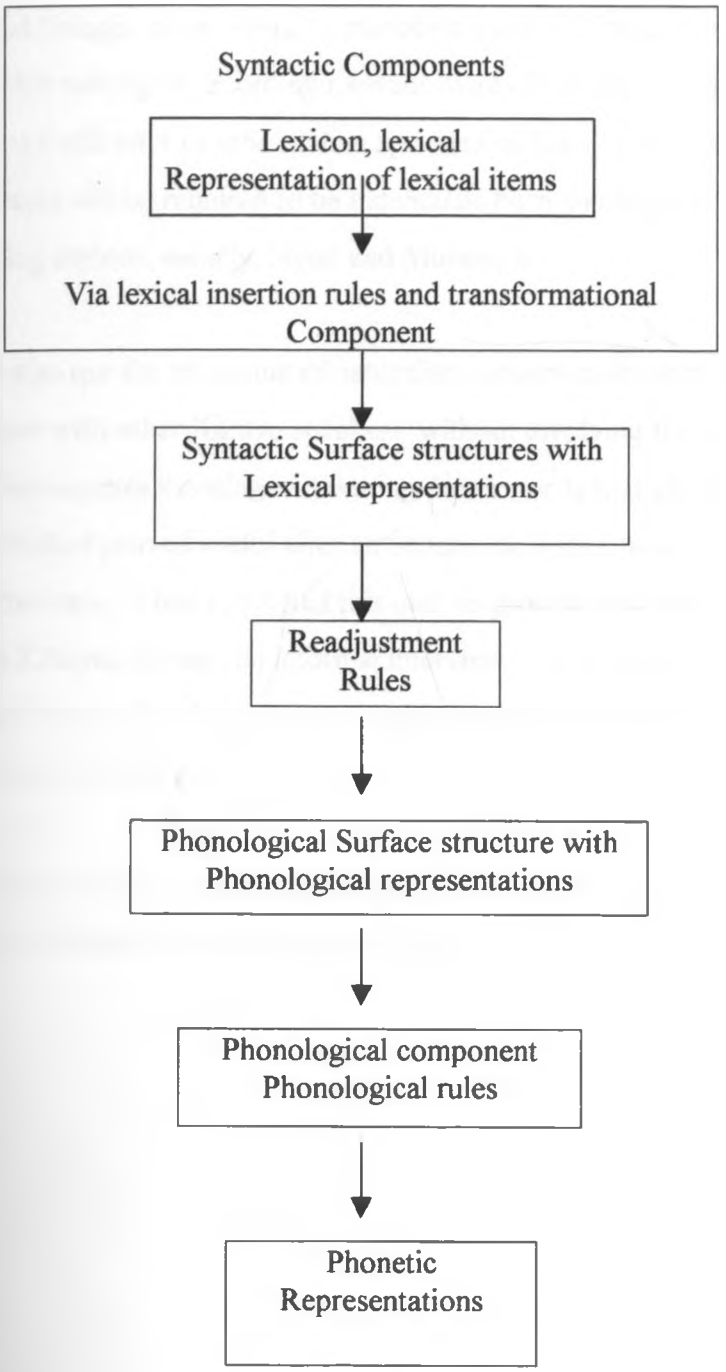
Phonetic representations in Generative Phonology are considered to be segmentable into discrete units. The segments are defined as bundles of features. For the most part the features were given previously by Jakobson and revised slightly in Jakobson Fante and Halle (1951). Jakobson emphasised the arbitrary 'phonetic' distribution between consonants and vowels. It has since been the trend in generative work to

characterise all systematic phonemes both those which will be realised as phonetic consonants and those which will be realised as phonetic vowels by a set of features.

The phonetic representation has the form of a two-dimensional matrix in which the rows stand for particular phonetic features, and the columns stand for the segments. The entries in the matrix determine the status of each segment with respect to the features (distinctive features). As classificatory devices distinctive features play a role in the full specification of a lexical entry, alongside with syntactic, semantic features and idiosyncratic classifications of various sorts that determine the behaviour of a lexical entry with respect to rules of grammar. As phonetic parameters the distinctive features provide a representation of an utterance which can be interpreted as a set of instructions to the physical articulatory system.

The major devices of generative grammar dealing with the phonological aspect may be summarised as in the next page:

MAJOR DEVICES OF GENERATIVE GRAMMAR



Adapted from (Fudge ed. 1973.230)

1.9 METHODOLOGY

In this study, I will take advantage of the fact that I am a native speaker of Kikuyu; being born and brought up in Nyeri, to provide myself with data through introspection. This will involve writing or recording relevant words form my own intuitions. To cross-check this data I will refer to other native speakers of Kikuyu through informal interviews. These informants will be required to be individuals born and brought up in the Northern dialect speaking regions; namely, Nyeri and Murang'a.

I will also use the technique of naturalistic observation where data will be sort through contact with other Kikuyu speakers, without involving the speaker in a form of interview. This requires listening and writing down words thought to be relevant to the study. This method proved useful after an experience with a middle-aged man when I was planning on the topic. I had requested this man to give me examples of nouns formed from verbs in Kikuyu, through an informal interview. After some time of deep thought, he said he did not know of any, yet I later identified several derived nouns in his speech, in the conversation that ensued.

The data collected will then be grouped depending on the form of the new words to enable me to identify the phonological changes.

CHAPTER TWO

2.0 KIKUYU PHONOLOGY

2.1 INTRODUCTION

In chapter I, it was stated that our study is concerned with the phonological processes involved in derivation of Kikuyu nouns and adjectives. Before we embark on this, it is important to highlight some of aspects of Kikuyu phonology, which will provide background information for the ensuing discussion.

2.2 PHONETIC INVENTORY

In Kikuyu, as in other languages there is a distinction between segmental and supra-segmental elements. The segmentals are divided into two major classes of consonants and vowels. The supra-segmentals are those phonological units larger than the segment. (cf Hyman 1975). Examples of such supra-segmentals in Kikuyu are tone and intonation.

2.3 CONSONANTS

Kikuyu has a total of eighteen consonants. The table below illustrates the correspondence between the IPA representation and the orthography.

IPA Symbol	Orthographic Representation
b	mb
m	m
w	w
f	b
ð	th
n	n
t	t
d	nd
r	r
ʃ	c
dz	nj
ʃ̑	ny
j	y
k	k
g	ng
ŋ	ng'
ɤ	g
h	h

Generative Phonolgy; the theory on which this study is based, provides for two levels of representation; the underlying level-an abstract form consisting of phonological representations and the Surface level which is the phonetic representation. In Kikuyu some consonants may be underlying or Surface realizations in specific environments. Surface realizations involve phonological changes (processes) discussed in chapter three and four. Following is a discussion of the consonants, giving examples of their occurrence in word initial and word midial position, to verify their status as phonemes in Kikuyu. We note here, that word final consonants do not occur in Kikuyu. In the discussion, all

examples are provided giving both the phonetic representation and the Kikuyu orthography.

2.3.1 **b**

1. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[bɛɣo]	mbegũ	Seed
(ii)	[bata]	mbata	duck
(iii)	[bɛbɛ]	mbembe	maize
(iv)	[bɔɣa)	mboga	cabbage
(v)	[bɔta]	mbota	bottle top
(vi)	[buɣi]	mbugi	cow bell
(vii)	[bao]	mbaũ	wood
(viii)	[bori]	mbũri	goat
(ix)	[baði]	mbathi	bus
(x)	[beja]	mbĩa	rat
(xi)	[bɛi]	mbei	price

b.	**Word Midial**		
(i)	[moraba]	mũramba	banana stem
(ii)	[bɛbɛ]	mbembe	maize
(iii)	[ijɛbɛ]	iyembe	mango
(iv)	[itube]	itumbĩ	egg
(v)	[aba]	amba	lay foundation
(vi)	[abata]	ambata	climb
(vii)	[kɔba]	komba	take on credit
(viii)	[abora]	ambũra	undo
(ix)	[hubera]	humbĩra	cover

2.3.2 f

2. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[fafa]	baba	father
(ii)	[fara]	bara	road
(iii)	[faga]	banga	arrange
(iv)	[fera]	bĩra	stir
(v)	[fuða]	butha	rot
(vi)	[faði]	bathi	iron box
(vii)	[futa]	buta	pluck
(viii)	[fɤkɛra]	bokera	load

b. **Word Midial**

(i)	[ðufu]	thubu	soup
(ii)	[kefojo]	kĩbũyũ	flask
(iii)	[ifufa]	ibuba	drum
(iv)	[keferi]	kĩbĩri	stirring stick
(v)	[kefiriti]	kĩbiriti	match box
(vi)	[ɣefara]	gĩbara	steering wheel
(vii)	[ifati]	ibati	iron sheet
(viii)	[mofago]	mũbango	arrangement

2.3.3 t

3. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[tara]	tara	count
(ii)	[tɛɣa]	tega	trap
(iii)	[toma]	tũma	send
(iv)	[tɛma]	tema	cut

(v)	[tuða]	tutha	break
(vi)	[tuga]	tunga	compose
(vii)	[tɤa]	toga	smoke
(viii)	[ʊga]	tonga	become rich
(ix)	[tiðia]	tithia	hesitate

Word Midial

(i)	[ruta]	ruta	remove
(ii)	[ota]	ũta	bow
(iii)	[ɣotara]	gũtara	become lazy
(iv)	[ɣetada]	gĩtanda	bed
(v)	[ɣete]	gĩtĩ	chair
(vi)	[tiɣiti]	tigiti	ticket
(vii)	[mata]	mata	saliva
(ix)	[iratаði]	iratathi	a paper
(x)	[ɣaɣata]	gagata	sour

2.3.4 **d**

4 **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[dɛɣwa]	ndegwa	bull
(ii)	[darama]	ndarama	drum
(iii)	[doma]	ndũma	arrow root
(iv)	[duði]	nduthi	water pump
(v)	[daka]	ndaka	mud
(vi)	[darɛ]	ndare	berries
(vii)	[dɛɣɛ]	ndege	aeroplane
(viii)	[duma]	nduma	darkness
(ix)	[dɤɤ]	ndogo	smoke

b.	**Word Midial**		
(i)	[ɣetada]	gĩtanda	bed
(ii)	[ɛda]	enda	love
(iii)	[ʃudɔ]	nyundo	hammer
(iv)	[modo]	mũndũ	person
(v)	[mokada]	mũkanda	rope
(vi)	[hada]	handa	plant
(vii)	[moɣoda]	mũgũnda	garden
(viii)	[ɛdia]	endia	sell
(ix)	[ɣada]	ganda	become numb
(x)	[roda]	rũnda	cause one to fall

2.3.5 ʃ

5. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[ʃoʃo]	cũcũ	grandmother
(ii)	[ʃuma]	cuma	metal
(iii)	[ʃura]	cura	to burn
(iv)	[ʃuka]	cuka	report/gossip
(v)	[ʃɛha]	ceha	prune
(vi)	[ʃama]	cama	taste
(vii)	[ʃuha]	cuha	swing
(viii)	[ʃufa]	cuba	bottle
(ix)	[ʃoɣa]	cũga	to spring

b. **Word Midial**

(i)	[haiʃa]	haica	climb
(ii)	[raʃia]	racia	pay dowry
(iii)	[ʃoʃo]	cũcũ	grandmother
(iv)	[ɣuʃia]	gucia	pull
(v)	[ðɛʃa]	theca	pierce
(vi)	[ɣaʃa]	gaca	to stain
(vii)	[hɔʃia]	hocia	hook
(viii)	[ɣɔɔʃa]	gooca	praise
(ix)	[aʃa]	aca	no

2.3.6 **ð**

6. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[ðɛʃi]	theci	fork jembe
(ii)	[ðumu]	thumu	manure
(iii)	[ðoka]	thũka	go bad
(iv)	[ðiga]	thinga	plaster
(v)	[ðiire]	thiirĩ	debt
(vi)	[ðena]	thĩna	poverty
(vii)	[ðuða]	thutha	behind
(viii)	[ðima]	thima	measure
(ix)	[ðira]	thira	get finished

b. **Word Midial**

(i)	[moðuri]	mũthuri	man
(ii)	[moðogo]	mũthũngũ	white man
(iii)	[hoða]	hũtha	become light

(iv)	[oða]	ūtha	play
(v)	[hɔða]	hotha	to give offerings
(vi)	[hiða]	hitha	hide
(vii)	[ɛða]	etha	search
(viii)	[mɛða]	metha	table
(ix)	[ðuða]	thutha	behind
(x)	[maða]	matha	gather

2.3.7 **k**

7. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[kora]	kūra	grow old
(ii)	[kɔʃa]	konya	uproot
(iii)	[kua]	kua	die
(iv)	[kɔma]	koma	sleep
(v)	[kama]	kama	milk
(vi)	[kima]	kima	marsh
(vii)	[karia]	karia	crash
(viii)	[kɣa]	kīga	become foolish
(ix)	[ki ʃa]	kinya	step on

b.	**Word Midial**		
(i)	[iki ʃa]	ikinya	sole
(ii)	[mokada]	mūkanda	rope
(iii)	[ɣekuo]	gīkuo	death
(iv)	[okera]	ūkīra	wake up
(v)	[okoro]	ūkūrū	old age
(vi)	[riika]	riika	age group
(vii)	[ikara]	ikara	charcoal

(viii)	[ikia]	ikia	throw
(ix)	[ɣekɛno]	gĩkeno	happiness

2.3.8 **g**

8. **Examples**

	Word Initial	**Orthography**	**Gloss**
(i)	[gɔrɔ]	ngoro	heart
(ii)	[gari]	ngari	car
(iii)	[gaðe]	ngathĩ	ladder
(iv)	[gare]	ngari	leopard
(v)	[goko]	ngũkũ	hen
(vi)	[gɔma]	ngoma	satan
(vii)	[gere]	ngĩrĩ	warthog
(viii)	[gorwe]	ngũrwe	pig
(ix)	[gaara]	ngaara	field mouse

b. **Word Midial**

(i)	[higa]	hinga	close
(ii)	[riga]	ringa	hit
(iii)	[nuga]	nunga	smell
(iv)	[tɔga]	tonga	become rich
(v)	[raga]	ranga	step on
(vi)	[ðiga]	thinga	plaster
(vii)	[hogo]	hũngũ	hawk
(viii)	[roga]	rũnga	straighten
(ix)	[moðogo]	mũthũngũ	whiteman
(x)	[ʃoga]	cũnga	doze

2.3.9 **ɣ**

9. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[ɣaaða]	gaatha	tighten
(ii)	[ɣoroka]	gũrũka	go mad
(iii)	[ɣuʃia]	gucia	pull
(iv)	[ɣora]	gũra	buy
(v)	[ɣaja]	gaya	share
(vi)	[ɣɛria]	geria	try
(vii)	[ɣuða]	gutha	grab
(viii)	[ɣita]	gita	thatch
(ix)	[ɣeðɔmɔ]	gĩthomo	education

b.	**Word Midial**		
(i)	[hiɣo]	higo	kidney
(ii)	[koɣa]	kũga	bark
(iii)	[iɣa]	iga	keep
(iv)	[iɣua]	igua	hear
(v)	[keɣa]	kĩga	become foolish
(vi)	[aɣana]	agana	become naughty
(vii)	[keɣada]	kĩganda	factory
(viii)	[iɣana]	igana	to be enough
(ix)	[iɣoro]	igũrũ	up/high

2.3.10 **dz**

10. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[dzera]	njĩra	way
(ii)	[dzoɣo]	njũgũ	peanut
(iii)	[dzɔɣu]	njogu	elephant

(iv)	[dzɣɔɔ]	njogoo	cock
(v)	[dza]	nja	compound
(vi)	[dzaba]	njamba	cock/brave man
(vii)	[dzata]	njata	star
(viii)	[dzao]	njaũ	calf
(ix)	[dzoɣoma]	njũgũma	club

b. **Word Midial**

(i)	[ðedza]	thĩnja	slaughter
(ii)	[ɛdza]	enja	dig
(iii)	[ðadzu]	thanju	stick
(iv)	[kodza]	kũnja	fold
(v)	[keɾdzɛ]	kĩonje	cripple
(vi)	[kɔdzi]	konji	lock
(vii)	[hedza]	hĩnja	to slim
(viii)	[hɛhɛdza]	hehenja	to make humble
(ix)	[madzani]	manjani	tea leaves
(x)	[ɔdzɾiðia]	onjorithia	utilize

2.3.11 **r**

11. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[raða]	ratha	shoot
(ii)	[rɔra]	rora	look
(iii)	[rɑɣa]	roga	poison
(iv)	[rɛra]	rera	bring up
(v)	[rɛhɛ]	rehe	bring
(vi)	[roɣa]	rũga	jump
(vii)	[rɑta]	rota	dream
(viii)	[raga]	ranga	step on

(ix)	[rida]	rinda	soak

b. **Word Midial**

(i)	[arama]	arama	become wide
(ii)	[karamu]	karamu	pencil/pen
(iii)	[kuruma]	kuruma	crawl
(iv)	[aria]	aria	talk
(v)	[iratаði]	iratathi	a paper
(vi)	[korora]	kũrũra	scrab
(vii)	[tɔria]	toria	become victorious
(viii)	[kora]	kũra	grow
(ix)	[tora]	tũra	pierce
(x)	[darɛ]	ndare	berries

2.3.12 **w**

12. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[wera]	wĩra	work
(ii)	[wɛdɔ]	wendo	love
(iii)	[waru]	waru	potatoes
(iv)	[waɣanu]	waganu	naughtiness
(v)	[waðeki]	wathĩki	obedience
(vi)	[wetekiɒ]	wĩtĩkio	belief
(vii)	[wɛtɛrɛri]	wetereri	patience
(viii)	[warie]	wariĩ	width
(ix)	[wɛro]	werũ	browness

b. **Word Midial**

(i)	[gorwe]	ngũrwe	pig
(ii)	[mwaki]	mwaki	fire

(iii)	[mwarimo]	mwarimũ	teacher
(iv)	[kwaba]	kwamba	laying foundation
(v)	[mokwadzo]	mũkwanjũ	walking stick
(vi)	[rwara]	rwara	finger nail
(vii)	[iɣwɛta]	igweta	fame
(viii)	[riowa]	riũwa	sun
(ix)	[rwɟa]	rwoya	feather

2.3.13 j

13. **Examples**

a **Word Initial**		**Orthography**	**Gloss**
(i)	[jakwa]	yakwa	mine
(ii)	[ja ʃu]	yanyu	your(s)
(iii)	[jaku]	yaku	your
(iv)	[jakɛ]	yake	his/hers
(v)	[jaɔ]	yao	theirs

b. **Word Midial**

(i)	[wejɛdi]	wĩyendi	selfishness
(ii)	[ijɛbɛ]	iyembe	mango
(iii)	[ija]	iya	steal
(iv)	[ɔja]	oya	take
(v)	[koja]	kũya	start(to sing)
(vi)	[wejaði]	wĩyathi	independence
(vii)	[rwɟa]	rwoya	feather
(viii)	[ɣaja]	gaya	share

2.3.14 **m**

14. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[mami]	mami	mother
(ii)	[mama]	mama	uncle
(iii)	[moturi]	mũturi	black smith
(iv)	[mae]	maĩ	water
(v)	[mata]	mata	saliva
(vi)	[mani]	mani	beans
(vii)	[moɣoda]	mũgũnda	garden
(viii)	[mote]	mutĩ	tree
(ix)	[mɛri]	meri	ship

b	**Word Midial**		
(i)	[kama]	kama	to milk
(ii)	[ɣetama]	gĩtama	cloth
(iii)	[mama]	mama	uncle
(iv)	[kɔma]	koma	sleep
(v)	[inama]	inama	bend
(vi)	[mami]	mami	mother
(vii)	[ʃama]	nyama	meat
(viii)	[doma]	ndũma	arrow root
(ix)	[roma]	rũma	bite
(x)	[gɔma]	ngoma	satan

2.3.15 **n**

15. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[nana]	nana	become naughty
(ii)	[nogaro]	nũngarũ	straight
(iii)	[nina]	nina	finish
(iv)	[nora]	nũra	become fat
(v)	[nɛɣɛna]	negena	make noise
(vi)	[nomu]	nũmu	firm
(vii)	[nɛgɛra]	nengera	give
(viii)	[nɛnɛ]	nene	big
(ix)	[nuga]	nunga	smell

b.	**Word Midial**		
(i)	[kɛna]	kena	become happy
(ii)	[tinia]	tinia	cut
(iii)	[ɔna]	ona	see
(iv)	[ʃona]	cũna	lick
(v)	[ina]	ina	sing
(vi)	[kaana]	kaana	deny
(vii)	[ɣana]	gana	praise(eg a person)
(viii)	[kania]	kania	warn
(ix)	[hɔna]	hona	heal

2.3.16 **ʃ**

16. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[ʃama]	nyama	meat
(ii)	[ʃɛki]	nyeki	grass
(iii)	[ʃɔni]	nyoni	a bird

(iv)	[ʃɛni]	nyeni	greens
(v)	[ʃɔta]	nyota	bottletop
(vi)	[ʃudɔ]	nyundo	hammer
(vii)	[ʃoba]	nyũmba	house

b. **Word Midial**

(i)	[keʃa]	kĩnya	gourd
(ii)	[ɣɔʃa]	gonya	bend
(iii)	[kɔʃa]	konya	uproot
(iv)	[kiʃa]	kinya	step on
(v)	[tɔʃa]	tonya	enter
(vi)	[kuʃa]	kunya	pinch
(vii)	[iʃaʃa]	inyanya	eight
(viii)	[iʃa]	inya	four
(ix)	[ɛʃora]	enyũra	break

2.3.17 ŋ

17. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[ŋɔbɛ]	ng'ombe	cow
(ii)	[ŋɔdu]	ng'ondu	sheep
(iii)	[ŋaraɣu]	ng'aragu	hunger
(iv)	[ŋara]	ng'ara	become thirsty
(v)	[ŋoreka]	ng'ũrĩka	become disgusted
(vi)	[ŋaðia]	ng'athia	become angry
(vii)	[ŋɔrɔta]	ng'orota	snore
(viii)	[ŋaara]	ng'aara	bend slightly

b. **Word Midial**

(i)	[keŋaŋi]	kĩng'ang'i	crab
(ii)	[keŋɤtɔrɛ]	kĩng'otore	ten cents coin
(iii)	[roŋaðiɔ]	rũng'athio	anger
(iv)	[ðeŋa]	thĩng'a	pester
(v)	[dzɛŋi]	njong'i	ugly

2.3.18 **h**

18. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[huroka]	hurũka	rest
(ii)	[hɔna]	hona	heal
(iii)	[hɔɤta]	hoota	win
(iv)	[hi ʃa]	hinya	strength
(v)	[haata]	haata	sweep
(vi	[hɛha]	heha	become cold
(vii]	[hio]	hiũ	hot
(viii)	[hubera]	humbĩra	cover
(ix)	[hoota]	hũũta	become hungry
(x)	[hɔnɔka]	honoka	be/become saved

b.	**Word Midial**		
(I)	[mahɔja]	mahoya	prayer
(ii)	[kehɛo]	kĩheo	present
(iii)	[tuha]	tuha	become blunt
(iv)	[ʃeha]	ceha	prune
(v)	[kahee]	kahĩĩ	boy
(vi	[ʃuha]	cuha	swing
(vii	[rɛhɛ]	rehe	bring
(viii)	[tihia]	tihia	injure
(ix)	[hɛhu]	hehu	cold

From the analysis, Kikuyu has eighteen consonant phonemes, since each of the consonants may appear both in the word initial and midial position. In the theory used in my analysis, the phonemes are described in terms of distinctive features and it is on the basis of this set of phonetic features that the phonetic level is presented.

DISTINCTIVE FEATURE MATRIX FOR KIKUYU CONSONANT PHONEMES

	b	f	t	d	ʃ	ð	k	g	ɣ	dz	r	w	j	m	n	ʃ	ŋ	h
Consonantal	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	+	+	+
Syllabic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sonorant	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	-
Anterior	+	+	+	+	-	+	-	-	-	-	+	-	-	+	+	-	-	-
Coronal	-	-	+	+	+	+	-	-	-	-		-	-	-	+	-	-	-
High	-	-	-	-	+	-	+	+	+	+	-	+	+	-	-	+	+	-
Back	-	-	-	-	-	-	+	+	+	-	-	+	-	-	-	-	+	-
Voice	+	-	-	+	-	+	-	+	+	+	+	+	+	+	+	+	+	-
Continuant	-	+	-	-	+	+	-	-	+	-		+	+	-	-	-	-	+
Nasal	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-

2.4 CONSONANT CLUSTERS

First of all, I want to point out that Kikuyu does not have consonant clusters. However, I decided to find space for this section because earlier studies; such as Barlow (1960), Amstrong (1940), Mutahi (1977) and Njogu (1978) have all stated that consonant clusters occur in Kikuyu. Njogu (1978) for example argues that Kikuyu allows consonant clusters and that each cluster forms a single consonantal sound. He presents the following examples:

19.		**Gloss**
(i)	[ŋgwarɛ]	patridge fowl
(ii)	[keombwa]	heap
(iii)	[ndwara]	finger nails
(iv)	[ðe ʃdzwɔ]	get slaughtered

To argue out this case, I shall use Swahili and English borrowings in Kikuyu.

20.	**SWAHILI**	**KIKUYU**	**GLOSS**
(I)	[mlaŋgo]	[moragɔ]	door
(ii)	[mkate]	[moɣatɛ]	loaf of bread
(iii)	[mgoŋgo]	[moɣɔgɔ]	the back
(iv)	[mkwadzu]	[mokwadzo]	walking stick
(v)	[raŋgi]	[ragi]	paint
(vi)	[ʃumba]	[ʃoba]	house
(vii)	[kitambaa]	[ɣetabaja]	cloth
(viii)	[kikɔmbɛ]	[ɣekɔbɛ]	cup
(ix)	[kitanda]	[ɣetada]	bed
(x)	[ʃundɔ]	[ʃudɔ]	hammer

b.	**ENGLISH**	**KIKUYU**	**GLOSS**
(I)	[haɪlənð]	[haeladi]	highland
(ii)	[kæmp]	[kabe]	camp
(iii)	[lɔndzɪtju:d]	[lɔgitjudi]	longitude
(iv)	[aɪlənd]	[aeladi]	island
(v}	[kæmpein]	[kabeini]	campaign
(vii)	[endzɪn]	[idzini]	engine
(vii)	[Aŋkl]	[anikɔ]	uncle

(viii) [sku:l] [ʃukuru] school

In the data above, there are two processes namely; insertion and deletion. Deletion involves the loss of the nasals before voiced non-continuants, while insertion involves the addition of a vowel in the C C environments. The two processes ensure that all consonant clusters are broken.

Given that all borrowed words adapt to the phonological structure of the borrowing language, and that all consonant clusters in the data have been broken, it follows that Kikuyu does not allow consonant clusters. Njogu's examples therefore, could be better represented as follows:

NJOGU			**GLOSS**
21			
(I)	[ŋgwarɛ]	[gwarɛ]	patridge fowl
(ii)	[keombwa]	[keobwa]	heap
(iii)	[ndwara]	[dwara]	finger nails
(iv)	[ðeɲdzwɔ]	[ðedzwɔ]	get slaughtered

2.5 VOWELS

Kikuyu has a total of seven vowels. As for the consonants, the orthography does not exactly correspond to the phonetic symbols. Below is a tabulated representation of the vowels with their orthographic symbols.

IPA Symbol	Orthographic Representation
i	i
e	ĩ
ɛ	e
u	u
o	ũ
ɔ	o
a	a

To establish the Phonetic status of the vowels, following is a discussion of these vowels giving examples of their occurrence in Word Initial, medial and final position. The examples are presented giving both the phonetic representation and the Kikuyu orthography.

2.5.1 **i**

22 **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[ihede]	ihĩdĩ	bone
(ii)	[ijɛbɛ]	iyembe	mango
(iii)	[ituda]	itunda	fruit
(iv)	[iratаði]	iratathi	paper

b.	**Word Midial**		
(i)	[ɛdia]	endia	sell
(ii)	[ʃina]	cina	burn
(iii)	[ðiga]	thinga	plaster
(iv)	[rida]	rinda	soak

c. **Word final**

(i)	[ʃɔni]	nyoni	bird
(ii)	[gəði]	ngothi	skin
(iii)	[ʃɛki]	nyeki	grass
(iv)	[iɣɔti]	igoti	coat

2.5.2 **e**

23 **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[eka]	ĩka	do
(ii)	[eta]	ĩta	call
(iii)	[era]	ĩra	tell
(iv)	[etea]	ĩtĩa	boast

b. **Word Midial**

(i)	[ɣete]	gĩtĩo	respect
(ii)	[kedo]	kĩdũ	something
(iii)	[ke ʃa]	kĩnya	gourd
(iv)	[dzera]	njĩra	way

c. **Word final**

(i)	[mote]	mũtĩ	tree
(ii)	[ɣete]	gĩtĩ	chair
(iii)	[ihede]	ihĩdĩ	bone
(iv)	[gere]	gĩrĩ	warthog

2.5.3 **ɛ**

24. **Examples**

a. **Word Initial**

(i)	[ɛdia]	endia	sell
(ii)	[ɛʃora]	enyūra	break
(iii)	[ɛdza]	enja	dig
(iv)	[ɛda]	enda	love

b. **Word Midial**

(i)	[mɛria]	meria	swallow
(ii)	[tɛma]	tema	cut
(iii)	[ɣɛmia]	gemia	colour
(iv)	[kɛna]	kena	become happy

c. **Word Final**

(i)	[gorwɛ]	ngūrwe	pig
(ii)	[rwɛrɛ]	rwere	side
(iii)	[motwɛ]	mūtwe	head
(iv)	[bwɛ]	mbwe	fox

2.5.4 **u**

25 **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[uma]	uma	come out
(ii)	[uruɣa]	uruga	stir
(iii)	[una]	una	break
(iv)	[uɣa]	uga	say

b. **Word Midial**

(i)	[tuða]	tutha	cut
(ii)	[monugɔ]	mũnungo	smell
(iii)	[motumia]	mũtumia	woman
(iv)	[dutu]	ndutu	jigger

c. **Word final**

(i)	[motu]	mũtu	flour
(ii)	[ɣutu]	gutu	rust
(iii)	[dzɔɣu]	njogu	elephant
(iv)	[roðadzu]	rũthanju	small stick

2.5.5 **o**

26. **Examples**

a. **Word Initial**

(i)	[ora]	ũra	run away
(ii)	[oma]	ũma	become hard/dry
(iii)	[ota]	ũta	bow
(iv)	[oɣɔ]	ũgo	witch craft

b. **Word Midial**

(i)	[mote]	mũtĩ	tree
(ii)	[ɣora]	gũra	buy
(iii)	[modo]	mũndũ	person
(iv)	[moðuri]	mũthuri	man

c. **Word final**

(i)	[diro]	ndirũ	bad luck
(ii)	[ʃoʃo]	cũcũ	grandmother
(iii)	[iðato]	ithatũ	three

(iv)	[goko]	ngũkũ	hen

2.5.6 ɔ

27. **Examples**

a.	**Word Initial**	**Orthography**	**Gloss**
(i)	[ɔna]	ona	see
(ii)	[ɔja]	oya	take
(iii)	[ɔdza]	onja	become crippled
(iv)	[ɔga]	onga	suck

b.	**Word Midial**		
(i)	[tɔga]	tonga	become rich
(ii)	[dɔɣɔ]	ndogo	smoke
(iii)	[tɔɣa]	toga	to smoke
(iv)	[kɔʃa]	konya	uproot

c.	**Word final**		
(i)	[motuɣɔ]	mũtugo	mannerism
(ii)	[kehɛɔ]	kĩheo	present
(iii)	[morɔmɔ]	mũromo	lip
(iv)	[ɣeðɔmɔ]	gĩthomo	education

2.5.7 a

28. **Examples**

a.	**Word Initial**		
(i)	[aka]	aka	build
(ii)	[aria]	aria	talk
(iii)	[akana]	akana	go up in flames
(iv)	[aɣana]	agana	become naughty

b. **Word Midial**

(i)	[mami]	mami	mother
(ii)	[ʃai]	cai	tea
(iii)	[ganɔ]	ngano	wheat
(iv)	[gai]	Ngai	God

c. **Word final**

(i)	[itua]	itua	decision
(ii)	[tuða]	tutha	break
(iii)	[kama]	kama	milk
(iv)	[raða]	ratha	shoot

From the data above, all the vowels may occur in any of the three positions; that is, word initial, midial and final. Therefore Kikuyu consists of seven vowel phonemes. The vowel phonemes can also be described in terms of distinctive features.

DISTINCTIVE FEATURE MATRIX FOR KIKUYU VOWEL PHONEMES

	i	e	ɛ	o	ɔ	u	a
High	+	-	-	-	-	+	-
Back	-	-	-	+	+	+	-
Low	-	-	-	-	-	-	+
Tense		+	-	+	-		

2.6 VOWEL CLUSTERS

Kikuyu allows a vowel cluster of two. This cluster can either be V_1V_1 ; identical vowels or V_1V_2; different vowels. While almost any vowel can follow any other, not all sequences are possible.

2.6.1 PERMISSIBLE SEQUENCES

V_1V_1

ii

29.a)	**Examples**	**Orthography**	**Gloss**
(i)	[tiira]	tiira	support
(ii)	[ðiire]	thiirĩ	debt
(iii)	[monafii]	mũnabii	prophet

ee

b.	**Examples**	**Orthography**	**Gloss**
(i)	[teeri]	tĩĩri	soil
(ii)	[reetwa]	rĩĩtwa	name
ɛɛ.	**Examples**	**Orthography**	**Gloss**
(i)	[kɛɛda]	keenda	nine
(ii)	[moðɛɛ]	mũthee	old man

uu

d.	**Examples**	**Orthography**	**Gloss**
(i)	[huuha]	huuha	blow
(ii)	[kuura]	kuura	to rain

oo

e.	**Examples**	**Orthography**	**Gloss**
(i)	[mooði]	mũũthi	player
(ii)	[ɣooka]	gũũka	come

f. ɔɔ

Examples		**Orthography**	**Gloss**
(i)	[kɔɾa]	koora	small frog
(ii)	[xɔʃa]	gooca	praise

Here, we emphasise that Kikuyu allows all V_1V_1 sequences. Amstrong (1940) presents this phenomenon as vowel length. Infact she states that:

"all the vowels of Kikuyu may occur long or short".

Some of the examples she gives are as follows: (she uses a V_1V_1 sequence to represent length)

30.		**Gloss**		**Gloss**
(i)	[koora]	uproot	[kora]	grow
(ii)	[haata]	sweep	[hata]	get stuck
(iii)	[ðaaka]	play	[ðaka]	beautiful
(iv)	[gaara]	field mouse	[gara]	roasted maize
(v)	[ɣeekɔ]	pipe(smoking)	[xekɔ]	dirt

She claims that these words differ in vowel length only implying that length is Phonemic. Similarly Mutahi (1977) argues for vowel length as phonemic. Some of his examples are as follows:

31.		Gloss		Gloss
(i)	[ri:ka]	age group	[rika]	go into water
(ii)	[ka:na]	deny	[kana]	fourth
(iii)	[re:ɔ]	be drunk	[reɔ]	that one (past)

Njogu (1978) in an M.A dissertation agrees with Amstrong and Mutahi, and states that Kikuyu has fourteen vowels; seven short and seven long. However from ~~out~~ the V_1V_1 data, we note that Kikuyu allows identical vowels in a sequence. These vowels are discrete with individual tones, and are thus not single long vowels. To elaborate more on this let us place tone on Armstrong and Mutahi's examples.

Amstrong

32.		Gloss		Gloss
(i)	[kòòrà]	uproot	[kórá]	grow
(ii)	[hààtà]	sweep	[hátá]	get stuck
(iii)	[ðààkà]	play	[ðáká]	beautiful
(iv)	[gààrà]	fieldmouse	[gárá]	roasted maize
(v)	[xèèkɔ̀]	smoking pipe	[xékɔ́]	dirt

Mutahi

33.

(i)	[rì:kà]	age group	[ríká]	go into water
(ii)	[kà:nà]	deny	[kánà]	fourth
(iii)	[rɛ̀ɔ́]	be drunk	[rɛ́ɔ́]	that one (past)

Each of these authors incorrectly impose English vowel analysis on Kikuyu. Thus, they miss one of the basic elements of the phonology; that is tone. Their examples not only differ in what they refer to as vowel length but also tone, since each vowel in Kikuyu

carries its own distinctive tone. Therefore, the pairs of words they present do not pass as minimal pairs to justify vowel length.

V_1V_2

ie

34.a.	**Examples**	**Orthography**	**Gloss**
(i)	[ðie]	thiĩ	go
(ii)	[nie]	niĩ	me

iɛ

b.	**Examples**		
(i)	[diniɛ]	ndiniɛ	that I cut
(ii)	[ʃɛdiɛ]	nyendiɛ	that I sell

iu

c.	**Examples**		
(i)	[kiuɣɔ]	kiugo	word
(ii)	[kiuɣa]	kiuga	gourd

io

d.	**Examples**		
(i)	[kahio]	kahiũ	knife
(ii)	[morio]	mũriũ	son

iɔ

e.	**Examples**		
(i)	[iriɔ]	irio	food
(ii)	[ðiɪra]	thiora	twist

ia

f.	**Examples**		
(i)	[aria]	aria	talk
(ii)	[ɛdia]	endia	sell

35 **ei**

a..	**Examples**	**Orthography**	**Gloss**
(i)	[ɣeðei]	gĩthĩĩ	maize mill
(ii)	[reiðia]	rĩithia	look after animals

eu

b)	**Examples**		
(i)	[moreu]	mũrĩu	drunkard
(ii)	[reu]	rĩu	now

eo

c)	**Examples**		
(i)	[keora]	kĩũra	frog
(ii)	[ɣeoði]	gĩũthi	game

e ɔ

d)	**Examples**		
(i)	[keɔdzɛ]	kĩonje	disabled person
(ii)	[keɔdɔ]	kĩondo	basket

ɛi

b.	**Examples**	**Orthography**	**Gloss**
(i)	[tɛiðia]	teithia	help
(ii)	[ɣɛiðia]	geithia	greet

ɛo

b.	**Examples**		
(i)	[bɛo]	mbeũ	seed
(ii)	[kɛoka]	keũka	crack

ɛɔ

c.	**Examples**		
(i)	[kehɛɔ]	kĩheo	present
(ii)	[tɛɔ]	teo	be thrown away

ɛa

(i)	[hɛana]	heana	give
(ii)	[tɛana]	teana	loose each others contact

ui

37.

a.	**Examples**	**Orthography**	**Gloss**
(i)	[gui]	ngui	dog
(ii)	[ʃuiðia]	nyuithia	to make drink

uɛ

b.	**Examples**		
(i)	[guɛ]	ngue	that I die
(ii)	[duɛ]	ndue	that I pick

uo

c.	**Examples**		
(i)	[guo]	nguũ	dead
(ii)	[guo]	nguũ	hippo

u ɔ

d.	**Examples**		
(i)	[xuɔkɔ]	guoko	hand
(ii)	[guɔ]	nguo	clothes

ua

e.	**Examples**		
(i)	[ʃua]	nyua	drink
(ii)	[iɣua]	igua	hear

oi

38.

a.	**Examples**	**Orthography**	**Gloss**
(i)	[ɣoiðia]	gũithia	drop
(ii)	[moira]	mũira	witness

oe

b.	**Examples**		
(i)	[roe]	rũĩ	river
(ii)	[iðoerɔ]	ithũĩro	west

ou

c.	**Examples**		
(i)	[tou]	tũu	those(small ones)
(ii)	[hou]	hũu	fallen height (in liquids)

ɔi

39.

a	**Examples**	**Orthography**	**Gloss**
(i)	[gɔi]	ngoi	baby carrier
(ii)	[mohɔi]	mũhoi	begger

ɔɛ

b.	**Examples**		
(i)	[dzɔɛ]	njoe	that I take
(ii)	[nɔɛ]	noe	beans

ai

40. a	**Examples**	**Orthography**	**Gloss**
(i)	[gai]	Ngai	God
(ii)	[ikai]	ikai	cheek

ae

b.	**Examples**		
(i)	[hwae]	hwaĩ	yesterday evening
(ii)	[mae]	maĩ	water

aɛ

c	**Examples**		
(i)	[gaɛ]	ngae	that I share
(ii)	[haɛ]	hae	that I cough

au

d.	**Examples**		
(i)	[hau]	hau	there
(ii)	[ʃau]	nyau	cat

ao

c.	**Examples**		
(i)	[dzao]	njaũ	calf
(ii)	[bao]	mbaũ	wood

aɔ

f.	**Examples**		
(i)	[kwaɔ]	kwao	their place
(ii)	[waɔ]	wao	their (person)

In Kikuyu therefore, we have a large number of permissible sequences. However, there are a few seqeucnes which are not possible. These are the following:

* [ɛe]	* [ea]
* [ɛu]	* [ɔe]
* [oɔ]	* [ɔo]
* [oɛ]	* [ɔa]
* [oa]	* [ɔu]
* [eɛ]	* [ue]

CHAPTER THREE

3.0 PHONOLOGICAL PROCESSES IN NOUNS FORMED FROM VERBES .

3.1 INTRODUCTION

In the previous section, was a discussion of the sound system of Kikuyu as a general background to the study. In this chapter I focus on the phonological processes involved in the derivation of nouns from verbs. During derivation, the nouns take different prefixes which give the nouns a particular class. Since the prefixes involved correspond to those of the noun classes, I present the noun classes below.

NOUN CLASSES

CLASS	SING	PL		EXAMPLE	
1/2	mo-	a-	[moiretu]	'girl'	[airetu]
			[moɣekojo]	'a Kikuyu'	[aɣekojo]
			[moturi]	'blacksmith'	[aturi]
3/4	mo-	me-	[mokwa]	'rope'	[mekwa]
			[mote]	'tree'	[mete]
			[morimo]	'disease'	[merimo]
5/6	i-	ma-	[iðakɔ]	'play'	[maðakɔ]
			[iðadoko]	'box'	[maðadoko]
			[ituda]	'fruit'	[matuda]
	re-		[reetwa]	'name'	[mareetwa]
			[riikɔ]	'cooker'	[mariikɔ]
			[riiðɔ]	'eye'	[maiðɔ]
7/8	ke-	i-	[kehatɔ]	'broom'	[ihatɔ]

			[kedo]	'thing'	[idɔ]
			[kehigɔ]	'gate'	[ihigɔ]
		ʃ-	[keara]	'finger'	[ʃiara]
			[keiba]	'corpse'	[ʃiiba]
			[kɛɔdɔ]	'basket'	[ʃiɔdɔ]
9/10	N	N	[gare]	'leopard'	[gare]
			[ŋɔbɛ]	'cow'	[ŋɔbɛ]
			[ʃogo]	'pot'	[ʃogo]
11/10	ro-	N-	[roko]	'firewood'	[go]
			[roɣanɔ]	'story'	[ŋanɔ]
			[roʃiarɔ]	'generation'	[dziarɔ]
12/13	ka-	to-	[kaana]	'small child'	[twana]
			[kamote]	'small tree'	[tomete]
			[kahee]	'small boy'	[tohee]
14/6	o-	ma-	[odo]	'thing'	[maodo]
			[ota]	'bow'	[mɔta]
			[oðio]	'face'	[mɔðio]
15/6	ko-	ma-	[koɣoro]	'leg'	[maɣoro]
			[ɣoto]	'ear'	[mato]
16/15	ha-	ko-	[hado]	'place'	[kodo]

3.2 GLIDE FORMATION

Glide formation is one of the most common processes in Kikuyu phonology. It is a process that results in the formation of the semi-vowels; glides. Schane (1973) states that:

> "syllable structure processes affect the distribution of consonants and vowels within a word. Consonants may be deleted or inserted... A segment may change minor class features such as a vowel becoming a glide".

The glide is formed in the derivation of agentive, abstract and manner nouns. Agentive nouns are words refering to agency, usually refering to human beings. Let us look at the following examples.

	Underlying	Surface	Gloss
1a)	(i) /mo + aka/	[mwaki]	builder
	(ii) /mo + ɛdia/	[mwɛdia]	seller
	(iii) /mo + ɛða/	[mwɛði]	one who seeks
	(iv) /mo + adeka/	[mwadeki]	writer
	(v) /mo + ɛdza/	[mwɛdzi]	one who digs
	(vi) /mo + ehia/	[mwehia]	sinner
	(vii) /mo + abata/	[mwabati]	climber
	(viii)/mo +ɔta/	[mwɔti]	one warming around a fire
	(ix) /mo + atora/	[mwatori]	one who cuts eg firewood
	(x) /mo + ɔja/	[mwɔi]	one who takes

In these examples we note that the mid vowel [o] in the class 1/2 prefix changes to the glide [w], at the morpheme boundary. The low vowel in the root final position also

changes to a high front vowel, except in cases where we have a verb root ending in [–ia]. In such words, the ending is maintained in the derived noun. In the last example, [x] the semi vowel [j] in the root is deleted, that is, /mo+ ja/ > [mwɔi] (see section 3.4)

Abstract nouns are words referring to entities without physical or practical existence. These words are formed in a number of ways but only two ways are relevant here. One of the ways is by prefixing [o-] to a verb root. Examples include: -

Underlying	**Surface**	**Gloss**
b)(i) /o+ aka/	[waki]	art of building
ii) /o + ɛda/	[wɛdi]	willingness
iii) /o + ehia/	[wehia]	sin
iv) /o + ɛtɛrɛra/	[wɛtɛrɛri]	patience
v) /o + a ða/	[waðɔ]	law
vi) /o + ɛda /	[wɛdɔ]	love
vii) / o + etekia/	[weteki ɔ]	belief
viii) /o +ɔdzɔria/	[wɔdzɔria]	utilization
ix) /o + eka/	[weki]	ability to do something

In these examples the class 14 [o-] prefix changes to the glide [w] when the following segment is a vowel. The final vowel in the newly formed noun also changes. In this case the low vowel either changes to the high vowel [i] or the mid vowel [ɔ]

The second way of forming abstract nouns is by using the prefix [mo-] Below are examples.

Underlying	**Surface**	**Gloss**
C) i) / mo + etea/	[mwetɛɔ]	conceit
ii) /mo + aria /	[mwari ɔ]	voice

iii) /mo + adeka/	[mwadekɔ]	writing
iv) / mo +ɔrɪta/	[mwɔrɪtɔ]	aim

In the data above, like in agentive nouns that take the [mo-] prefix the mid vowel [o], in the prefix changes to a glide. In these abstract nouns the final low vowel changes to the mid vowel [ɔ].

Manner nouns are words that refer to the way or manner of doing something. Consider the following examples.

Underlying	**Surface**	**Gloss**
d)i) /mo + akera/	[mwakerɛ]	manner/way of building
ii) /mo + areria/	[mwareriɛ]	manner/way of talking
iii) /mo + ˙etera/	[mweterɛ]	manner/way of calling
iv) /mo + ɛdzɛra /	[mwɛdzɛrɛ]	manner/way of digging
v) /mo +ɔjɛra /	[mwɔjɛrɛ]	manner/way of lifting
vi) /mo + ɛdɛria/	[mwɛdɛriɛ]	manner/way of selling
vii) /mo + arera/	[mwarerɛ]	manner/way of spreading
viii) /mo + abera/	[mwaberɛ]	manner/way of laying foundation
ix) /mo + ɛðɛra/	[mwɛðɛrɛ]	manner/way of looking for

In the examples above, a glide too is formed at the morpheme boundary. A notable characteristic of manner nouns is the change of the low vowel [a], to the mid vowel [ɛ], in the word final position.

The data presented here illustrates that a glide is always formed at morpheme boundary whenever the vowel [o], precedes another vowel in the initial position of the verb stem. However, there are cases when this process is blocked.

Underlying	Surface	Gloss
e) (i) /mo + una/	[muuni]	one who breaks
(ii) /mo + uɣa/	[muuɣi]	one who says
(iii) /mo + oða/	[mooð i]	player
(iv) /mo + oba/	[moobi]	potter
(v) /mo + ita/	[moiti]	hangman
(vi) /mo + iɣa/	[moiɣi]	one who keeps

In these examples the glide is not formed. In examples e (i) and (ii) the mid vowel [o] in the prefix is raised to [u]; a high back vowel. This is an assimilatory process discussed in section 3.5.1. The final low vowel changes to the high vowel [i] a common change in words referring to human beings. (agentive)

Since [i] and [u] are high vowels – the only high vowels in Kikuyu, the glide is formed whenever the vowel [o] is followed by a non high vowel except [o]. This environment may be specified in the form of a rule as follows.

1.

$$\begin{bmatrix} +\text{syllabic} \\ -\text{high} \\ +\text{back} \\ +\text{tense} \end{bmatrix} \longrightarrow \begin{bmatrix} -\text{syllabic} \\ +\text{back} \end{bmatrix} / \; C_o \_\_\_\_\_ \begin{matrix} V \\ [-\text{high}] \end{matrix}$$

$$\begin{matrix} -\text{high} \\ +\text{back} \\ +\text{tense} \end{matrix}$$

Rule statement

The vowel [o] becomes [w] before a non-high vowel except [o]

3.3 INSERTION

Insertion is a phonological process that involves the addition of segments mainly to break clusters. There are two types of insertion, namely, prothesis and epenthesis. Prothesis is the insertion of segments in word initial position, and epenthesis is the insertion of a segment in any other position. Let us look at the following examples in Kikuyu.

Underlying	Surface	Gloss
2 a) (i) /o + e + aða/	[wejaði]	self rule
(ii) /o + e + anaga/	[wejanagi]	self destruction
(iii) /o + e + ɛda/	[wejɛdi]	selfishness
(iv) /o + e +eta/	[wejeti]	self calling
(v) /o + e +aka/	[wejaki]	self growth (eg materially)
(vii) /mo + e + era/	[mwejerɔ]	one's assumption

The data above illustrates the insertion of the glide [j] at the morpheme boundary, between the first person singular marker {e-} and the following vowel in the verb stems; an example of epenthesis. Thus this insertion breaks the V V cluster. In the example, the glide [w] is also formed, as the /o + e/ sequence, creates an environment for the process. The final vowels in all words have also been raised to either [ɪ] or [ɔ].

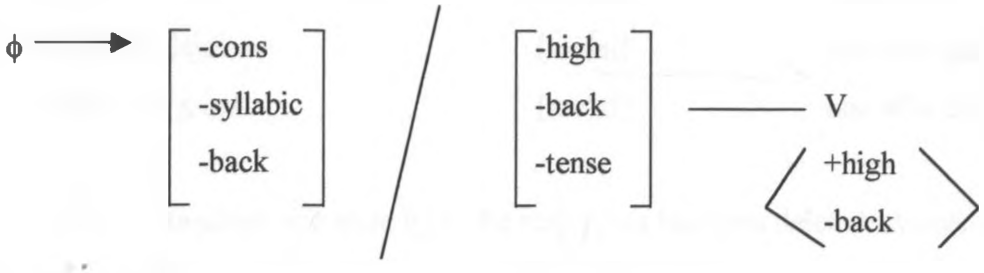
In certain environments, however, the insertion of the glide is blocked.

Underlying	Surface	Gloss
b (i) /o + e + iɣa/	[weiɣi]	self reliance
(ii) /o + e + ira/	[weiri]	feeling of inferiority

(iii) /o + e + ita/ [weiti] suicide

In these examples there is the formation of the glide, and final vowel raising. However, unlike in 2 a) the glide [j] is not inserted. This indicates that the environment for insertion is created when the vowel [e] precedes a vowel in the initial position of a verb stem, except the high front vowel. The phonological rule for insertion is as follows: -

2



Rule statement

The glide [j] is inserted after [e] and before another vowel except [i]

3.4 DELETION

Deletion is a process that involves the loss of segments. Hyman (1975) says,

> "In general consonants are deleted and vowels inserted to facilitate natural syllabification"

The process of deletion can either be apocope or syncope. Apocope is the loss of a segment at the end of a word, while syncope is the loss of a segment or segments from some part of a word other than the end. Consider the following examples.

Underlying	Surface	Gloss
3 a) (i) /mo + hɔja/	[mohɔi]	begger
(ii) /mo + ɣaja/	[moɣai]	one who shares
(iii) /mo + kaja/	[mokai]	one who screams (eg for help)
(iv) /mo +ɔja/	[mwɔi]	one who takes/lifts
(v) /mo + kija/	[mokii]	one who prepares (eg fermented porridge)
(vi) /mo + koja/	[mokoi]	starter (of a song)
(vii) /mo + ʃaja/	[moʃai]	one who pants
(viii) / mo +ɣ ija/	[moɣii]	one who disturbs

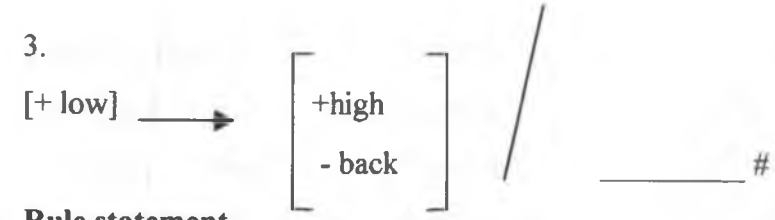
In the data given, the glide [j] in the verb roots has been deleted. Vowel raising also occurs; in this case the low vowel changes to the high front vowel since the new words refer to human beings – class1/2.

Here vowel raising is an important change for it creates an environment for glide deletion; a case of feeding and bleeding. A rule A feeds rule B, if rule A acts as an input for the application of rule B. In such a case, rule B is a bleeding rule. In the examples above, the environment for deletion is created when the final vowel is raised to a high front vowel. Thus the vowel-raising rule is a feeding rule for the deletion rule. To confirm this consider the following examples.

Underlying	Surface	Gloss
b) (i) /i + hɔja/	[ihɔja]	prayer
(ii) /ro + kaja/	[rokajɔ]	a scream
(iii) /re + ɔj + ana	[reɔjanɔ]	lifting of each other
(iv) /mo +ɣ ij + ana/	[moɣijanɔ]	disturbance
(v) /mo + kija/	[mokijɔ]	porridge (prepared after fermentation

In these examples, the final low vowel changes to [a] and [ɔ], thus the glide is not deleted. This supports the assertion that the glide is deleted when it comes before a final high front vowel. Since vowel raising plays a vital role in glide deletion, below are the two phonological rules in their order of application.

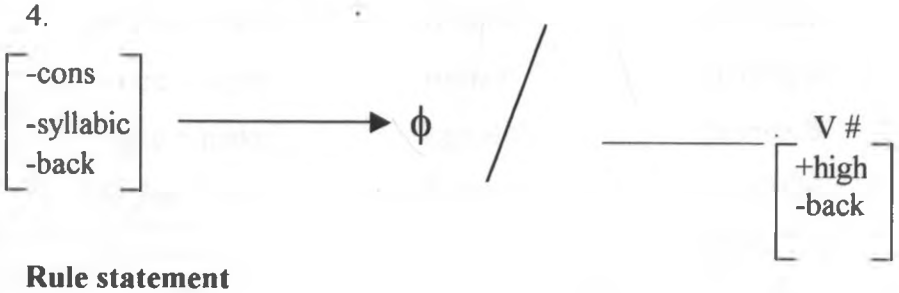
3.



Rule statement

The low vowel becomes [i] in word final position

4.



Rule statement

The glide [j] is deleted before the high vowel [i]

Earlier, glide insertion was discussed and determined that the process is geared towards natural syllabification. However, the glide deletion rule, rule 4, works against the preferred syllable structure, resulting in a C V V structure. This is a case of a phonetically preferred structure in opposition to another phonetically preferred structure. It further explains why the glide is not inserted in data 2b.

3.5 ASSIMILATION

Assimilation is a process whereby a segment acquires the features of a neighbouring segment. Consider the following examples.

Underlying	Mid- underlying	Surface	Gloss
4 a) (i) /mo +rɔɣa/	/morɔɣi/	[m^{w}or^{w}ɔɣi]	witch
(ii) /mo + tua/	/motui/	[m^{w}ot^{w}ui]	one who picks
(iii) /mo + twara/	/motwari/	[m^{w}otwari]	driver
(iv) /mo + kua/	/mokui/	[m^{w}ok^{w}ui]	one who carries alot
(v) /mo + rea/	/morei/	[m^{w}orei]	one who eats a lot
(vi) /mo + rema/	/moremi/	[m^{w}uremi]	farmer
(vii) /ro + ɣana/	/roɣanɔ/	[r^{w}oɣan^{w}ɔ]	story
(viii) /ro + raʃia/	/roraʃiɔ/	[r^{w}oraʃiɔ]	dowry
(ix) /ro + iriɣa/	/roiriɣɔ/	[r^{w}oiriɣ^{w}ɔ]	fence
(x) /ke + maka/	/kemakɔ/	[kemak^{w}ɔ]	astonishment
(xi) /ke + rɔta/	/kerɔtɔ/	[ker^{w}ɔt^{w}ɔ]	dream
(xii) /ke + rera/	/kererɔ/	[kerer^{w}ɔ]	crying

In the examples above, all the consonants that come before a round vowel are produced with some degree of lip rounding; a process referred to as labialization. The final low vowels also change after norminalization. In this case, to the high front vowel [i] and the mid vowel [ɔ]. The phonological rule for labialization is as follows.

5.

$$C \longrightarrow [+\text{round}] \quad / \quad \underline{\qquad} \quad \begin{matrix} V \\ [+\text{round}] \end{matrix}$$

Rule statement

A consonant becomes labialized before a round vowel.

Let us look at another set of data, below

Underlying	Mid-underlying	Surface	Gloss
b) (i) /mo + tura/	/moturi/	[mõturi]	smith
(ii) /mo + ɣɛna/	/moɣɛni/	[mõɣɛ̃nĩ]	visitor
(iii) /mo + raða/	/moraði/	[mõraði]	shooter
(iv) /mo + tɛɣa/	/motɛɣɔ/	[mõtɛɣɔ]	trap
(v) /mo +nuga/	/monugɔ/	[mõnũgɔ]	smell
(vi) /mo + rema/	/moremi/	[mõrẽmĩ]	farmer
(vii) /mo + rɛma/	/mọrɛmi/	[mõrɛ̃mĩ]	naughty person
(viii) /o + ɣɛma/	/oɣɛmu/	[oɣɛ̃mũ]	colourfulness
(ix) /o + rutana/	/orutani/	[orutãnĩ]	teaching
(x) /i + ki ʃa/	/iki ʃa/	[ikĩ ʃã]	sole

In the data above, all the vowels neighbouring the nasal consonants become nasalized by virtue of their being contiguous to the nasal segments. This process is referred to as nasalization, and may be represented in the form of a phonological rule as follows.

6

$$V \longrightarrow [+\text{nasal}] \;/\; \begin{matrix} *C \\ [+\text{nasal}] \end{matrix}$$

Rule statement

A vowel becomes nasalized when neighbouring a nasal segment.

3.5.1 VOWEL ASSIMILATION

In certain environments, a vowel may assimilate the features of another vowel. Schane (1973) states that:

..."The vowel of one syllable may become more like the vowel of some other syllable."

The major difference between assimilatory rules affecting vowels and those affecting consonants is that while in consonants no cases of total assimilation exist, in vowels we have some. Examples include:

Underlying	Surface	Gloss
C (i) /mo + una/	[muuni]	one who breaks
(ii) /mo + uma/	[muumi]	one who goes out
(iii)/mo+uɣa/	[muuɣi]	one who says
(iv) /ro + una/	[ruunɔ]	hem

In these examples, while the final vowel is raised to a high or mid vowel, the vowel [o] in the prefix assimilates all the features of the following high back vowel at morpheme boundary. This is a case of total assimilation. The phonological rule for this phenomenon is as ~~in the next page~~. follows.

7.

$$\begin{bmatrix} -\text{high} \\ +\text{back} \\ -\text{low} \\ +\text{tense} \end{bmatrix} \longrightarrow [+\text{high}] \; / \; C \_\_\_\_ V \begin{bmatrix} +\text{high} \\ +\text{back} \end{bmatrix}$$

Rule statement

The vowel [o] becomes [u] before [u]

3.6 DISSIMILATION

Dissimilation is a process whereby consonants become less similar. It contradicts the motivations of assimilation which aim at making sounds more alike. Mutahi (1977) states that:

> "The motivations for dissimilation have been said to be both conceptual and articulatory. The first involves the efforts by the speaker to make two sounds more distinct while the second involves the inability by the speaker to produce two sounds in a sequence."

Consider the following examples.

	Underlying	Surface	Gloss
5 a)	(i) /ke + kena/	[ɣekɛnɔ]	happiness
	(ii) /ke + tea/	[ɣeteɔ]	respect
	(iii) /ke + taha/	[ɣetahi]	something for drawing (eg water)
	(iv) /ke + toma/	[ɣetomi]	reason
	(v) /ke + kuneka/	[ɣekunekɔ]	cover
	(vi) /ke + kunora/	[ɣekunorɔ]	opener
	(vii) /ke + kɔba/	[ɣekɔbɔ]	credit
	(viii) /ke + ʃanora/	[ɣeʃanori]	comb
	(ix) /ke + fera/	[ɣeferi]	stirring stick

In the examples above, the voiceless segment [k] in the prefix changes to the voiced continuant

[ɣ]. This happens when the following consonant in the verb stem initial position is a voiceless segment. This phenomenon is referred to as Dahls law. There are segments however, that violate Dahls law. Examples include.

Underlying	**Surface**	**Gloss**
b) (i) /ke +ðɔma/	[ɣeðɔmɔ]	education
(ii) /ke +ðima/	[ɣeðimɔ]	measurement
(iii) /ke + ðedzera/	[ɣeðedzerɔ]	slaughterhouse
(iv) /ke + hata/	[kehatɔ]	broom
(v) /ke + hɔta/	[kehɔtɔ]	fact
(vi) /ke + hɔnia/	[kehɔnia]	what heals (eg medicine)
(vii) /ke + hɛha/	[kehɛho]	a whisper
(viii) /ke + higa/	[kehigɔ]	gate

In examples (i) – (iii), [ð] behaves like a voiceless segment resulting to the change of [k] to [ɣ] In examples (iv) – (viii), on the other hand, the voiceless segment [h] behaves like a voiced segment. Thus, the [k] in the prefix does not change. These two cases may be considered as exceptions to Dahls law. The phonological rule will therefore be as follows.

8.

$$\underset{\begin{bmatrix} -voice \\ +high \\ +back \end{bmatrix}}{C} \longrightarrow [+voice] \;/\; \# \;\_\_\_\_\; V \underset{[-voice]}{C}$$

$$\left\langle \begin{matrix} ð \\ h \end{matrix} \right\rangle$$

Rule statement

[k] becomes voiced in word Initial position when the following consonant in the stem is voiceless except [ð] and [h].

3.7 CONSONANT STRENGTHENING

Consonant strengthening is a phonological process involving two changes; namely voicing, and defricativization. Consider the following examples.

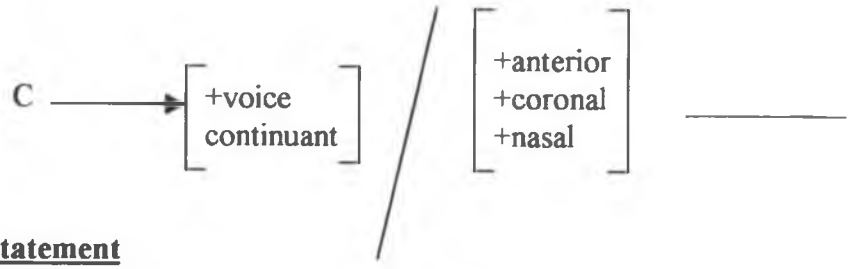
Underlying	Surface	Gloss
6.		
(i) /n + ʃɔka/	[dzɔkɔ]	a return
(ii) /n + ʃina/	[dzinɔ]	roast meat
(iii) /n + ʃama	[dzamɔ]	tasting
(iv) /n + ʃuka/	[dzuko]	gossip
(v) /n + ʃuha/	[dzuhɔ]	swinging
(vi) /n + ʃiara/	[dziarɔ]	generation
(vii) /n + roɣa/	[doɣɔ]	jumping
(viii)/n + rea/	[dea]	party
(ix) /n + ɣɛrɛkania/	[gɛrɛkanɔ]	parable
(x) /n + ɣɛra/	[gɛrɔ]	disaster
(xi)/n + ɣaja/	[gajɔ]	a share
(xii)/n + ɣarora/	[garorɔ]	mass of cut bushes
(xiii)/n + ku ʃa/	[gu ʃo]	a pinch
(xiv)/n + kiri ʃana/	[giri ʃanɔ]	dispute

(xv)/n + kima/	[gimɔ]	mashed food
(xvi)/n + kada/	[gadɔ]	dough
(xvii)/n + keda/	[gedɔ]	something woven
(xviii)/n + tu ʃa/	[du ʃɔ]	theft
(xix)/n + tuma/	[dumɔ]	a stitch
(xx)/n + tɤa/	[dɤɔ]	smoke
(xxi)/n + tugata/	[dugata]	servant

In the above examples, when the nasal is prefixed to the consonants [r, k, t] they become voiced stops. This process is referred to as strengthening. After strengthening, the nasal is deleted. The final low vowels in the stems also change to [o] and [ɔ] except in 6 (vii) and (xxi) where the vowel is maintained. The phonological rules for these phenomena are as follows in the order of application.

Strenthening rule

9

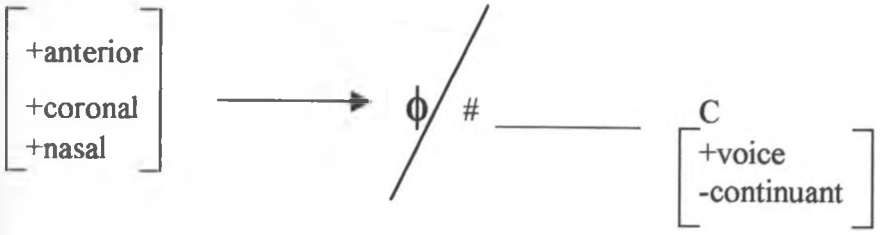


Rule statement

A consonant becomes a voiced stop after the nasal [n].

[n] deletion rule

10



Rule statement

The nasal [n] is deleted before a voiced stop.

CHAPTER FOUR

4.0 PHONOLOGICAL PROCESSES IN ADJECTIVES FORMED FROM VERBS

4.1 INTRODUCTION

As mentioned earlier Kikuyu adjectives can be derived from verbs, although such adjectives are not as numerous as the nouns. The derived adjectives usually take the class prefix of the nouns they are describing. These prefixes are shown in section 3.1. In this section I shall focus on the phonological processes involved in the derivation of adjectives from verbs.

4.2 GLIDE FORMATION

Glide formation is a process that involves the formation of a semi-vowel; a glide. Consider the following examples.

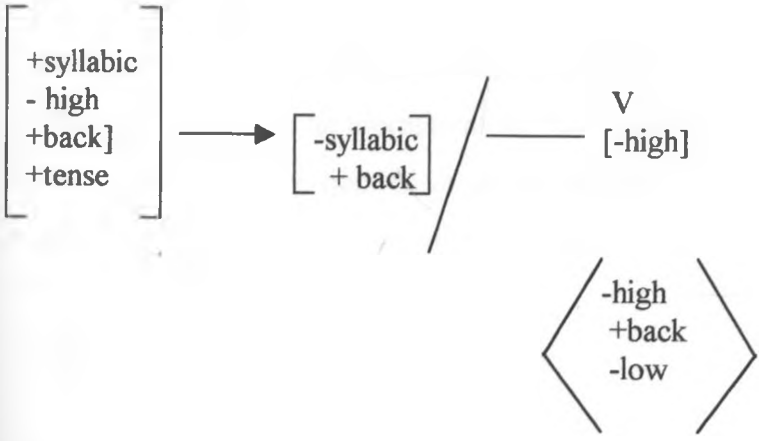
		Underlying	Surface	Gloss
1 a	i)	/mo +ɔdza/	[mwɔdzu]	crippled
	ii)	/mo + aɣana/	[mwaɣanu]	naughty
	iii)	/mo + aɣera/	[mwaɣeru]	good (person)
	iv)	/mo+ aðeka/	[mwaðeki]	obedient
	v)	/mo + etea/	[mwetei]	proud
	vi)	/mo + ɔra/	[mwɔru]	rotten

In the above examples, when {mo} is prefixed to a vowel initial stem, the vowel [o] changes to a glide. The final vowels also change to [i] and [u]. There are instances however when glide formation is blocked.

Underlying		Surface	Gloss
b) i)	/mo + ira/	[moiro]	black
ii)	/mo + ora/	[mooru]	lost
iii)	/mo + oma/	[moomo]	hard
iv)	/mo + ura/	[muuru]	rainy

In these examples the glide is not formed. This occurs when the initial vowel in the stem is [i],[o] or [u] The phonological rule for glide formation may therefore be written as follows:

1.



Rule Statement

The back vowel [o] becomes [w] before a non-high vowel except [o]

4.3 INSERTION

Insertion is a phonological process, which involves the addition of a segment or segments in a word. Let us look at the following examples.

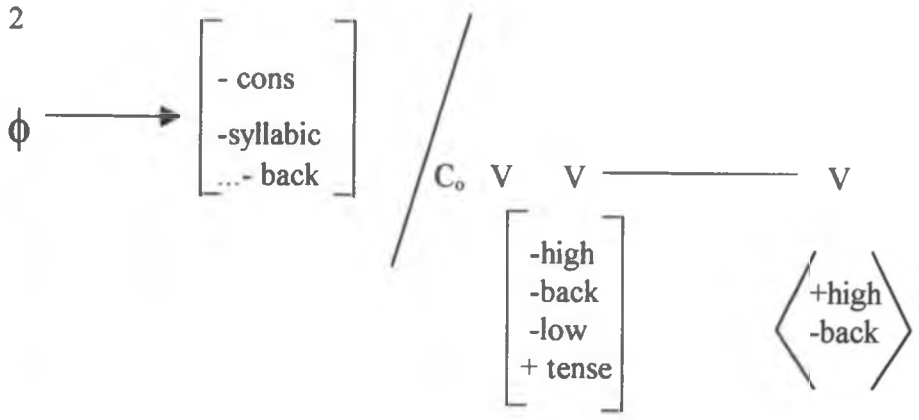
Underlying	Surface	Gloss
2 a)		
i) /mo + e + aba/	[mwejabi]	proud
ii) /mo + e+ anaga/	[mwejanagi]	extravagant
iii) /mo + e+ ɛda/	[mwejɛdi]	selfish
iv) /mo + e +aria/	[mwejaria]	defensive
v) /mo + e + aka/	[mwejaki]	up coming
vi) /mo + e + aða/	[mwejaði]	independent

In these examples the glide [j] is inserted between the vowels at stem boundary and the glide [w] is also formed. This is a case of rule ordering. In chapter two, it was noted that Kikuyu allows a vowel cluster of two. In the data above there is a sequence of three vowels in the underlying representation, thus prompting insertion, to break the vowel cluster. After the insertion the vowel [o] becomes a glide. There is an environment however, when the glide insertion is blocked.

Underlying	Surface	Gloss
b) (I) /mo + e + ima/	[mweimu]	mean on oneself
(ii) /mo + e + iɣa/	[mweiɣu]	settled

In these examples the glide is not inserted. This occurs when the vowel in the initial position of the stem is [i] since the two segments [j] and [i] share similar features, that is, [+ high] [- back]. The glide [w] is however formed, reducing the three vowel cluster to two. The two rules, glide insertion and glide formation may be written as follows in their order of application.

2

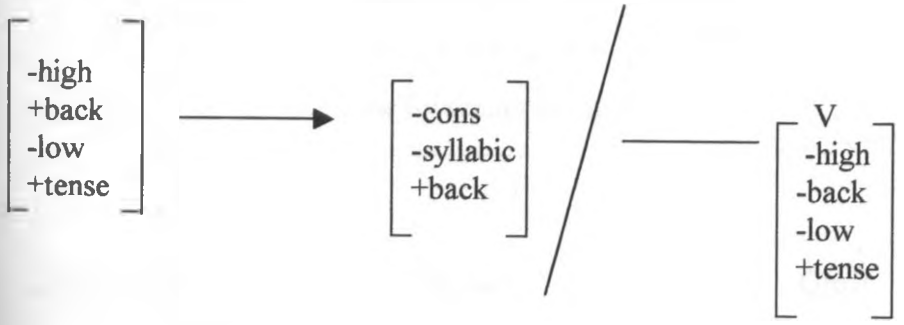


Rule statement

The glide [j] is inserted after two vowels; the latter being [e], and before a stem with an initial vowel except [i]

3

V



Rule statement

The vowel [o] becomes a glide; [w], in the environment before [e]

4.4 DELETION

Deletion is the opposite of insertion and it involves the loss of a segment or segments. Consider the following examples

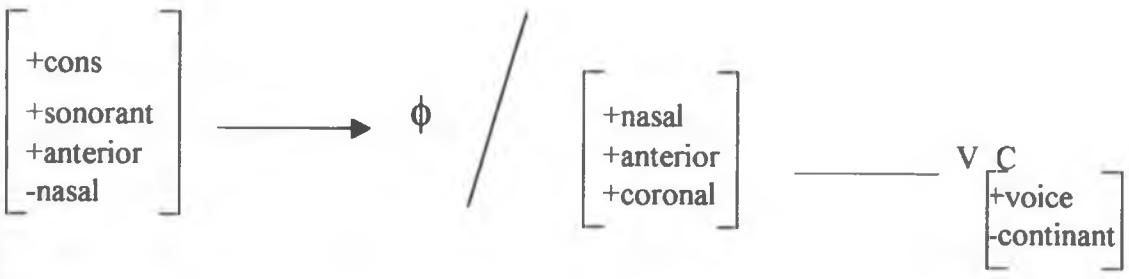
Underlying	Surface	Gloss
3 a) (i) /n + roma/	[nomu]	firm
(ii)/n + rɛma/	[nɛmu]	naughty
(iii)/n + rogara/	[nogaro]	straight
(iv)/n + rama/	[namɛ]	woven
(v)/n + roga/	[nogɛ]	without curves or bends
(vi)/n + rema/	[nemɛ]	cultivated
(vii)/n + ruma	[numɛ]	cursed
(viii)/n + rida/	[nidɛ]	soaked

In the data above when the nasal is prefixed to the stems with [r] in the initial position, the [r] is deleted. The final vowels also change to [u] [o] and [ɛ]. To verify the environment for deletion let us look at the following examples.

Underlying	Surface	Gloss
b) (i) /n + rita/	[ditu]	foolish
(ii) /n + rora/	[doro]	bitter
(iii) /n + rika/	[diku]	deep
(iv) /n + raiha/	[daihu]	long
(v) /n + roka/	[doku]	loose
(vi) /n + rɤta/	[dɤtu]	rusted

In these examples when the nasal is prefixed to the stem, there is a different change. The [r] becomes [d] and the nasal is deleted. This occurs when the following consonant in the stem is voiceless and/or a continuant. Thus the [r]- deletion rule may be written as follows:

4



Rule statement

[r] is deleted after a nasal when the following consonant in the stem is a voiced non-continant.

4.5 ASSIMILATION

Assimilation is a phonological process whereby a segment acquires the features of a neighbouring segment. Let us look at the following examples.

4 a)	Underlying	Mid-underlying	Surface	Gloss
(i)	/mo + hɛha/	/mohɛhu/	[mõhɛhu]	cold
(ii)	/mo + nora/	/monoru/	[mõnõru]	fat
(iii)	/mo + ðena/	/moðenu/	[mõðẽnũ]	poor
(iv)	/mo + hɔra/	/mohɔru/	[mõhɔru]	cold
(v)	/mo + hɔha	/mohɔhu/	[mõhɔhu]	weathered
(vi)	/mo + ijora/	/moijoru/	[mõijoru]	full
(vii)	/mo + rita/	/moritu/	[mõritu]	foolish

(viii)	/n + rogara/	/nogaro/	[nõgaro]	straight
(ix)	/n + rama/	/namɛ/	[nãmɛ̃]	woven
(x)	/n + roga/	/nogɛ/	[nõgɛ]	without curves
(xi)	/n + roma/	/nomu/	[nõmũ]	firm
(x)	/n + ruma/	/numɛ/	[nũmɛ̃]	cursed
(xiii)	/n + aboka/	/ʃaboku/	[ʃãboku]	worn out
(xiv)	/n + ɛʃoka/	/ʃɛʃoku/	[ʃɛ̃ʃõku]	broken
(xv)	/n + oma/	/ʃomo/	[ʃõmõ]	hard
(xvi)	/n + aba/	/ʃabɛ/	[ʃãbɛ]	spread out
(xvii)	/n + ɣɛma/	/ŋɛmu/	[ŋɛ̃mũ]	beautiful
(xviii)	/n + ɣuma/	/ ŋumu/	[ŋũmũ]	dump
(xix)	/n + ɣɛmia/	/ ŋɛmiɛ/	[ŋ ɛ̃mĩɛ]	coloured
(xx)	/n + ɣada/	/ ŋadu/	[ŋãdu]	gone bad
(xxi)	/n + ɣuda/	/ ŋudu/	[ŋũdu]	rusted/rusty

In the data above, all the vowels neighbouring a nasal segment in the mid-underlying representation have been conditioned by the nasals to acquire nasality; a process referred to as nasalization. The phonological rule for this phenomenon is as follows.

5

$$[+\text{syllabic}] \longrightarrow [+\text{nasal}] \;/\; \underset{[\text{nasal}]}{*\,C}$$

Rule statement

A vowel becomes nasalized when neighbouring a nasal consonant.

In other environments a different kind of assimilation occurs. Consider the following examples.

Underlying	Mid-underlying	Surface	Gloss
b) (i) /mo + rwara/	/morwaru/	[$m^{w}orwar^{w}u$]	ill
(ii) /mo + nɔɣa/	/monɔɣu/	[$m^{w}on^{w}ɔɣu$]	tired
(iii) /mo + keɣa/	/mokeɣu/	[$m^{w}oke\gamma^{w}u$]	foolish
(iv) /mo + tɔga/	/motɔgu/	[$m^{w}ot^{w}ɔg^{w}u$]	rich
(v) /mo + hɹɛra/	/mohɹɛru/	[$m^{w}oh^{w}ɔrɛr^{w}u$]	calm
(vi) /ro +tuha/	/rotuhu/	[$r^{w}ot^{w}uh^{w}u$]	blunt
(vii) /ro +rika/	/roriku/	[$r^{w}orik^{w}u$]	deep
(viii)/n + oma/	/ʃomo/	[$\int^{w}om^{w}o$]	hard
(ix) /n + rora/	/doro/	[$d^{w}or^{w}o$]	bitter

In these examples, all consonants preceding round vowels in the mid-underlying representation, are produced with some secondary degree of lip rounding. This process is referred to as labialization. The phonological rule for labialization is as follows:

6.

$$[+\text{cons}] \longrightarrow [+\text{round}] \;/\; \underline{\quad\quad} \; \begin{matrix} V \\ [+\text{ round}] \end{matrix}$$

Rule statement

A consonant becomes labialized before a round vowel.

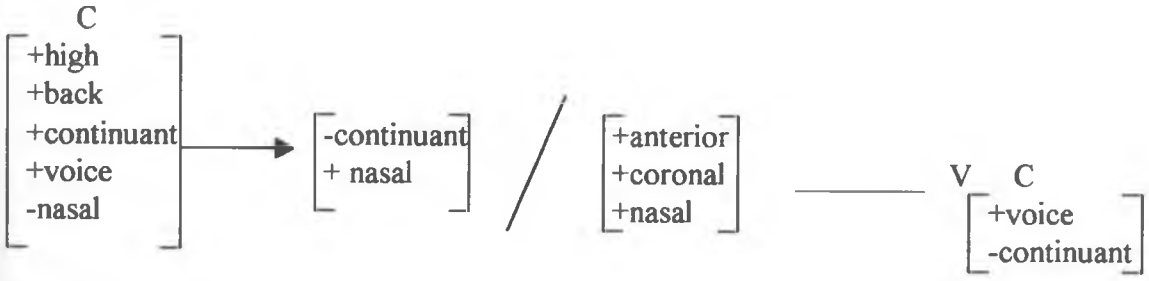
4.6VELARIZATION

In certain environments a back segment may be conditioned by a neighbouring segment to become a high back nasal. This involves the lowering of the velum to enable air to escape through the nose; a process referred to as velarization. Consider the following examples.

Underlying		Surface	Gloss
5 (i)	/n + ɣɛma/	[ŋɛmu]	beautiful
(ii)	/n + ɣana/	[ŋanɛ]	praised
(iii)	/n + ɣuma/	[ŋumu	dump
(iv)	/n + ɣuda/	[ŋudu]	rusty
(v)	/n + ɣada/	[ŋadu]	gone bad
(vi)	/n + ɣɔma/	[ŋɔmu]	on strike
(v)	/n + ɣɛmia/	[ŋɛmiɛ]	coloured

In these examples, while the final low vowels become [u] and [ɛ], the back continuant [ɣ] is velarized to [ŋ]. This occurs after prefixing the nasal to stems with [ɣ] in the initial position, and when the following consonant in the stem is a voiced non-continuant. The nasal [n] is then deleted. The phonological rule for velarization as below.

7



Rule statement

The back consonant [ɣ] in the stem initial position, becomes [ŋ] after a nasal, when the following consonant in the stem is a voiced non-continuant.

4.7 DISSIMILATION

Dissimilation is the opposite of assimilation. In dissimilation sounds become more unlike each other, either because of the problem of producing two similar sounds in close

positions or the need to make the two sounds more distinct. Consider the following examples

Underlying	**Surface**	**Gloss**
6.		
a) (i) /ke + kena/	[ɣekenu]	happy
(ii) /ke + kora/	[ɣekoro]	old
(iii) /ke + tɔga/	[ɣetɔgu]	rich
(iv) /ke + tuha/	[ɣetuhu]	blunt
(v) /ke + keɣa/	[ɣekeɣu]	foolish
(vi) /ke + ʃina/	[ɣeʃinɛ]	roasted
(vii)/ke + ʃama/	[ɣeʃamu]	with taste
(viii)/ke + ʃura/	[ɣeʃuru]	burnt
(ix) /ke + fuða/	[ɣefuðu]	rotten

In the data above, the voiceless segement [k] in the prefix becomes [ɣ]. This happens when the initial consonant in the stem is voiceless. The final low vowels also change to [u] [o] and [ɛ]. Let us consider more data when the initial consonant in the stem is voiced.

Underlying	**Surface**	**Gloss**
b) (i) /ke + ɣɛma/	[keɣɛmu]	beautiful
(ii) /ke + ɣada/	[keɣadu]	gone bad (eg food)
(iii) /ke + ɣuma/	[keɣumu]	dump
(iv) /ke + maka/	[kemaku]	astonished
(v) /ke + nora/	[kenoru]	fat
(vi) /ke + nuga/	[kenugu]	smelly
(vii) /ke + ɲika/	[keriku]	deep
(viii)/ke + ɲɔta/	[kerɔtu]	rusty
(ix) /ke + roka/	[keroku]	detached

In these examples, the [k] does not change, since the stem initial consonant is voiced. The final low vowel however, becomes [u]. There are cases though, when the dissimilation process is blocked.

Underlying	Surface	Gloss
C (i) /ke + hɔha/	[kehɔhu]	weathered
(ii) /ke + hɛha/	[kehɛhu]	cold
(iii) /ke + hioha/	[kehiohu]	hot
(iv) /ke + ðoka/	[ɣeðoku]	bad
(v) /ke + ðɛra/	[ɣeðɛru]	clean
(vi)/ke + ðakara/	[ɣeðakaru]	good looking

In these examples, when the stem initial consonant is [h]; a voiceless segment, the [k] does not change. On the other hand when the stem initial consonant is [ð]; a voiced segment, the [k] becomes voiced. The two sounds [h] and [ð], violate the rule for dissimilation. Thus, the phonological rule is as follows.

8

$$\begin{bmatrix} +\text{cons} \\ +\text{high} \\ +\text{back} \\ -\text{voice} \\ -\text{continuant} \end{bmatrix} \longrightarrow \begin{bmatrix} +\text{voice} \\ +\text{continuant} \end{bmatrix} \Big/ \#\_\_\_\_\_ \text{V} \begin{matrix} \text{C} \\ [\text{-voice}] \end{matrix}$$

ð
h

Rule statement

The voiceless segment [k] becomes [ɣ] at word initial, when the following consonant in the stem is voiceless except [ð] and [h].

4.8 CONSONANT STRENGTHENING

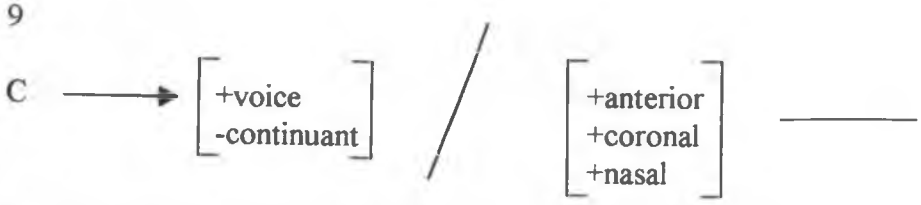
Consonant strengthening is a process that involves two changes, that is, voicing and defricativization. Let us look at the following examples.

	Underlying	Surface	Gloss
7 (i)	/n + ʃura/	[dzuru]	burnt
(ii)	/n + ʃama/	[dzamu]	with taste
(iii)	/n + ʃuha/	[dzuhu]	hanging
(iv)	/n + ʃɔra/	[dzɔrɛ]	drawn
(v)	/n + ʃona/	[dzonɛ]	licked
(vi)	/n + ʃina/	[dzinɛ]	roasted
(vii)	/n + rita/	[ditu]	stupid
(viii)	/n + rora/	[doro]	bitter
(ix)	/n + rika/	[diku]	deep
(x)	/n + rɛɣɛra/	[dɛɣɛro]	loose
(xi)	/n + ɾɔta/	[dɔtu]	rusty
(xii)	/n + roka/	[doku]	detached
(xiii)	/n + rɔɣa/	[dɔɣɛ]	cursed
(xiv)	/n + kɛɣa/	[gɛɣu]	foolish
(xv)	/n + kora/	[goro]	old
(xvi)	/n +kɛna/	[gɛnu]	happy
(xvii)	/n +tuha/	[duhu]	blunt
(xviii)	/n + tinia/	[diniɛ]	that is cut
(xix)	/n + tɔga/	[dɔgu]	rich

(xx)	/n + fuða/	[buðu]	rotten
(xxi)	/n + futa/	[butɛ]	without feathers

In the data above, while the low vowels change to [u] [o] and [ɛ] the segments [ʃ, r, k, t and f] become voiced non-continants, [dz, d, g, d, b] respectively. In this case, if a segment in the underlying representation is voiced, the voicing rule applies vacuously. Again, if a segment in the underlying representation is a non-continuant the defricativization rule also applies vacuously. This process occurs when the nasal is prefixed to the verb stems with [ʃ, r, k, t and f] in the initial position. After strengthening has taken place the nasal is deleted. The phonological rules for the two processes are as follows.

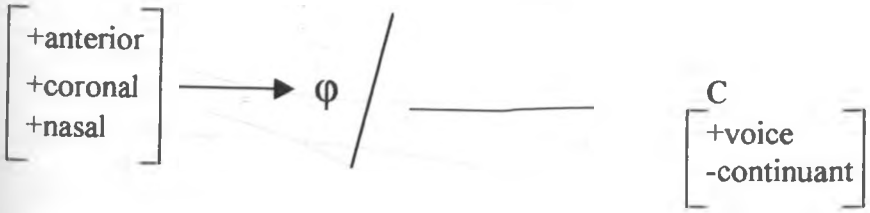
9



Rule statement

A consonant becomes a voiced stop after a nasal.

10



Rule statement

The nasal [n] is deleted before a voiced stop.

4.9 ʃ and dz

ʃ and dz are underlying consonants in Kikuyu. However, in certain environments, they are realized in the Surface. Let us look at the following examples.

8 a)	**Underlying**	**Surface**	**Gloss**
(i)	/n + aboka/	[ʃaboku]	worn out
(ii)	/n + ɛʃoka/	[ʃɛʃoku]	broken
(iii)	/n + inama/	[ʃinamu]	slanting
(iv)	/n + oma/	[ʃomo]	hard
(v)	/n + ɛdia/	[ʃ ɛdiɛ]	sold
(vi)	/n + aneka/	[ʃanekɛ]	hanged
(vii)	/n + adeka/	[ʃadekɛ]	written

In these examples, when the nasal is prefixed to stems with vowels in the initial position, and the following consonant in the stem is a voiced non-continuant, the [n] becomes [ʃ]. The final low vowels in the stems become [u] [o] and [ɛ]. Let us consider more data when the following consonant is the stem is not a voiced non-continuant.

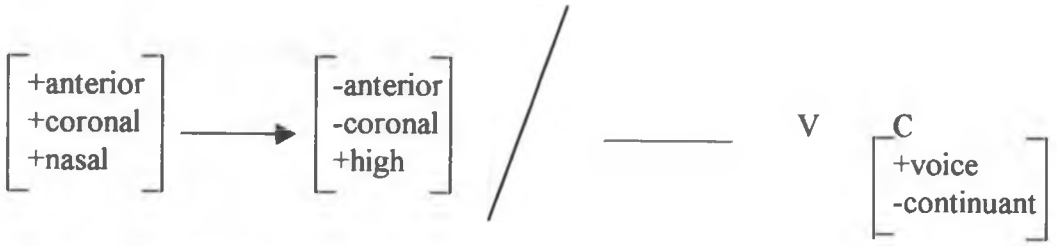
b)	**Underlying**	**Surface**	**Gloss**
(i)	/n + aroka/	[dzaroku]	unmade
(ii)	/n + ira/	[dziro]	black
(iii)	/n + atoka/	[dzatoku]	cracked
(iv)	/n +ɔra/	[dzɔru]	rotten
(v)	/n +ɔɣɔma/	[dzɔxɔmu]	crooked
(vi)	/n + aɣera/	[dzaɣeru]	nice
(vii)	/n + arama/	[dzaramu]	wide

(viii)	/n + aɣana/	[dzaɣanu]	naughty
(ix)	/n + etea/	[dzetei]	boastful
(x)	/n + aðeka/	[dzaðeki]	obedient

In the data above, when the nasal is prefixed to the stems with an initial vowel and the following consonant is not a voiced non-continuant, the nasal becomes [dz] while the low vowels become [u] [o] and [i]. Thus the phonological rules for [ʃ] and [dz] formation are as follows.

ʃ Formation rule

11

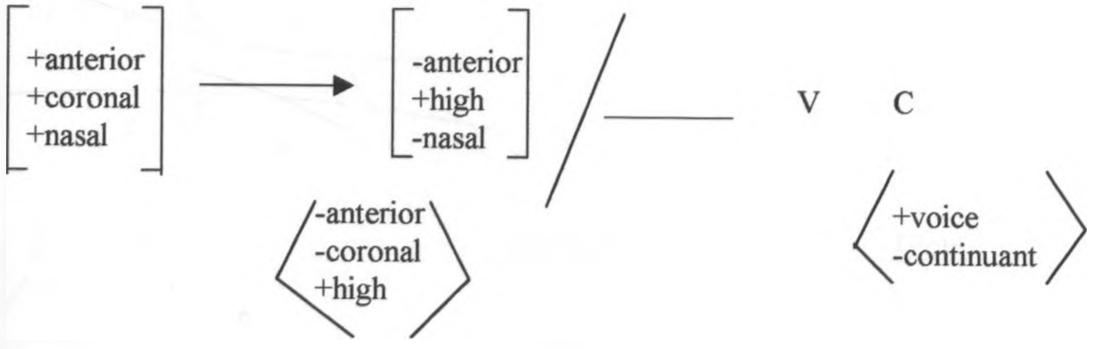


Rule statement

The nasal [n] becomes [ʃ] before a vowel when the following consonant in the stem is a voiced non-continuant.

dz formation rule

12



Rule statement

The nasal [n] becomes [dz], before a vowel followed by a consonant, except voiced non-continuants, when it becomes [ʃ]

4.10 THE NC CLUSTER IN KIKUYU

From the data presented in this study, it is evident that the nasal prefix [n] in Kikuyu conditions several changes. Below is a general summary of the nasal-consonant combinations in the underlying representation and the resultant Surface forms.

4.10.1 Voiceless continuants

a) /n + ʃ / > [dz]

9 Examples

Underlying		Surface	Gloss
(i)	/n + ʃura/	[dzuru]	burnt
(ii)	/n + ʃina/	[dzinɛ]	roasted

b) /n + f/ > [b]

10 Examples

Underlying		Surface	Gloss
(i)	/n + fuða/	[buðu]	rotten
(ii)	/n + futa/	[butɛ]	without feathers

4.10.2 Voiced continuants

a) /n + r/ When the following consonant in the stem is a voiced non-continuant > [n]. In this case [r] is deleted.

11 Examples

Underlying	Surface	Gloss
(i) /n + roma	[nomu]	firm
(ii) /n + rɛma/	[nɛmu]	naughty

b) /n + r/ When the following consonant in the stem is not a voiced non-continuant > [d]

12 Examples

Underlying	Surface	Gloss
(i) /n + rora/	[doro]	bitter
(ii) /n + rɔta/	[dɔtu/	rusty

c) /n +ɣ/ when the following consonant in the stem is a voiced non-continuant > [ŋ]

13 Examples

Underlying	Surface	Gloss
(i) /n + ɣɛma/	[ŋɛmu]	beautiful
(ii) /n + ɣada	[ŋadu]	gone bad

d) /n +ɣ / When the following consonant in the stem is not a voiced non-continuant > [g]

14 Examples

Underlying	Surface	Gloss
(i) /n + ɣora/	[gorɛ]	that I buy
(ii) /n + ɣajɛ/	[gajɛ]	that I share

4.10.3 Voiceless non-continuants

a) /n + t / > [d]

15 Examples

Underlying	Surface	Gloss
(i) /n + tɔga/	[dɔgu]	rich
(ii) /n + tuha/	[duhu]	blunt

b) /n + k/ > [g]

16 Examples

Underlying	Surface	Gloss
(i) /n + kɛɣa/	[gɛɣu]	foolish
(ii) /n + kɛna/	[gɛnu]	happy

4.10.4 Voiced non-continuants

a) /n + b/ > [b]

17 Examples

Underlying	Surface	Gloss
(i) /n + bori/	[bori]	goat
(ii) /n + bɔxa/	[bɔxa]	cabbage

b) /n + d / > [d]

18 Examples

Underlying	Surface	Gloss
(i) /n + doma/	[doma]	arrow root
(ii) /n + darɛ/	[darɛ]	berries

c) /n + g/ > [g]

19 Examples

Underlying	Surface	Gloss
(i) /n + gare/	[gare]	leopard
(ii) /n + goko/	[goko]	hen

/n +dz/ > [dz]

20 Examples

Underlying	**Surface**	**Gloss**
(i) /n + dzɔɣu/	[dzɔɣu]	elephant
(ii) /n +dzoɣo/	[dzoɣo]	peanuts

Thus, it is from the data that I conclude that, in all N C clusters in the underlying representation, the nasal is always deleted before the surface voiced non-continuants, except /n + r/. In /n + r/ if the following consonant in the stem is a voiced non-continuant the [r] is deleted while the nasal is maintained. On the other hand, if it is not a voiced non-continuant the [r] becomes [d], then the nasal is deleted. With this in mind a sequence structure condition for N C clusters in Kikuyu may be written as follows.

If	:	N	C
		↓	↓
Then	:	ϕ	[+voice, -continuant]

4.11 CONCLUSIONS

This study set out to establish and discuss the phonological processes involved in the derivation of Kikuyu nouns and adjectives from verbs, within the framework of Generative Phonology.

First, I have established that Kikuyu has a total of twenty five sounds; eighteen consonants and seven vowels. Earlier studies, such as Armstrong (1940), Barlow (1960), Mutahi (1977) and Njogu (1978) have indicated that Kikuyu has long vowels, making a total of fourteen; seven short and seven long. However, this study has clearly illustrated that Kikuyu does not have long vowels. It is important however, to note that Kikuyu allows a vowel cluster of two and that it allows identical vowels in a sequence which scholars have incorrectly considered as single long vowels.

Secondly, the study has proven that Kikuyu does not allow consonant clusters in the surface representations. Earlier studies claim that Kikuyu allows the NC consonant cluster. Here the confusion arises because there is a difference between the orthography of Kikuyu and the phonological representation. Phonology deals with sounds; what is actually heard from a speaker, and thus, a scholar studying any language should not be influenced by the orthography but should concentrate on the sounds produced. This study has shown that although Kikuyu has an underlying NC cluster, the nasal is deleted in the surface.

Thirdly, this study has established that Kikuyu nouns and adjectives are derivable from verbs. Different prefixes may be used in their derivation with varying productivity. In such derivations, there are phonological processes involved, which are motivated by various factors.

Finally, in this study, I have been able to discuss the sound changes occurring in Kikuyu derivations using the two levels of representation, that is, the underlying and the surface representation, and to account for these changes using phonological rules.

Thus, the study has demonstrated that the theory of Generative Phonology is an adequate theory to describe and explain the different phonological changes in Kikuyu.

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