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DEPARTMENT OF AFRICAN LANGUAGES AND LINGUISTICS

DÉPARTEMENT DE LANGUES AFRICAINES ET LINGUISTIQUE

THE PHONOLOGY OF LOANWORDS IN EJAGHAM

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A POST GRADUATE DIPLOMA « MAITRISE » IN LINGUISTICS

By

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DEDICATION

In everything, give thanks to God.

This work is dedicated to

the Lord almighty who gave me the strength,

courage and determination to go through it.

And to my Dad and Mum

Abel Ojong and Emilia Ojong

for bringing me forth into the world.

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For those whose names I have forgotten, they are not the least left out. To you all I would say I am much indebted. Thank you for your contributions. May God richly bless you.

List of abbreviations and symbols

C	:	Consonant
V	:	Vowel
ø	:	Zero
/	:	Context / environment
=	:	equal to
[ ]	:	Phonetic transcription
/ /	:	Phonemic transcription
H / ´	:	High tone
L / `	:	Low tone
m /-	:	mid tone
LH	:	Rising tone
HL	:	Falling tone
σ	:	Syllable
->	:	Becomes / is realised as
#-	:	word initial position
#	:	word boundary
[-rd]	:	unround
[+rd]	:	round
N	:	Syllabic Nasal
C_1	:	Initial consonant
|	:	association lines
α	:	Alpha (place of articulation)
VL	:	Voiceless
Vd	:	voiced

UR : Underlying Representation

PR : Phonetic Representation

ATR : Advance tongue Root

Fo : The future tense

Pi : The past tense

Po : The present tense

[± cont]: Plus / minus continuant

[± strid] : Plus / minus strident

[± ant] : Plus / minus anterior

[± constr] : Plus / minus constrictive

* : not accepted

TBU : Tone Bearing Unit

UAC : Universal Association Conventions

SIL : Summer Institute of Linguistics

ed(s) : Editors

ALCAM: Atlas Linguistique du Cameroun

BUCREP: Bureau centrale de recensement et population.

CREA: Centre de Recherches et d' Etudes Anthropologiques

NACALCO: National Association of Cameroonian Language Committees

CERDOTOLA: Centre Regional de Documentation sur les Traditions Orales et les Langues Africaines

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CHAPTER I

General Introduction

No native speakers of any language can be proud of the absence of loanwords in their language. Yet, very often, native speakers and even researchers pay little or no attention to these loanwords. We think that loanwords constitute an important part in every language and as such they deserve a keen attention.

Ejagham speakers use loanwords which are borrowed from many other languages (English, Duala, Efik, Pidgin, etc). Despite the complex structure of words from these languages, loanwords that are adopted suit the syllable and word structure of Ejagham language.

To explain how this is realized, this piece of work has been divided into five chapters:

Chapter one introduces the reader to the location of Ejagham in Cameroon, the language, the theoretical framework, the methodology, the aim of the study, its scope and literature review.

Chapter two deals with some major phonological phenomena in the Ejagham language.

Chapter three talks about the phonology of loanwords in nouns both in their segmental and autosegmental representation.

Chapter four is concerned with the phonology of loanwords in verbs.

Chapter five gives a general conclusion on the phonology of loanwords in Ejagham.

I.1 Location of Research area

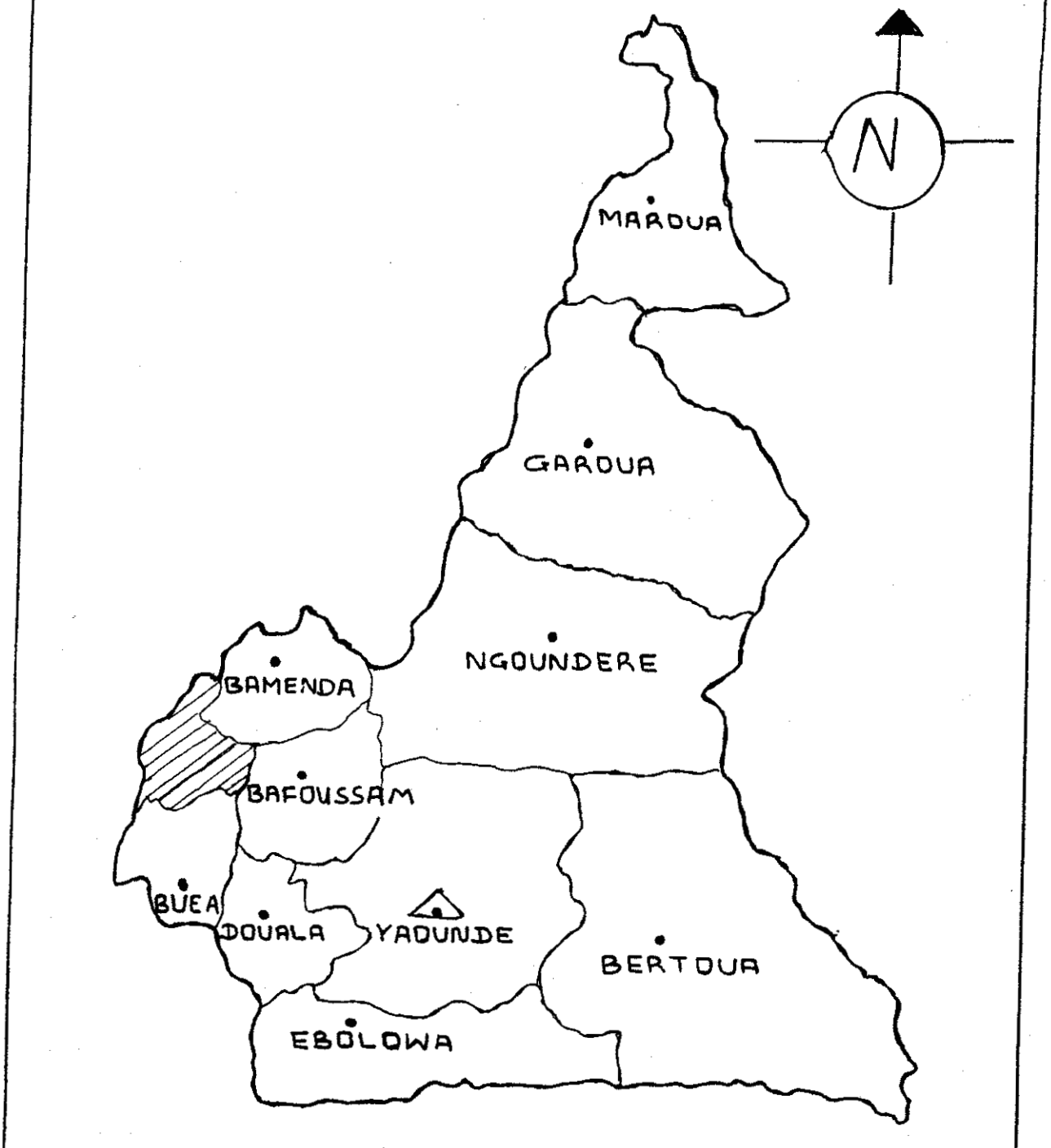
The Ejagham people are found in the Cross River basin in a continuous triangular territory with the towns of Calabar, Ikom and Mamfe at the three angles. The international boundary between Cameroon and Nigeria divides the territory into two parts.

In Cameroon, the Ejagham people are found in the Eyumojock Sub-division of Manyu division in the South West province. They are bounded in the North by the Anyangs, and Boki people, in the East by the Bayangs, in the west by the Ikom division of the Cross River State and in the South by the Baludu and Mbo people of Ndian Division, and Nguti Sub-division respectively.

The Ejagham ethnic-group is composed of three sub-groups. The Keaka sub-group is situated in Central Ejagham, the Ekwe Sub-group is located to the North-East sharing boundary with the Cross River State of Nigeria and the Obang Sub-group is found in the South sharing boundary with the Mbo and Balundu people.

The total population of this area stands at 27,115 according to the 1987 census. Source: BUCREP Yaounde.

LOCATION OF MANYU DIVISION IN CAMEROON



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KEY

Manyu Division

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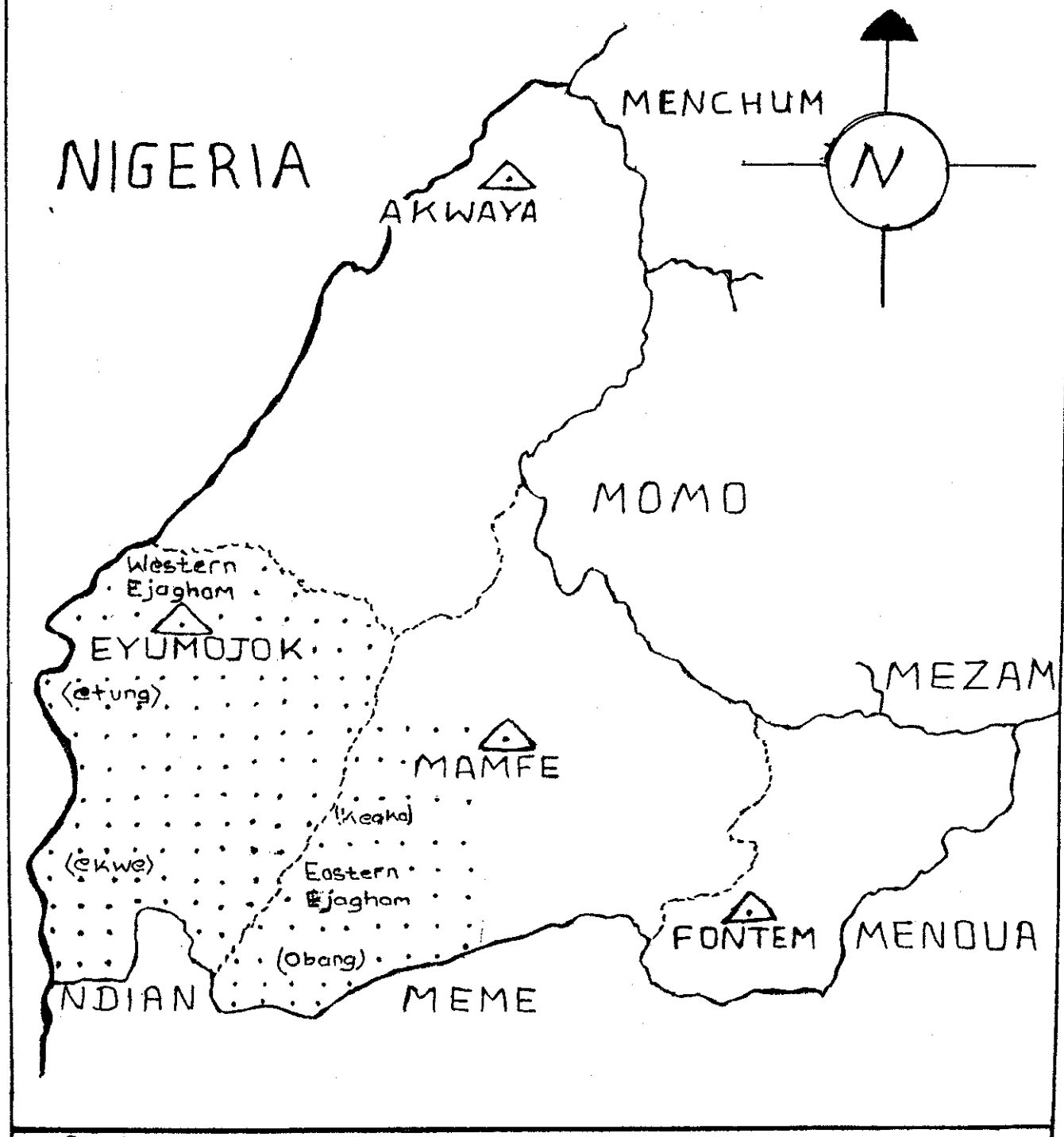
LOCATION OF EJAGHAM IN MANYU DIVISION



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KEY

- International boundary
- Divisional boundary
- Subdivisional boundary
- Subdivisions
- Ejagham Area

SOURCE 1987 © ALCAM ISH. CREA R. BRETON

I.2 The Ejagham Language

The Ejhagham tribe got its name from lake Ejagham. Many terms have been used to refer to the dialects or sub-dialects of Ejagham: Ekwe, Eyafin, Keaka, Obang, Etung, Kwa. However, the most widespread term of self-reference is "Ejagham" (with its variant "Ejagha".

The root –jáɣá occurs in more than one noun class. For instance, njaɣa refers to a person who speaks "Ejagha" and ajaɣa to many people who speak it.

Because this term is the most widespread term of self-reference in the area of the language, in this study it will be referred to as Ejagham.

The language has its own alphabet which consists of the sounds of the Ejagham language. The following tables show sounds of the language according to their place and manner of articulation.

Vowels: The three main varieties of the Ejagham language have three different systems. The EE variety has altogether eight vowels. Watters (1981) recognizes seven vowels with the exclusion of [e].

(1) *The Phonetic Vowel chart of Ejagham*

	Front	central	back
High	i	ɨ	u
Mid High	e		o
Mid Low	ɛ		ɔ
Low		ɑ	

(This chart is adapted from Watters 1981)

However, it is important to note that some vowels are conditioned by the surrounding consonant. For instance ɔ is realised as [o] when it is the prefix of a root whose first root vowel is [+high]; e.g. ɔ-fú >ò-fú "day"

The above vowel sounds can be attested in the following words in Ejagham

(2)	i	nì	man
	i	mbik	goat
	e	ŋgbè	tiger
	ɑ	ékpá	cane
	ɛ	èlém	a kind of yam
	u	òkùm	juju (society)
	o	njô	dog
	ɔ	èzɔ̀k	noise

Some of these vowels are used as nominal prefix for various noun classes as illustrated in (3):

(3)	e-lòk	root	cl.5
	ɑ-lòk	roots	cl.6
	ɔ-kpìɣí	canoe	cl.14
	ɑ-kpìɣí	canoes	cl.6

Consonants: Eastern Ejagham has twenty three distinctive consonants; however this number increases if we add prenasalised consonants, such as mb, nd, ŋg, etc. ,which exist in the language.

(4) *The Phonetic consonant chart of Ejagham*

Place of articulation

Manner of articulation		Bilab	Labden	Den.alv	Pal alveo	Pal.	Velar	Lab Vel.
Plosive	Vls	p		t			k	kp
	Vd	b		d			g	gb
Fricative	Vls		f	s			ɣ	
	Vd	β		z				
Africate	VL				č			
	Vd				j			
Nasal	Vd	m		n		ɲ	ŋ	
Pre Nas	Vd	mb		nd			ŋg	
Stop								
Liquids	Vd			L				
Trill	Vd			r				
Glides	Vd	w				y		

The above symbols correspond to those of the International Phonetic Association (IPA) presented in *General Alphabet of Cameroon Language*, edited by Tadajeu and Sadembouo (1984).

In this language no noun begins by a consonant. Most nouns begin by a vowel while a few by the syllabic nasal which, in such a case, is a prefix.

Complex consonants are also found to occur in the language but with restriction to the environment. We will be looking at them in relation to loanwords.

Tones: Ejagham makes use of a variety of tones. Both level and contour tones can be identified in the language.

The level tone

/	H	The High tone as in óká "mat"
\	L	The Low tone as in ònù "beauty"
-	m	The mid tone in most cases is derived

The contour tone

ʌ	HL	The falling contour as in kô "take" (imperative)
v	LH	The rising contour as in kǎ "give" (imperative)

I.3 Dialects

Ejagham can be divided into three major dialects as follows
Western Ejagham (W.E) and its sub-dialect " Ekwe"
Eastern Ejagham (E.E) and its sub-dialect "Keaka"
Southern Ejagham (S.E) has been referred to as " Kwa"

These three dialects may be distinguished on the basis of phonological, morphological, and lexical differences. The most important are the phonological and morphological aspects. Certain consonant correspondences distinguish also the three dialects from each other as in Watters (1981)

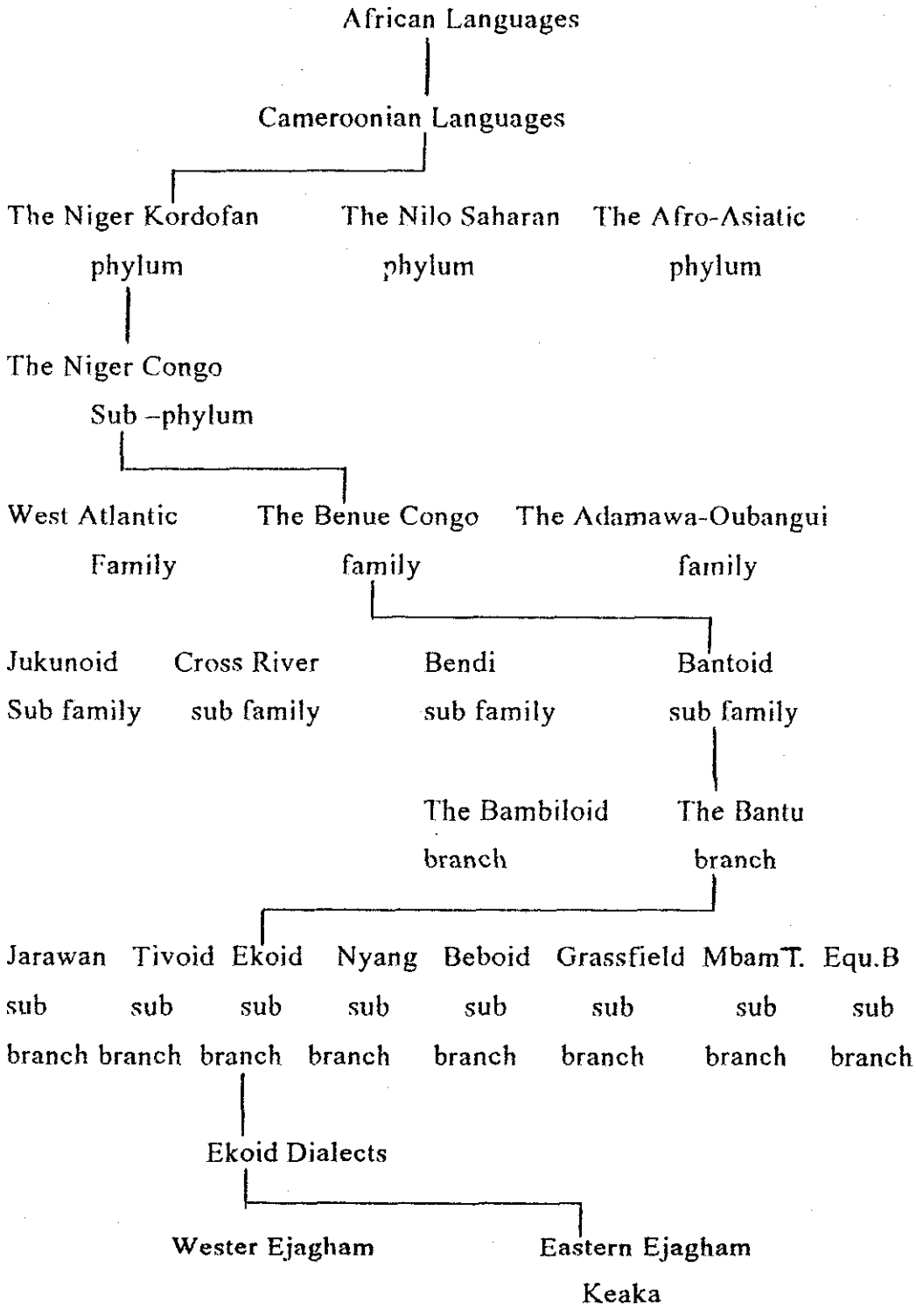
This work will be based on the Eastern Ejagham sub-dialect, spoken in the Eyumojock sub-division of Cameroon. The speech forms are as used in eastern Ejagham or at least of the " Obang" area. Loanwords were collected as used by the speakers of this variety.

I.4 Language Family

Several classifications have been made for the Ejagham Language. Two of these classifications are those by Williamson (1971) and by Bennett and Sterk (1977). In this work we will adapt Greenberg's Classification taken from ALCAM (1983) . It shows that the Ejagham Language belongs to Zone 800 following the classification of languages.

This classification can be seen in the following genealogical trees

(5) The genealogical tree of Ejagham language following Greenberg's classification of African languages



Source: Adapted from ALCAM (Pages 69, 360)

1.5 Theoretical Framework

The theory used for this piece of work is largely the Standard Generative Phonology. This approach to linguistics was initially developed by Noam Chomsky in his *Syntactic Structures* (1957) and is known as Generative Grammar. The approach was used in syntax where he emphasized on the generation of surface structure of sentences from deep structures using transformational rules. Standard Generative Phonology was then developed in the highly influential work of *Sound Pattern of English* by Chomsky and Halle (1967)

This model is used in this work to show how underlying forms of loanwords are derived from the surface structures in a more convincing manner.

Although the generative approach dominates in this study, the descriptive approach is also used where necessary

I.6 Methodology

As a native speaker of the language, the researcher was the source of some loanwords. A bulk of the data used for this study came from elders. For instance we had assistance from native speakers in the village such as Mr Daniel Arrey and his wife, Mr Zacharia Agbor, Mr Ojong Tobias, Mr Ojong Abel as well as Mr Tanyi Mbuagbaw of CABTAL Yaounde. These people were able to provide us with loanwords from African languages such as Efik, Duala, Igbo, Balondo and a few from German. Loanwords from these languages combined with those from English and Pidgin constitute the source of loanwords for our work.

I.7 Aim of the Work

When words are borrowed from one Language to the other, most, if not all undergo some phonological or morphological changes. The aim of this work is first of all to show the phonological and tonological changes that occur in loanwords in order to suit the Ejagham syllable and word structure.

This work also aims at proving that loanwords contribute a lot in the expansion of the Ejagham lexicon.

Lastly, it aims at creating an awareness in the minds of Ejagham native speakers who use loanwords without knowing they come from other languages.

I.8 Scope of the Work

The treatment of loans as a whole is vast and varied given the different types of loans that exist. We cannot pretend to handle all the aspects of loans in a work like this. We have therefore focused on the phonology of loanwords, especially those that have undergone phonological changes. We discovered that in terms of lexical categories, it is mostly the nouns as well as a few verbs that are borrowed. Adjectives and adverbs rarely become integrated. That is they often do not go beyond the morphemic mixing stage[1].

[1] Morphemic mixing refers to the use of morphemes from two languages within the same lexical item. Khati Thekiso (1985 P.183)

I.9 Literature review

Linguistically, not very much has been done on the grammar and vocabulary of the Ejagham language. Few authors such as Tom and Elien Edmondson have written an article titled: *Some dialect shifts in Ejagham* published in CAMLANG (1971). In this article, they have collected and published a word list of various Ejagham dialects. Many of these words do not include tones. Others have worked on the classification of languages in this area, placing Ejagham as one of the Ekoid languages (see for example Guthrie (1962, 1971), Greenberg (1963), Williamson (1971), and Bennet and Sterk (1977)).

The most prominent writer on Ejagham, John WATTERS, has written articles and a dissertation on *The Phonology and Morphology of Ejagham:* with notes on dialect variation (1983). In his work, he brings out a reference grammar of Ejagham, its phonological units, morphophonology, morphology as well as some historical topics in Ejagham morphology. It would be important to note that in this work, he cites a few examples of loanwords in Ejagham from Efik and English, but he was neither concerned with the phonologynor morphology of the loanwords. The latter has also collected and translated some folk tales in the Ejagham language. He has translated the New Testament in the Ejagham language as well.

Many works have been done on the phonology of indigenous languages, but our work differs from them in that we are dealing with the phonology of loanwords in an indigenous language. So far, a similar topic has been treated by KENMONYE and CHUMBOW in an article: *Structures syllabiques et phonologie*

*des emprunts en Ghomala, p*ublished in AJAL (2000). This article describes the mechanism or processes of the insertion of loanwords (nouns exclusively) in the Ghomala language. In part of our work, we adapted the latters' approach in order to show how strange segments get incorporated into the Ejagham language. We shall not only be dealing with loan nouns like the latter, but also loan verbs as well as loanwords from other African Languages.

In another article by Jan Knappert titled *the Study of Loanwords in African Languages* published by SIL, the author explains how loanwords which he styles as " travel-words" are carried across the continent of Africa.

Still in relation to loanwords, LEEDING J. Velma has also written an article: L*oanwords: ours and theirs* which is published in READ Vol. 21 (1986). In it, the writer brings out the attitudes of the Aboriginal towards loanwords from English. He admits that all languages have borrowed words. Again, the phonology of the loanwords cited in the last two articles we have mentioned was not the area of interest of the writers.

However, the phonological aspects of loanwords which the above writers seem not to be concerned with, is what we are interested in.

CHAPTER II

SOME MAJOR PHONOLOGICAL PROCESSES IN EJAGHAM

2.0 Introduction

This chapter focuses on some phonological phenomena commonly attested in Ejagham. It is worth mentioning that these processes are those that are common with the Eastern Ejagham variety, given that the language has three major dialects that are distinguished by phonological, morphological, and lexical differences. We will start by bringing out the word structure and the various syllable types. This will be followed by the phonological processes. In each process we will bring out the necessary aspects such as the underlying tones and rules. This section of the work will help us to know about certain phonological processes that take place in loanwords which will be discussed in the subsequent chapters.

2.1 The Word Structure

We will look at the word structure of Ejagham as they are in nouns and verbs because they are the only lexical items involved in borrowing in this language.

For monosyllabic, disyllabic, and trisyllabic forms, nouns present a simple structure. That is: Prefix + Root

(1)

a)	è -	nùŋ	bed
b)	é -	zóɣó	air
c)	é -	káβóɣó	lizard

Verbs have only monosyllabic and disyllabic forms with the following shape

Prefix (Pr) + Root (Rt) + final vowel (Fv) (infinitive)

(2)

	Pr.	Rt.	Fv	
a)	è -	sɔ̀β -	é	to boil
	è -	làŋ -	é	to touch
b)	è -	gím	é	to stand
	è -	nyàn	é	to melt

This simple word structure is also seen to occur in loan nouns and verbs as in (3).

(3)

a)	è - gwá		cassava (Efik)
	è - rísì		rice (English)
	ó - fóɣójù		umbrella (Efik)
b)	e - p ɔ́m-	é	to pump
	e - βéné		to bend

However, most loans from English (nouns especially) whether monosyllabic, disyllabic, or trisyllabic have a zero prefix.

Example c)	ø – zîŋ	zinc
	ø – mítà	meter
	ø – mísínjà	messenger

2.2 The Syllable Structure

Words in Ejagham present different types of syllables, but the canonical shape of a syllable is CV. We shall look at the different types of syllables that could be found in a root in this language.

(4)			
	V:	à	he/she
	CV:	kô	take
	CVC:	làŋ	touch
	CSV:	e-gwí	comb
	CSVC:	ŋ-kwìk	corn
	CCV:	m-blí	leaf

Looking at Ejagham loanwords, we could also see that the canonical shape is CV, and they present syllable types such as:

CV:	tî	tea
CVC:	kâm	camp
CCV:	ò-flɛ̀	French

The syllable structure of loanwords from other African languages is much similar to that of Ejagham, whereas those from English are derived from complex syllable structures.

(5)	English	Ejagham	Gloss
	CVV: biə	byâ	beer
	VVV: aʊə	áwà	hour
	CCVV: traɪ	trâ	try
	CVCC: ziŋk	ziŋ	zinc
	CCVCC: plæŋk	plaŋ	plank

From the above examples, we can see that complex syllables in English become simplified to one of the above syllable structures in Ejagham.

In chapter three and four we would be examining what happens to English consonants, diphthongs and long vowels when the words in which they are found are borrowed into Ejagham

2.3 Phonological Processes

Many phonological processes exist in this language, but we are going to discuss those that are common. Among them we have the following:

2.4. Reduplication

This is a process in which all or part of the phonological material of the base is repeated, (Rocca & Johnson 1999). In Eastern Ejagham, reduplication is much more frequent. Most nouns reduplicate entirely to give the notion of abundance, while in another instance, only the root is reduplicated to insist on the manner of doing something. The various types of reduplcation are illustrated in (6):

(6) a.	ɔ̀-tɔ̀b ɔ́-tɔ̂b	very muddy	(ɔ̀-tɔ̀b)	mud
	à-yíb á-yîb	very wet / watery	(àyáib)	water
	è-zɔ̀k é-zɔ̂k	noisy	(èzɔ̀k)	noise
	m̀-bá ḿ-mbâ	clearly, plain road	(mbá)	road
b.	ŋ́-kpâ ŋ̀kpâ	a type of beans		
	ŋ̀-gù ŋ̀-gù	antelope		
c.	ò-kùm kùm	cassava fufu		
	è-βɔ́m bɔ́m	a crow		
	é-kɔ̂m kɔ̂m	ram		
	m̀-fɛ́k fɛ́k	liver		
d.	làŋélàŋ	just touch	(làŋ)	touch
	kóékō	just take	(kô)	take
	wúŋéwūk	just drink	(wuk)	drink
	kpàŋékpàŋ	just plant	(kpaŋ)	plant

In the preceding examples, (a) represent whole word reduplication. The base retains its basic tone LL or LH which becomes HHL on the reduplicant. We suggest that this change of tone stems from the fact that all derived forms of words in this language have a high tone prefix. Consequently the L tone on the reduplicant which derives the adjective, delinks and a floating H docks to the prefix. The H tone later spreads to the first root vowel which has a floating L tone, thus giving a HHL tone sequence.

In (b) we equally have whole word reduplication and the tone of the base is copied to the reduplicant. In (c) only the root is

reduplicated alongside the tone. Lastly, in (d), there is whole reduplication and tonal dissimilation in H tone verb roots.

Reduplication equally takes place in loanwords. Loan nouns and verbs do not exist in reduplicated form but they can be reduplicated to give different notions.

2.5 Lateralisation

It is very common in this language to find a lateral after bilabial stops and nasals. This phenomenon which occurs in both monosyllabic and disyllabic words can be considered a modification of the old form. Consider the following examples:

Old Form (W.E)	Modified form (EE)	Gloss
(7) a. ó-jô	ó-blô	tomorrow
è-jân	è-blâ	medicine
à-nyɔ̀t	à-mlɔ̀t	fur / body hair
à-jî	a-blî	she gave birth
n-jô	m- blô	dog
n-jí	m-blí	leaf
b. è-nyáné	e-mláá	to scatter
à-káŋê	a-káŋlê	she fried
à-kímí	a-kimlê	she by passed
à-féβê	a-féβlê	she flew

In the examples that precede, we notice the following alternations

a) j ~ bl j → b/-l

ny ~ ml ny → m/-l

b) ŋ ~ ŋl

β ~ βl

m ~ ml

For both (7a) and (7b) we will propose a general lateralisation rule as follows:

[Ø] -> [+lat] / [- cor] --V

This rule states that a lateral is inserted between a labial or velar and a vowel.

It is important to note that modified consonants of these types are considered complex single units rather than consonant clusters. Meanwhile, not all velars in WE are lateralised in EE, and where they are, the motivation is not clear (WATTERS 1981)

2.6 ASSIBILATION

This is a process whereby plosives become sibilants. This phenomenon is exemplified in Ejagham where [p, b] and [k, g] become [β] and [ɣ] respectively at intervocalic position. Below are some illustrative examples:

(8) a.	tɔ̂p	follow	ɔ-tɔ́β-á	you should be following
	kîk	keep	ɔ-kíɣ-á	you should be keeping
	tûp	throw	ɔ-túβ-á	you should be throwing
	bêp	ask	ɔ-βéβ-á	you should be asking

b.	fúbê warm	ɔ́-fúβ(é)-á	you should be warming
	bìgê cover	ɔ́-βîɣ(ɛ)-á	you should be covering
	nyàbê straighten	ɔ́ nyàβ(ɛ)-á	you should be straightening
	nyàgê dirty	ɔ́ nyàɣ(ɛ)-á	you should be dirtying

In the above data, we notice several phonological processes. For instance, the distribution of voiced and voiceless plosives is systematic. Voiceless plosives in (a) become voiced in (b) at intervocalic position.

(9) Rule: voicing P -> b / V -V
k -> g / V-V

The above rules can be summarized in features as

$$\begin{bmatrix} -\text{cont} \\ -\text{son} \\ -\text{cor} \\ -\text{voiced} \end{bmatrix} \rightarrow [+\text{Voiced}] / \text{V--V}$$

In (b) we see instances of vowel deletion. This is because non identical vowels[2] are not allowed to occur in the same environment in this language. When this happens, one of them deletes. This leaves us with the following rule:

(10) Vowel deletion.

ɛ -> ø /-a

or

$$\begin{bmatrix} -\text{hi} \\ -\text{low} \\ -\text{ATR} \\ -\text{bk} \end{bmatrix} \rightarrow ø / \text{--} [+\text{Low}]$$

sonority hierarchy?

[2] Unidentical vowels that are not allowed to occur in the same environment are limited to ɛ-a. Others such as o-ɛ can occur at word boundary without deletion.

This rule states that a front mid vowel is deleted before a vowel that is low.

In all, the most significant phonological process in the data is one in which stops have become fricatives at intervocallic position[3]

(11) Rule: Assibilation:

b -> β / V-V

p -> β / V-V

k -> ɣ / V-V

This rule can be rewritten as:

$$\begin{bmatrix} -\text{son} \\ -\text{cont} \\ -\text{cor} \\ -\text{voice} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{cont} \\ +\text{voice} \end{bmatrix} / \text{V-V}$$

The rule in (11) states that a plosive becomes a continuant at intervocalic positon.

2.7 VOWEL HARMONY

A vowel system in a language is said to have vowel harmony if the vowel in a word shares certain features such as [+back] [+round] [+ATR] (Mutaka 1995). In this language the Final vowel that occurs in most words is –ɛ. This vowel harmonises with the root vowel which has the feature [+high]. Below are some examples.

---

[3] Watters (1994)specifies that the voiced labial plosive /b/ only optionally becomes a fricative in utterance initial position e.g. bayɣlɛ̂ [bayɣlɛ̂] ~[βa ɣlɛ̂] "peel off".

(12) a. e - séŋ-é to write
e - làŋ-é to touch
e – fém-é to burn
e - zèm-é to sow
e - fɛβ-é to soak gari

b. e - jùŋ- ú to lift up
e - wúɣ-ú to drink
e - kíɣ-í to keep
e - jò-ó to roast
e - fɔ́-ɔ́ to wipe
e - kɔ̀-ɔ́ to choke

In (a) above, the verbal suffix remains unchanged because the root vowels are [-high]. Whereas in (b) the verbal suffix ɛ becomes u, i, o after u, i, o respectively in the radical. In other words the [+high] feature of the root spreads from left to right. This leaves us with the following rule for vowel harmony:

(13) Height Harmony:

[-hi]→ [+high] / [+high]--

This rule says that a low vowel becomes high before a high vowel.

Also, there is a similarity between the vowel of the radical and the final vowel in nouns.

Example: e-sɔ́ŋɔ́ spoon
a-fóɣô urine

ɔ- wɔ̀rɔ̀nɔ́	working dress
e-blìɣí	kóla
e-lɛ̀rɛ̂	tongue

2.8 NASAL ASSIMILATION

Some words in Ejagham have the sequence Nasal + Consonant. These consonants are said to be homorganic. e.g. mb, nt , np, nd, ŋg etc. In this language we can say that NC forms two phonemes because Nasals before consonants are usually syllabic as shown by their contrastive tone in the following examples:

(14)	m̀pâ	flute
	ŋ̀gbè	tiger
	ḿbɛ́ŋɛ́	heart
	ńsí	father
	ŋ̀gwák	cockroach

Another evidence to support the fact that these pre-nasalised sounds are separate phonemes that undergo nasal assimilation process is that, most often, they serve as noun class prefix for words as shown in the following examples:

(15)	m̀-bík	ɔ̀-βík	goat(s)	cl.3/14
	m̀-pìk	à-pìk	nail(s)	cl.9/6
	ǹ-dɛ́k	à-rɛ́k	rope(s)	cl.9/6
	ŋ-gàr	ɔ-ɣàr	knife(ves)	cl.9/14

The prefix assimilates to the first root consonant sound. The only situation where nasals are [-syllabic] is when a nasal consonant is followed by a glide -w as illustrated by the following examples:

(16)	ŋwàŋ	- ŋwàŋ	lightning
	ŋwénê		to smell

Nasal assimilation equally takes place in verbs where the first person singular assimilates to the first consonant of the verb root. Consider the examples in (17) where "m" stands for the first person singular.

(17)	bák	m̀bák	I came
	súm	ǹsûm	I hit
	làŋ	ǹlâŋ	I touched
	βén	m̀bên	I danced
	βèé	m̀béè	I planted
	kô	ŋ̀kô	I took
	fík	m̀fîk	I gave back

In the above data, we notice the assimilation of the pronoun "I" to the first root consonant. In addition - we observe that [β] becomes a voiced plosive when contiguous to nasals, taking on the complete oral occlusion characteristics of the nasal consonant.

The above data on nasal assimilation permits us to formulate the nasal assimilation rule as follows:

(18)

$$\text{Rule N-} \dashrightarrow \begin{bmatrix} \alpha \text{ cor} \\ \alpha \text{ ant} \end{bmatrix} / - \quad \begin{bmatrix} \alpha \text{ cor} \\ \alpha \text{ ant} \end{bmatrix}$$

This rule means that a nasal adopts the qualities or place of articulation of the consonant that follows.

Another type of assimilation occurs in vowels resulting in nasalization. The nasal vowel stems from the fact that most lexical items in EE have lost the nasal sounds [m] and [n] in the second consonant position of CVC(V) roots. The result is that either the root vowel becomes a long vowel where the second vowel assimilates to the first or the vowel becomes nasalized. This is illustrated below:

(19)	W.E	EE	
a)	nyàm	nyã	meat
	è-kóm	e-kɔ̃	song
	ɔ-yám	ɔ-yã	cooking
	a-fɔ́n	a-fɔ̃	fat
b)	è-nyánè	è-mlãã	to scatter
	é-búní	é-βũũ	mud bed
	m̀-fúní	m-fũ	wild vine vegetable
	e-kàmé	e-kãã	to answer

The forms in (19a) above illustrates nasal deletion followed by the assimilation of the nasal quality to the root vowel. Those in (19b) illustrate nasal deletion at intervocalic position followed by nasal assimilation to the long vowel. In both (19a) and (19b) the tones remain the same as it is in W.E.

2.9 LABIALISATION

Burquest (1993) says "in labialisation, the articulation of the consonant anticipates that of the following vowel so that the consonant is rounded in its own articulation." Labialisation, which is most commonly conditioned by high vowels in Ejagham, occurs in the first consonant position of the root. Below are some examples.

(20)	è-č^{w}í	load
	è-g^{w}í	comb
	ǹ-s^{w}í	a type of ant
	è-k^{w}ík	forest
	ǹ-t^{w}îk	chief
	ŋ̀-k^{w}ìk	maize
	à-y^{w}îk	she killed

In both monosyllabic and disyllabic words, labialized sounds are followed by the front high vowel –i

2.10 ASPIRATION

In this language, the voiceless labial, alveolar, post alveolar and velar consonants are all aspirated in the initial consonant position of the root.

(21)	e-k^{h}ùp	bundle
	o-k^{h}ùm	society (juju)
	e-t^{h}ûm	work
	a-t^{h}ɔ̂ŋ	ashes
	ŋ-k^{h}ɔ̀p	box
	ɔ-k^{h}ɔ̃	bees
	à-č^{h}ô	she pounded
	à-k^{h}â	she stayed

2.11 HIGH TONE SPREADING

The most significant tonal process in Ejagham involves words and the spreading of any preceding high tone onto a following noun. When nouns follow a lexical item with a final high tone, the H tone spreads. If the noun has a low tone on the prefix that Low tone completely assimilates to the H and becomes a H. It doesn't matter if the word is an associative marker, a preposition or a possessive pronoun. Consider the following examples.

(22)a.		è-kók	fire side
		ǹ-jû	house
		ŋ̀-kékú	ghost
		m̀-bèr	cocoyams
	b.	kó	take
		kă	in
		í	Associative Marker
		e-y-ă	your

The group of words in (22a) are nouns with low tone prefix while those in (22b) represent post-grammatical units with high tones. When these words are put in phrasal constructions, the following tonal changes are realized:

kó	έ-kók	take the fire side
kǎ	ń-jùk	in the house
e-rí-í	ŋ́-kέkú	the ghost's food (εrí = food)
e-y-ǎ	ḿ-bὲt	your own cocoyams

We will propose a rule to explain the above tonal change on the noun prefix.

(23) High tone spreading

```
V # V  ->  V # V
|   |      | ˍ ‐ ǂ
H   L      H   L
```

This rule states that a high tone spreads to following TBU across word boundary.

2.12 Summary

In summary to this chapter, we have discussed phonological processes some of which have been described by Watters (1981) and some which we found to be existing but not yet described. For instance we have shown that reduplication occurs in both the stem and roots of words. That stops become fricatives in a process known as Assibilation, while a vowel harmonizes in height with the final vowel in the language. We have also shown that lateralisation takes place in the language and it is considered an aspect of modification. Meanwhile nasal assimilation takes place in both consonants and vowels. Other consonantal processes such as labialization, aspiration occur at second consonant position, which according to Watters (1981) is an innovation to the various sub dialects.

Lastly we have discussed the most common tonological process in the language which is High tone spreading. We will show how some of these processes take place in loanwords in the subsequent chapters.

CHAPTER III

THE PHONOLOGY OF LOANWORDS IN NOUNS

3.0 Introduction

In this chapter, our main discussion will be on loanwords with specific attention to nouns. This is because, in terms of lexical categories, the noun is the most common lexical item that is borrowed. Consequently, a majority of interesting phonological processes that take place are in this class. This chapter will be divided into two main parts. Part one will deal with segmental phonology. For instance, we will show how certain restrictions in Ejagham result to change in segments in loanwords. Part two will talk about the suprasegments, e.g. how loanwords get their tones, both surface as well as underlying tones.

3.1 Loanwords

According to Pius TAMANJI (1995), loanwords occur in a situation where *"the receiving language borrows the form as well as the meaning associated with this form."* The word *"loanwords"* and *"borrowing"* used in this work are technical terms to describe the process whereby a linguistic unit, usually a lexical item, has come to be used in a language other than the one it originated from (Crystal 1985: 36 183). Taking this into consideration, we will consider the following as loanwords:

(1) Borrowed word		Ejagham	Gloss	Source Language
1)	pound	pâŋ	currency	English
2)	soldier	sójà		English
3)	radio	rédyò		English
4)	ofraŋkpo	ɔ́fárŋkpó	scissors	Efik
5)	màkàlà	màkrà	puf-puf	Duala
6)	ɔ̀bàsɛ̀	ɔ̀βàsì	God	Balondo
7)	àŋwâ	àŋwâ	cat	Efik
8)	sànjà	e-sànjà	loincloth	Duala
9)	akaraŋ	ŋkárâŋ	a type of scissors	German
10)	tafel	táflè	arm board	Dutch
11)	jìgìdá	àjìgìjá	waist chain	Hausa
12)	ǹjàngà	ǹjàngà	crayfish	Pidgin

The above list of words is for illustration. We will be giving many other examples of loanwords in the course of our analysis.

3.2 Segmental Phonology

The structure of words and syllables in particular is often modified as a result of the introduction of foreign words borrowed from other languages as we can see from the examples above.

Loanwords, especially from English have certain sounds or segments which do not exist in Ejagham. For instance consonants such as

δ, v, h, θ, st, lk,

while others will occur but with restriction to the environment such as ts, ʃ, ʒ, dʒ, L, etc

In like manner the following vowels in English will never occur in Ejagham

a) Monophthongs.

ʌ, æ, ɒ, ʊ

b) Diphthongs

iə, ɑi, ɑu, ɔi, ei

c) Triphthongs

iəu, ɑiə, ɑuə

We have seen from the beginning that this language has eight vowels and twenty-three consonants excluding pre-nasalised sounds. Of all these sounds, none of the above is included. Consequently, when speakers of this language are confronted with sounds such as the ones above, there is bound to be a modification or what Chumbow (1982b) and Tamanji (1995) refer to as phonetic approximation[1]. Consider the following realizations

[1] Phonetic Approximation could be defined as: where some sound segments attested in the donor language are absent in the receptor language, these *"strange"* sounds will be approximated to the indigenous sound segments with which they have the highest degree of phonetic similarity.

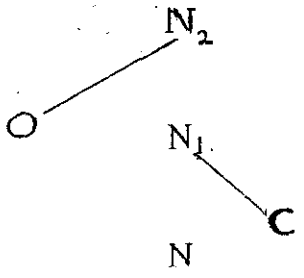
(2)	English		Ejagham	Gloss
	kætikist	->	kàtàkís	catechist
	peipə	->	pípà	paper
	kɔlidʒ	->	kólɛ̂ʃ	college
	plæŋk	->	plâŋ	plank
	laim	->	lámîs	lime

To account for the change of segments in loanwords, we will adopt the approach used by Kenmonye and Chumbow (2000). In this approach the basis of analysis is a syllable.

In a syllable N_2 stands for onset, N_1 stands for coda and N represents the nucleus.

Thus represented as:

(3)



In this representation N_2 = initial consonant (C_1) or onset

N1 = Final consonant (C_2) or coda

N = Vowel (V)

3.2.1 Initial consonants (C_i)

Basing our argument on the data we have, all the consonants that occur at word initial position in loanwords, are equally attested in Ejagham but for the glottalic fricative [h] which is not attested at all in the language. This sound is automatically rejected in any loanword that begins by it.

(4)

N_2

$$\begin{bmatrix} +\text{cont} \\ -\text{strid} \\ -\text{ant} \\ +\text{spread} \\ -\text{constr} \end{bmatrix}$$

*he *ha *hi

Examples:	
Ejagham	English
áwà	hour
áŋkàčif	handkerchief
aβúsá	Hausa
ámà	hammer
ɔ́ndrer	hundred

The above examples leave us with the following rule:

h-deletion rule:

h- > ø / #-

The glottalic fricative becomes deleted at word initial position.

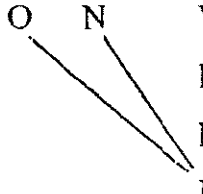
3.2.2 Complex consonants

Following the principle of sonority as laid down by KATAMBA (1989) the sounds of every language that permits consonant clusters has the following distribution of segments in syllables

Consonants		Syllable	Greatest sonority
Vowels	-	+	|
Glides	+	-	|
Liquids	+	-	|
Nasals	+	-	|
Voiced	+	-	v
VL Obstruents	+	-	Least sonority

This chart shows that vowels have the highest sonority strength while obstruents have the least. In other words, a language that permits consonant clusters will have the sequence ONLG at word initial position, and GLNO at word final position (KENMONYE 2000). Ejagham obeys this principle but with modification. In this language nasals are [+syllabic] as we have shown in chapter II. Consequently, with their high sonority strength, they can only precede obstruents as in the examples below

(5)



N	*kŋo	rather	ŋ̀kó	snail
N_1	*bmi	rather	m̀bì	rat
N_2	*tni	rather	ǹtík	money

This ordering is respected in loanwords which have nasal sounds inserted where they did not previously exist in the source language. Below are some examples

(6) Borrowed form	Ejagham	Gloss
gari	ŋgàrí	gari
səʊp	ńsôp	soap
kʌp	ŋk^{h}ô	cup k- > k^{h} /#-
kɒk	ŋk^{h}ɔk	cock
mʌg	mmég	mug
gwa:və	ŋgwáβà	guava
kæn	ŋkén	can
taim	ntâm	time

The above data reveals two phonological processes which can be derived through the following rules:

(7) Rule(a) ø -> N / #-C Nasal insertion
[obstr / son]

This rule states that a nasal becomes inserted before an obstruent or a sonorant at word initial position.

Rule (b) $N \rightarrow ŋ / - \begin{Bmatrix} g \\ k \end{Bmatrix}$

N-> m / - m
N -> n / - s

These rules can be summarized as

$$N \quad \text{--}> \quad \begin{bmatrix} \alpha \text{ cor} \\ \alpha \text{ ant} \end{bmatrix} \; / \; - \begin{bmatrix} \alpha \text{ cor} \\ \alpha \text{ ant} \end{bmatrix}$$

This implies that a nasal takes the place of articulation of the consonant it precedes.

The above explanation is made clear in the derivation[2] that follows

(8) Derivation of ńsôp, ŋk^{h}ɔ̂p, mmɛ́g

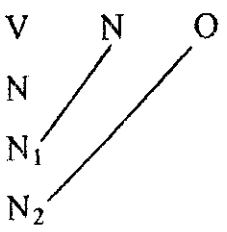
UR /	-səʊp	-k ʌp	-mʌg /
	¦	¦	¦
Nas. Insert	N	N	N
Nas. Assim	nsəʊp	ŋk ʌp	mmʌg
	¦	¦	¦
Phonetic Approx	ɔ	ɔ	ɛ
Aspiration	—	ŋk^{h}ɔp	—
PR	[nsɔp	ŋk^{h}ɔp	mmɛg]

In this derivation, all tones are ignored because we will show in the later part of the work how tones are derived in loanwords.

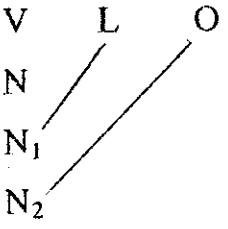
[2] In this derivation all change in vowel is considered simply as phonetic approximation because the change is not consistent. Consequently, it is difficult to come out with a rule that will apply to all.

Complex consonants or consonant clusters may occur within a word in this language, but never at word final position. A sequence such as the one below is rejected

(9)



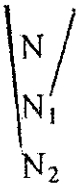
*amp



*ilk

Loanwords with consonants of this nature are adapted as follows

(10) kæmp



kâm

"camp"

bæŋk

bâŋ

"bank"

Other examples include:

(11) Borrowed form	ɛjagham	Gloss
kaind	kân	kind
kætikist	kàtàkís	catechist
plæŋk	pláŋ	plank
ziŋk	zíŋ	zinc
θaʊznd	tɔ́sìn	thousand
paʊnd	pâŋ	pound (currency)

The above data permits us to formulate a consonant deletion rule as follows

(12) Rule: C -> ø / C -- #

This rule means that a consonant is deleted after a consonant at word final position.

3.2.3 Final Consonants (C_2)

At word final position, only plosives such as p, b, t, d, ɗ, g and nasals m, n, ŋ, do occur in this language. A sound such as the lateral [l] does not.

(13) N_1

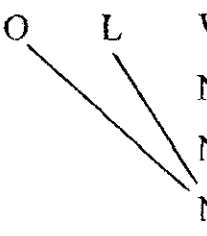
$$\begin{bmatrix} +\text{cont} \\ +\text{ant} \\ -\text{lab} \\ +\text{cor} \end{bmatrix}$$ *kel, *nal, *bil

Consequently, we expect this sound to be rejected at this position in loanwords just like the glottalic fricative [h] at word initial position. Unfortunately, this is not the case. Consider the following loanwords

(14)	Borrowed form	ɛjagham	Gloss
	tɛibl	é-tébl	table
	ketl	é-kétl	kettle
	taʊəl	táwel	towel
	kændl	kándl	candle

The question one raises here is to know why there is the acceptance of this sound at this position. We had shown earlier in this work that lateralisation is a common phenomenon in this language. It occurs at word initial and medial position. Hence we have a sequence such as the one in (15)

(15)



V		
N		
N_1	*m-blí*	leave
N_2	a-mlòt	fur

We have observed that all instances where obstruents precede liquids are permissible in this language. As a result speakers tend to adopt the lateral sound in this position more easily than they would reject it. In so far as they respect the sequence obstruent-liquid, the adoption of this sound is also evidenced in the following loans

(16) Borrowed form	Ejagham	
flour	fláwà	
French	òflɛ̀	
tafel	táflɛ̀	(Dutch)
ŋkan.ŋka	ŋkláŋká	(Efik) (bell)
clock	klɔ̂k	

In the examples above the lateral is preceded by obstruent. The reverse of it is no longer permissible in the language. Probably it is for this reason that / milk / is realized as /milik/ in this language. A vowel is copied from left to right so as to break the unwanted sequence –lk-

3.3 Restriction in vowels

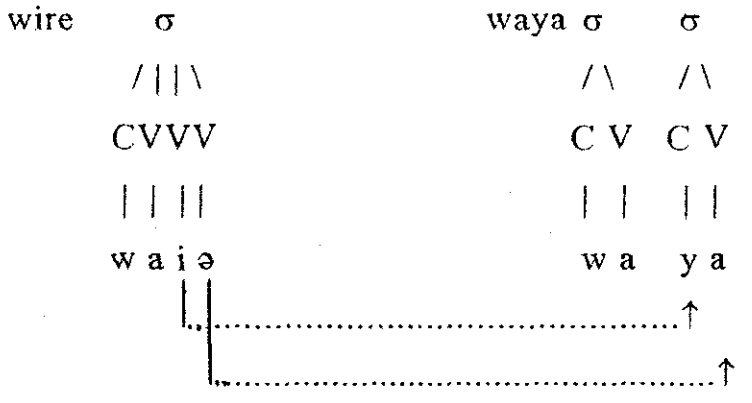
The vowels of Ejagham are very much restricted if we compare them with those of Indo-European languages. We will show in the examples that follow how speakers of this language "nativize" loanwords with such strange vowels. One of the ways is through glide formation.

3.3.1 Glide formation

Glide formation refers to a process whereby a vowel devocalizes into a semi–vowel or semi consonant. When a lexical item having diphthong is borrowed, the diphthong is simplified through this process. In other words, a glide is inserted to break up diphthongs.
E.g. $CV_1V_2(V_3)$ -> CVGV where G stands for a glide.
The word automatically becomes re-syllabified as follows

(17)

English	Ejagham
wire	waya



Other examples of glide formation include:

(18)	Borrowed form	Ejagham	Gloss
	kwaiə	kwáyà	choir
	auə	áwà	hour
	reidiəu	rédyô	radio
	aiən	áyân	iron
	peə	pyâ	pear
	flaʊə	fláwâ	flour
	ʌniən	ɔ́nyɔ̂s	onion
	biə	byâ	beer

(19) i -> y/-ə
u -> w/-ə

The preceding data exposed us to a glide formation rule which states

(20) Rule: $\begin{bmatrix} -\text{cons} \\ +\text{syll} \\ +\text{hi} \end{bmatrix}$ -> [-syll] / -- $\begin{bmatrix} +\text{syll} \\ -\text{cons} \end{bmatrix}$

These rules state that the high vowels /i/ and /u/, become semi-consonants /y/ and /w/ respectively before a vowel.

3.3.2 Vowel Lowering

In this language, final vowels of CVCV roots are limited to –ɛ, but we notice that words which end with a schwa in the donor language are pronounced with [a] in Ejaham. This consistent vowel modification is probably because in terms of place of articulation, [ə] is nearer to [a] than [ɛ]. Below are some examples

(21)	Borrowed form	Ejagham	gloss
	peipə	pípà	paper
	leibrə	lébrà	labourer
	əuvəsiə	òβàsyâ	overseer
	lɔ:jə	lɔ́yâ	lawyer
	səʊldʒə	sójâ	soldier
	haemə	ámâ	hammer
	endʒiniə	njìníyâ	engineer
	trauzə	trɔ́sà	trouser

This phonological process can be captured as follows

(22) $\begin{bmatrix}\text{-high}\\ \text{-low}\end{bmatrix}$ -> [-high] /- #

or simply ə -> a / - # Vowel lowering

It states: a schwa becomes [a] at word final position

For more clarification, we will attempt a derivation to show how glide formation and vowel lowering take place.

(23)

Derivation of	fláwà,	ámà	kwáyà	pípà
UR/	flavə	hæmə	kwaiə	peipə /
Glide Formation	w	-	y	-
Vowel Lowering	a	a	a	a
Phonetic approx	------	a		i
h - deletion		ø		
PR	[flawa	ama	kwaya	pipa]
	"Flour"	"hammer"	"choir"	"paper"

3.3.3 Prothesis

Some lexical items borrowed from English and other African languages are prefixed in this language. Prefixation does not just ease pronunciation for the native speaker, but also enable words to fit into specific noun classes. This process is what is referred to linguistically as Prothesis

(24)	Borrowed form	Ejagham	Gloss	Source language
(a)	-kaba	è-kàβà	traditional gown	Duala
	-sanja	è-sànjà	loincloth	Duala
	-jigida	à-jìgìjá	waist chain	Hausa

	-kanda	è-kàndá	belt	Pidgin
	-kaŋwa	à-káŋwá	limestone	Pidgin
	-kʌbəd	ɔ-kɔ́ββr	cupboard	English
	-rice	è-rísì	rice	English
	-kuča	è-kučá	sponge	Pidgin
	-kitʃin	é-kíčìn	kitchen	English
(b)	a-basɛ	o-βàsì	God	Balondo
	mu-loŋga	e-lòŋgá	bucket	Duala
	i-nɔ́n	ni-nɔ́	birds	Duala

The examples in (a) above show how loanwords with ø- prefix are accorded prefixes in Ejagham. This gives us a rule for prefixation

(25) Ø -> V/#--

It means that a vowel is inserted at word initial position; on the other hand, the forms in (b) simply show a change in prefix in loanwords that have prefix from source language.[3]

3.4 Auto Segmental Phonology

Unlike segmental phonology, here we are going to talk about tones in loanwords, how they are derived, their surface and underlying forms as well as their alternations.

[3] Assibilation which is one of the phonological processes common in this language can be seen in e-kaβ a, ɔ-kɔ́ββr and ɔ-βasi. It states b -> β / V-V

3.4.1 Tones and stress

Borrowing from English to Ejagham is a process that is done from a stress-timed language,[4] to a tone language.[5] In such circumstances, loanwords from English into Ejagham are made to bear tones and function under the same tone rules as indigenous words of Ejagham. This phenomenon is made possible in that, speakers tend to match stressed syllables in English with high tones, and unstressed syllables with low tones in a spontaneous manner as evidenced below.

(26)	Borrowed form	Ejaham	Gloss
	'ma:stə	másà	master
	mi'kænik	màkánìk	mechanic
	endʒ'niə	ǹjìníyà	Engineer
	'ʃʊgə	súkà	sugar
	mə'njʊə	mànyɔ̂	manure
	aj'dentəti	àdáŋtítì	identity

In the borrowed forms, the diacritic / ' / stands for stress.

3.4.2 The distribution of tones in loan nouns

Loanwords do not have a fixed tone pattern. Their tonal distribution vary from one loanword to the other. In this part of the work, we would group those with similar tone pattern in order to account for their underlying forms.

---

[4] A stress-timed language is one where stress (or loudness) has a cumulative function in signaling prominence. (TAMANJI 1995)

The most significant distribution of tones can be noticed on disyllabic roots of loanwords.

(27)

a) LH

sìká	cigarette	
kàká	cocoa	
ɛ-lòŋgá	bucket	(Duala)
ɛ-kùčá	sponge	(Pidgin)

b) HL

ɛ-rísì	rice	
súkà	sugar	
ɛ-lóŋgì	choir	(Duala)
bísìn	basin	

c) HH

m-básá	cross	(Duala)
o-rúkáŋ	match	(Efik)
ákpú	cassava fufu	(Efik)
ŋ-kláŋká	bell	(Efik)

d) HHL

sɛ́rɛ̂ŋ	shilling
bɔ́kɛ̂r	bucket
ŋ-kárâŋ	a type of scissors
kɔ́lɛ̂s	college

[5] A tone language is a language having lexically significant, contrastive but relative pitch on each syllable(Pike 1948.3)

e) LL

ɛ-sànjà	loin	(Duala)
ɔ-βàsì	God	(Balondo)

As can be seen from the data above disyllabic noun roots of loanwords exhibit three different tonal melodies namely: the H tone, the L tone and the HL tone. Despite these surface tones, Ejaham loanwords have essentially two underlying tones, the H and L tones. The explanations below account for these two tones.

In (27a) and (27b) we will consider the forms to have two tones underlyingly, viz the H and L tones. Each links to its corresponding root vowel through the Universal Association Convention of Pulleyblank (1986a) which states:

Association Conventions

Map a sequence of tones onto a sequence of TBU

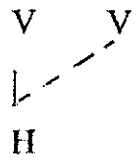
a) From left to right
b) In a one-to-one relation

Well-formedness condition
Association lines do not cross.

In (c and d) where the tone is underlyingly H, the H tone links to the first root vowel and later spreads to the second which is underlyingly toneless in (27c), but which has a Low tone in (27d). After HTS takes place, the L tone links to the second root vowel giving rise to a HL contour in (27d).

We would consider the last forms (e) to be toneless underlyingly and they get their L tone by default.

(28) Rule: High tone Spreading



This rule states, a High tone spreads to the following TBU.

The derivations below better illustrate these arguments

(29)	mbásá	sérêŋ	è-sànjà
UR /	m-ba sa	sɛrɛŋ	e-sanja /
	L H	H L	L
UAC	m-ba-sa	sɛrɛŋ	e-sanja
	L H	H L	L
HTS	m-basa	sɛrɛŋ	
	L H	H L	----
Default L	m-basa	sɛrɛŋ	e-sanja
	L H	H L	L L L
PR	[m̀básá	sérêŋ	è-sanja]
	"cross"	"shilling"	"loincloth"

3.5 Summary

In this chapter, we have shown that change in segments in loans come as a result of restriction of occurrences in sounds that exist in the language. Such is the case with complex and final consonants. Also, that sounds which do not exist in the language are adapted differently or deleted like we have for vowels and initial consonants respectively. In the course of showing how these changes in segments occur, we have come up with restructuring phonological processes such as Nasal insertion, Glide formation, Vowel lowering, Consonant deletion, Vowel insertion at word initial position technically called prothesis.

There are equally instances of Nasal assimilation, Assibilation, Aspiration and Lateralisation which are phonological processes that exist in the language. At the suprasegmental level, we have shown how loan words acquire tones, also how their underlying tones result into surface tones.

CHAPTER IV

THE PHONOLOGY OF LOANWORDS IN VERBS

4.0 Introduction

This chapter is aimed at examining the Ejagham loan verbs. Although limited in number compared to the nouns, the verbs exhibit interesting phonological phenomena. We are going to look at the structure of the loan verbs, their infinitive forms, then the conjugation system, given that tenses influence tones on verbs. We will end by examining some cases of reduplication in loan verbs.

4.1 The Structure of Loan Verbs

At the level of a syllable, loan verbs present the following shapes as illustrated in (1):

(1)	Original form		Ejagham		Gloss
a)	CVV	pei	CV	pî	pay
b)	CVVC	sain	CVC	sân	sign
c)	CVCC	pʌmp	CVC	pôm	pump
d)	CCVCC	trʌst	CCVC	tôs	trust
e)	CCVV	trai	CCV	trâ	try

The syllable structure of loan verbs is not very different from that of verbs in Ejagham. We thus have structures like:

(2)	CV	kô	take
	CVC	sâŋ	select
	CCVC	blɔ̂k	rub
	CCV	gwà	break

Loan verbs have only monosyllabic and disyllabic forms such as the ones below:

Monosyllabic:	wê	weigh
	fît	fit (from Pidgin meaning to be able)
Disyllabic:	sɔ́mɔ̂s	summon
	pɔ́nɛ̂	punish
	bɛ́nɛ̂	bend

In the preceding syllable structures, syllables with the sequence CC in their onset such as in (1d) and (1e), do not pose any problem to speakers of this language. This is because it is the sequence Obstruent –Liquid which, as we have shown earlier, is a plausible one for words in this language.

On the other hand, syllables with the sequence CC on their coda like in (1c) and (1d), have one consonant deleted because the language does not permit consonant clusters at word final position. This is exemplified in the sketch below

(4) T r ʌ s t —> t r ɔ s t "trust"

Still in the syllable structures the original form has the sequence VV in (1a) and (1b) and (1e) which is realised as V in Ejagham. In verbs just like in nouns, the vowel that changes from diphthong to monophthong is not consistent. This is shown in (5).

(5):

	English	Ejagham	Gloss
ei — i	pei	pî	pay
ei — e	wei	wê	weigh
ai — a	trai	trâ	try
	sain	sân	sign

The above situation exposes us to another problem, that of determining the choice of any given vowel. In order to do this, we shall use loanwords with diphthongs. Owing to the fact that loan verbs are limited in number we shall include nouns so as to clearly bring out the pattern.

4.1.1 Determining the choice of a Vowel

In a syllable whose nucleus has the sequence VV such as in English, only one of the vowels is maintained in the course of borrowing. What motivates the choice of the vowel that is maintained is not clear. Consider the following dipthong realisations from English to Ejagham:

(6)	English	Diphthong realisations	Ejagham	Gloss
	pei	ei — i	pî	pay
	peipə	ei — i	pípà	paper
	wei	ei — e	wê	weigh
	leibra	ei — e	léβrà	labourer
	taim	ai — a	ntâm	time
	sain	ai — a	sân	sign
	trai	ai — a	trâ	try
	kaind	ai — a	kân	kind
	paʊnd	aʊ — a	pâŋ	pound
	θauzend	au — ɔ	tɔ́sìn	thousand
	trauzəz	au — ɔ	trɔ́sà	trousers
	səup	əu — ɔ	nsɔ̂p	soap
	əuvəsiə	əu — ɔ	ɔ̀βàsíyà	overseer

The above table reveals three types of vowel simplification:

a) Front rising diphthongs are simplified by a single front vowel
b) Back rising diphthongs are simplified by a single back vowel
c) Front rising diphthongs simplify into a low vowel a.

4.2 The infinitive form of Loan verbs

Just like verbs in Ejagham, loan verbs have a prefix, a root and a suffix as components in the infinitive form. Consider the following examples.

(7)		
	è- βéné	to bend
	è- pɔ́né	to punish
	è- fɔ́m-é	to form

è- sán-é to sign
è- sɔ́mɔ́s-é to summon
è- pɔ́m-é to pump
è- pí-í to pay

Looking at the above forms we could see that the infinitive form has an underlying H tone which is realised on the suffix. This assumption is due to the fact that Low tone verbs in this language surface with a H tone in the suffix or final vowel.

(8): làŋ touch è-làŋ-é to touch
kùmê sit è kùmé to sit
kèlê give è kè lé to give

This presupposes that if we had loan verbs with a Low tone on the root, only the suffix would have had a high tone in the infinitive.

The suffix –i in the form for *pay* can be explained by the rule of vowel harmony earlier discussed in section 2.6, according to which a non-high vowel becomes [+high] before a [+high] vowel represented as:

[-hi] -> [+hi] / [+hi]-

The other forms of loan verbs could not have assimilated because they are not [+high]

Secondly, we could say that the nasal sound that follows has an impact on the preceding vowel. Consider the following situation where we have a [+high] followed by a nasal in the root in the language.

(9) tûm send è-túm-é to send
sûm hit è-súm-é to hit

The [+hi] does not assimilate to the final vowel. Whereas when the nasal is replaced, assimilation occurs as shown below:

(10)	tùk	pull	è-tùɣ-ú	to pull
	sùk	wash	è-suɣ-ú	to wash

Finally, we want to emphasize here that all verbs in English could be attributed this form in the infinitive.

(11):	è-kɔ̀lɛ́kt-ɛ́	to collect
	è-sɔ̀màrís-ɛ́	to summarize
	è-mɔ̀nɔ̀pɔ̀lís-ɛ́	to monopolize

But we are dealing only with those verbs that are commonly used by native speakers, even the illiterates, or at least those that are difficult to replace by native words. Verbs such as the ones above are commonly used by literates. They can be treated as an aspect of morphemic mixing. We do not consider them as loan verbs in this study. This also goes to account for the few number of loan verbs.

4.3 The imperative

Loan verbs can equally stand in isolation to give a complete meaning. This is exemplified in (12)

(12):	trûs	trust
	pôm	pump
	sân	sign
	bɛ́nɛ̂	bend
	pɔ́nɛ̂	punish

The above examples surface with a falling tone for both monosyllabic and disyllabic loan verbs. This phenomenon is equally noticed in H tone verbs in this language. We are suggesting that these verbs are underlyingly H, and the imperative marker is a floating L tone which docks onto the final root vowel. This can be justified by L tone verbs in the language which remain Low in the imperative form.

(13): làŋ touch
kèlɛ̂ give
wùlɛ̂ sell

This is equally justified in disyllabic L tone verbs when they take an object that has a Low tone prefix as exemplified below:

(14) a. ŋ̀kɔ̀k fowl -> kèlɛ́ ŋ̀kɔ̀k give the fowl

b. éfɔ̂ cloth -> wùlɛ́ éfô sell the cloth

The above prove that there is no Low tone in example (14a) because it would have blocked the H tone spread to the object prefix. If (14b) had a Low tone, the H tone object would have had a LH contour.

This goes to justify that the falling contour in the imperative form of loan verbs is not underlying, but is a result of a floating Low tone which docks to the root vowel with a high tone

4.4 The Tonal Pattern of Loan Verbs

Basing our analysis on the few loan verbs that we have, we observe that loan verbs have just two tone patterns at the surface level for monosyllabic and disyllabic words as follows:

(15) a. HL

pî	pay
sân	sign
wê	weigh
trâ	try
pôm	pump
fîr	fit

b. H.HL

sómôs	summon
bénê	bend
pónê	punish

Despite the fact that the above verbs surface with a falling tone, underlyingly, they are different. In (15a) we would argue that the root has a long vowel which we would represent as VV.[1] The first root vowel has a H tone underlyingly which is linked to it, while the second root vowel has a floating Low tone that docks after vowel assimilation has occurred to the first root vowel, thus giving it a HL contour tone. We will propose a rule to account for vowel assimilation and tone docking

[1] In languages where there are long and short vowels, a long vowel will be represented with a double vowel. e.g a: = aa. Tadadjeu and Sadembouo (1984)

(16) Rule:

a) V V -> V vowel assimilation

| | |

H L H L

This rule states that a vowed assimilates to a preceding vowel leaving behind its TBU floating

b) V V

| -> |\

H L H L tone docking

This rule states a floating Low tone docks onto a preceding TBU

One strong reason for this analysis is that in this language, there are words with long vowels at the surface level, although some of them are derived historically from a lost segment. The examples below illustrate such cases:

(17)	mlάâ	scatter	(mlãã)
	é-βúú	mud bed	(eβũũ) Derived from e-βúní
	ǹ-čáá	gift	
	kùû	place on something	(kũũ) Derived from kùní
	pìî	loosen	

It is however important to note that long vowels are found only in monosyllabic roots in this language. (see section 2.7)

One may also say that the contour tone stems from the fact that the borrowed form has a diphthong, for as Pike (1946) puts it *"The fact that more than one tone occurs with a single TBU in some languages may be compared with the occurrence of a vocalic diphthong."*

For the forms in (b) we assume that the first and second root vowels are both underlyingly High and the floating L tone docks later to the second root vowel giving it a HL contour tone. To justify that they are both underlyingly H, let us look at the infinitive forms of indigenous verbs whereby the suffix has a high tone irrespective of whether the root is Low or High

(18):	a)	kɛ̀lɛ̂	give	è-kɛ̀ lɛ́	to give
	b)	wùlɛ̂	sell	è-wùlɛ́	to sell
	c)	kámɛ̂	stoop	è-kámɛ́	to stoop

The above examples show that in disyllabic verbs, there is no H tone spread from the root to the final vowel.

For both forms (a and b) we consider that the L tone is floating and not underlying because the verbs are in the imperative form. The imperative marker is a floating Low tone.

The derivation below gives a better illustration of all the above explanations

(19) Derivation for: pî sân and p ɔ́nɛ̂

UR /	pii	saan	pɔnɛ	/
	¦	¦	\ /	
UAC	HL	HL	HL	
Vowel Ass.	pi	san	—	
	|	|		
	HL	HL		
Tone docking	pi	san	pɔnɛ	
	|\	|\	\/¦	
	H L	H L	H L	

PR [pî sân bénɛ̂]

4.5 Conjugation system of Loan Verbs

Tones in this language do not only play a lexical role but also a grammatical one. They are used to distinguish morphologically different forms of the same word. Loan verbs portray a vast tonological alternation when used in different tenses.

The Ejagham Language makes use of tenses such as the present, the past, and the future tenses. In addition, it has modals such as the hortative and the conditional. The present tense has no direct present form per se, rather it is action which is expressed in a present continuous manner, while the past has one form for which various time markers are attached to determine whether it is near or distant past.

To show how these tenses are used in loan verbs, we will use the first person singular "I" and the third person plural "they" as sample representations of all the persons. We will equally limit ourselves to three tenses viz: Po = The present tense

P_1 = The past tense

Fo = distant and near future

4.5.1 The First Person Singular mì = "I"

Loan verb (imperative)	Infinitive	Po	P_1	Fo
1) Pî Pay	è-pí-í to pay	mì ŋké pī Isg. Prog. Verb I am paying	mì mpî I paid	čòŋ mì mpî fut Isg. I will pay
2) sómôs summon	è-sómós-é to summon	mì ŋké sōmōs Isg. Prog. Verb I am summoning	mì nsóm ôs I summoned	Còŋ mì nsómôs Fut. Isg. I will summon

4.5.2 The third person plural á = they

Loan verb (imperative)	infinitive	Po	P_1	Fo
1) sân sign	è-sán-é to sign	á ké sān 3pl. Prog. Vb they are signing	Á-sân they signed	ćɔŋ á sân Fut. 3pl They will sign
2) pónɛ̂ punish	ɛ̄-pónɛ́ to punish	á ké pɔ̄nɛ̄ 3pl Prog they are punishing	á pónɛ̂ they punished	cɔ̀ŋ á pónɛ̂ fut 3pl They will punish

Before proceeding with the analysis of the underlying tone for each tense, we must precise that generally, the tones on the subject markers neither influence nor are they influenced by the tones of the root verbs.

4.5.3 The Present tense Po (progressive)

As said earlier, there is no overt present tense marker. The present continuous tense has the morpheme ké and a floating Low tone. The floating L does not dock onto the progressive marker but influences the root verb with a H tone to downstep to a mid tone.

(20): mì ŋké ` ꜜpī — I am paying

(prog)

ò ké ` ꜜtrā — you are trying

á ké ` ꜜpɔ̄nɛ̄ — they are punishing

The above illustration permits us to formulate the following rule

(21)

In prose, this rule states that a high tone downsteps to a mid tone when preceded by a floating Low tone.

(22) Derivation

		mì ŋké pī		á ké pɔ̄nɛ̄		
UR /	mi	ke	pi	a	ke	pɔnɛ /
	|	|	|	|	|	V
	L	HL	HL	H	HL	HL
Nasal Assimilation	mi	ŋke	Pi			
	|	|	|		———	
	L	HL	HL			
Downstep H	mi	ŋke	pi	a	ke	pɔnɛ /
	|	|	|	|	|	V
	L	HL	↓HL	H	HL	↓HL
			¦			¦
Stray erasure			↘ø			↘ø
PR	[m̀ ŋké pī			á ké pɔ̄nɛ̄]		

4.5.4 The Past tense P_1

To determine what marks Pi, we will posit a floating H tone, which appears before the verb root. This floating H docks onto the first root vowel. The verb root originally has an underlying H and a floating L tone. Consequently, when the floating H docks to the root vowel, its presence is not noticed. This is illustrated below.

(23)	á ´sân	they signed
	à ´pî	he / she paid
	mì ´nsómôs	I summoned

The above explanations can be justified by low tone verbs in the language which become H in the past tense.

(24):	làŋ	mi ´nlâŋ	I touched
	Jò	á ´Jô	they roasted
	kɛ̀lɛ̂	à ´kɛ́lɛ̂	he / she gave
	lɛ̀ β ɛ̂	ò ´lɛ́βɛ̂	you opened

In disyllabic root verbs the tone becomes simplified after docking on the first root vowel.

The above explanations give us the following rule for tone docking

(25) Rule:

V

/\ High Tone docking

H L

This rule means that a floating H tone docks progressively to a vowel associated to a Low tone. We will make a derivation for the following

(26) á sân mì nsómôs à kélê

UR / a san mi sɔmɔs a kɛlɛ /

| | | | V | | | |

H HL L HL L L HL

Nasal Ass —— mi nsɔmɔs —

| V

L HL

H tone dock — san — nsɔmɔs — kɛ lɛ

L tone delink

H HL H HL H L HL

Stray erasure

|

ø

Tone simplific — san — nsɔmɔs — kɛ lɛ

| V V

HL HL H L

Low tone — san — nsɔmɔs — kɛlɛ

dock

HL HL H L

PR [á sân mì nsómôs à kélê]

In the derivation in (26), kèlê is a native verb. We have derived it alongside loan verbs in order to show how a Low tone loan verb could be derived if we had one.

4.5.5 The Future tense Fo

The future tense marker is almost the same like that of the past tense. The only difference is that it has an additional morpheme čɔ̀ŋ which has an underlying Low tone. This morpheme combines with the past tense morpheme to give the future.

(27). čɔ̀ŋ mì ´mpî I will pay
čɔ̀ŋ á ´pôm They will pump

When we look at both tenses P1 and Fo we notice that while P1 has only an auto-segmental morpheme to mark the past, Fo is marked both segmentally and auto-segmentally in the future.

(28) UR / čɔŋ a pɔm /
| | |
L H HL

H Tone docking — — pɔm
H HL

Tone simplific — — pɔm
|
HL

Low Tone dock — — pɔm
H L

PR [ĉɔ̀ŋ á pôm]

4.6. Reduplication in Loan Verbs

In chapter two of this work, we mentioned that loanwords such as nouns and verbs, do not exist in reduplicated form but they can be reduplicated to give different meanings. In the case of Ejagham loan verbs, the reduplicated form conveys the meaning of what might roughly be translated as *Just* + action. Below are some examples

(29)	Basic form	Reduplicated form	
a)	pɔ̄m	pɔ́mépɔ̄m	just pump
	trâ	tráétrā	just try
	sân	sánésān	just sign
	pî	piepī	just pay
	trɔs	trɔ́sétrɔ̄s	just trust
b)	pɔ́nê	pɔ́né(é) pɔ̄nē	just punish
	sɔmɔs	sɔ́mɔ́sésɔ̄mɔ̄s	just summon
	bénê	béné(é)βēnē	just bend

As stated earlier, verbs in the infinitive form in this language have the structure pfx +rt+ fv. In the above forms, we notice that the verb root is reduplicated, while an -e- separates the reduplicant from the base [2].

At this point, one may want to know which segment stands for the reduplicant and which is the base, as well as the direction of the

[2] A base is a unit to which the template is affixed. It can be a word, a stem, or a root. On the other hand, a reduplicate is the material under the template (Marantz 1982, Vernyuy 1997)

A template refers to the reduplicative affix. McCarthy and Prince (1986).

reduplicative affix, whether its melody associates from left to right or from right to left.

To answer these questions, we would assume that the base is made up of a stem i.e. prefix + verb root. The entire stem is reduplicated and affixed to the base from left to right. Meanwhile, we will posit CV as the reduplicative template.

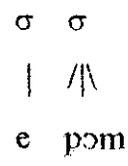
If this assumption holds true, then to account for these forms we will consider reduplication as a normal affixation process and would be analyzed here as the addition of a phonemically bare affix to a base morpheme or word, which then triggers the mapping of the base's melody to the affix (Marantz 1982)

4.6.1 Reduplication in Monosyllabic roots.

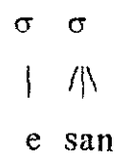
We will show how it takes place in pómépɔ̄m and sánésān.

We have the base which is a stem

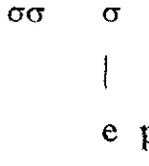
(30) a) i

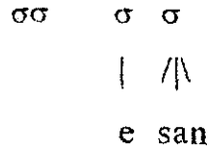


ii

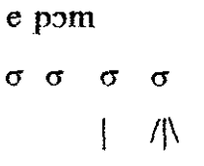


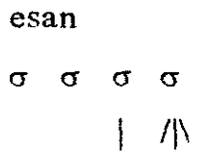
b) We prefix the reduplicative stem syllable to the base





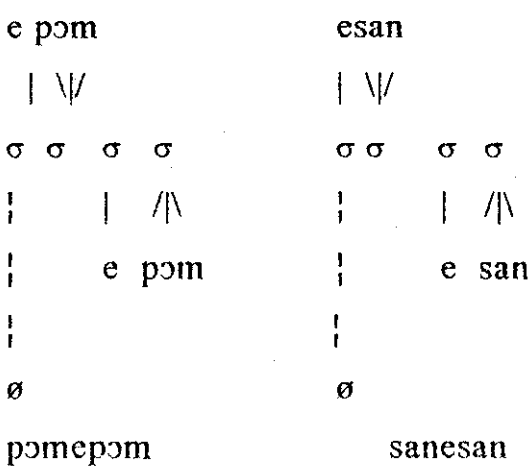
c)The segmental melody of the whole stem is copied to the right.





d) We then map the syllable node to the segment from left to right; meanwhile automatic syllabification takes place and the segment which does not meet the condition for syllabification is stray erased

(31)



4.6.2 Reduplication in Disyllabic roots

With disyllabic roots of loan verbs, a similar process takes place. The only difference is that disyllabic verbs with the shape CVCV have their prefix vowel of the base assimilated to the final vowel of the reduplicate. However, this phenomenon is only noticed in fast speech for instance

pɔnɛ e pɔnɛ -> pɔnɛpɔnɛ

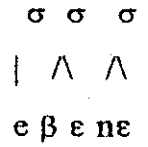
bɛnɛ e βɛnɛ -> bɛnɛβɛnɛ

CVCV.V.CVCV CVCV.CVCV

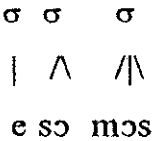
Considering the above explanation, reduplication in disyllabic roots can be derived as follows:

First there is the base

(32) a. i)

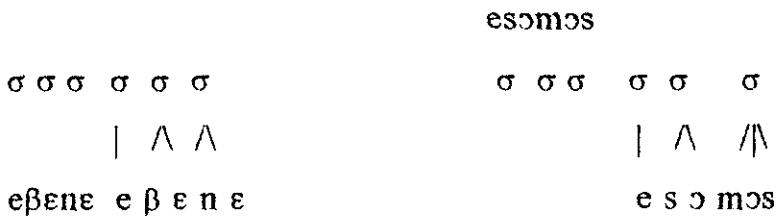


ii)

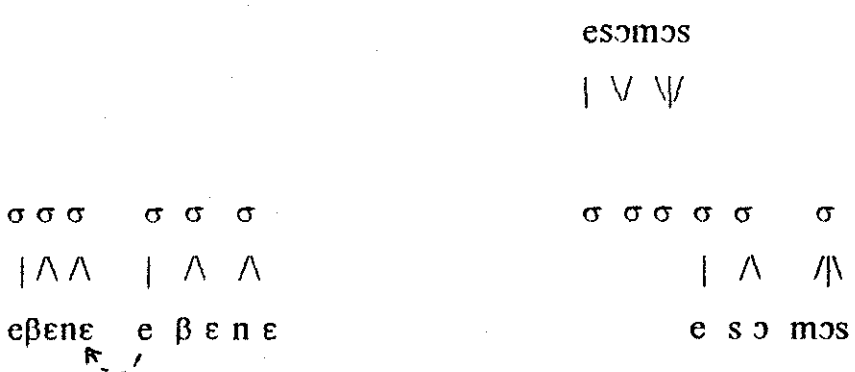


b. The reduplicative stem syllable is prefixed to the base

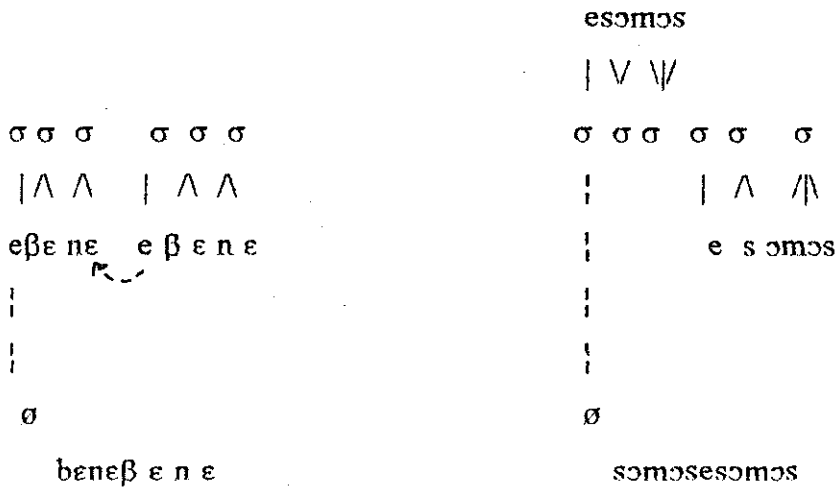
c. The phonemically bare affix triggers the copying of the base melody to the right



d. The copied melody is associated with the syllable nodes, the copied material undergoes automatic syllabification. Meanwhile the prefix of the base assimilates to the FV of the reduplicate in (i)



e. The unsyllabified material is stray erased after vowel assimilation has occurred.



Vowel assimilation could only take place at the end of the reduplication process because it is the entire stem that has to be copied. Consequently, if assimilation occurred earlier, only the root would have been reduplicated, thus we would have had a wrong result in the derivation.

4.7 Summary of chapter IV

To summarize the various aspects that have surfaced in this chapter, we will make the following remarks:

First, loan verbs have their syllable structures modified to suit those of Ejagham words.

Secondly, loan verbs have an underlying High tone that is accompanied by a floating Low tone for both monosyllabic and disyllabic verb roots.

Thirdly, tenses influence tones on loan verbs

Fourthly, each tense has an underlying tone

For instance: a) The Present tense has the morpheme
ké and a floating L tone.
b) The past has a floating H tone
c) The Future has a discontinuous morpheme which is
čɔŋ and a floating H

Moreover, LVs take the same form like indigenous verbs in the imperative and infinitive.

Lastly, loan verbs undergo whole stem reduplication.

CHAPTER V

5.0 GENERAL CONCLUSION

The Ejagham language like many others, borrows words for one reason or the other. Given that the language has its own phonological, morphological, and grammatical rules that govern it, any foreign word that comes into the language must abide to the rules of one of the above domains.

The main objective of this work has been to examine the changes that occur in loanwords in the course of abiding and to give logical phonological explanations to them. In the paragraphs that follow, we will make a synthesis of the work done so far.

5.1 Summary

This work, The Phonology of Loanwords in Ejagham, is made up of five chapters.

In chapter one, the researcher gives a background information of Ejagham as a whole, its linguistic situation, the methodology used in the collection of data, the theoretical framework, literature review, the aim of the work and its limitations.

In chapter two the researcher examines the word structure and some major phonological phenomena in Ejagham such as Nasal assimilation, Lateralisation, Assibilation, Reduplication, Vowel harmony

Aspiration and labialisation. In each process aspects such as tones and rules are brought out. The purpose of this is to see if

some of these processes could be found manifesting in loanwords, so as to render a better account of them.

Chapter three dwells on the phonology of loanwords in nouns. The work in this chapter is divided into two parts. Part one has to do with segmental phonology. Here we examine the initial, final, and complex consonants of loan nouns in relation to the restriction of occurrences of sounds in the language. This gives rise to phonological processes like consonant deletion, prenasalisation, nasal assimilation, glide formation as a result of triphthong and diphthong simplification, vowel lowering, and prothesis. Part two deals with autosegmental phonology. That is we illustrate how loanwords acquire their tones and the way these tones function. All these processes are accompanied by rules and derivations done where necessary.

Chapter four focuses on the phonology of loanwords in verbs. It begins by proving that verbs from Ejagham have complex syllable structures which become simplified in the Ejagham language. This chapter also examines the infinitive and imperative forms of loan verbs, their tonal pattern as well. It comes out that all loan verbs, whether monosyllabic or disyllabic have an underlying High tone. The conjugation system of loan verbs reveals that tones on loan verbs are affected by tenses. The tenses are examined one after the other. For each of them, the underlying tone is brought out. Native words have equally been used in this chapter to give justifications. This chapter ends up with reduplication in loan verbs. We have shown that the nature of reduplication here is whole stem.

Chapter five is made up of a summary, problems encountered and possible solutions, an appendix which consists of

loan words and native words used for illustration, and lastly a list of bibliographical references.

5.2 Problems encountered and possible solutions.

The researcher will not be honest to herself to say that there were no difficulties encountered in the course of analysis.

During our analysis, we discovered that English words with diphthongs are not easy to analyze because they do not have a fixed pattern when simplified as shown in (1).

(1). /ei/ in pei is simplified as /i/ in pî pay
/ei/ in wei is simplified as /e/ in wê weigh
/əu/ in səup is simplified as /Ɔ/ in ńsɔ̂p soap
/au/ in θaunzənd is simplified as /Ɔ/ in tɔ́sìn thousand

Examples of the above nature abound. Such a situation made it difficult to come up with a rule that could apply to all vowel simplification and to account for the choice of either vowels.

A proposed solution to the above problem could be to consider any of the two vowel realizations simply as phonetic approximation. We say so because we have observed and seen that the front rising diphthongs are simplified by the front vowels /i/ and /e/ while the back rising diphthongs are simplified by the back vowels /ɔ/ and /a/.

Other complex vowels however stood as exception to the above problem. For instance

a) /ai/ is permanently simplified to /a/
b) Triphthongs are permanently simplified to glides /y/ and /w/

c) The central vowel /ə/ is permanently simplified to the back low vowel /a/.

We treated prenasalised sounds as mb, ŋk, nd, etc. as separate phonemes since nasals are [+ syllabic] and always act as a noun class prefix on nouns and as subject prefix on verbs.

We are proposing that the nasal be considered a single unit but which phonetically has different realizations when it partially assimilates the following consonant as exemplified in (2).

(2):	N	->	ŋ̍k^{h}ɔ̂p	cup
	N	->	ŋ̀k^{h}ɔk	cock
	N	->	ŋ̀kɛ́n	can
	N	->	ǹtâm	time
	N	->	ǹsɔ́mɔ̂s	I summoned (mì = I)
	N	->	m̀pî	I paid
	N	->	m̀még	mug

Another problem had to do with lateralised consonants: ml, bl, ɣl. They were considered as consonant clusters rather than single phonemes. Lateralised consonants should be seen merely as an innovation in this language; consequently they should not be in the underlying representation. This innovation is however positive because it has rendered easy the adoption of loanwords with the sequence

(3) Obstruent-Liquid

:	flour	->	fláwa
	tafel	->	táflè
	French	->	òflè
	kettle	->	ékétl

table -> étébl

kerosene -> krasin

One major innovation which loanwords have brought into the Ejagham language is that the lateral sound occurs at word final position. No word in this language has the lateral sound in this position.

A general observation made by the researcher is that loan words form an integral part of the Ejagham lexicon. Once adopted, they are used in the same way as indigenous words. We think that to an extent, the aim of this work has been achieved. We have been able to identify certain retentions as well as changes involving consonants, vowels, and tones when the words that contain them are borrowed into Ejagham.

We also think that this work has something to contribute to the science of language, that of having proved that change in segments in loan words is not just by mistake, but by natural phonological phenomena which, very often, the native speakers are not even aware of.

The work done on the phonology of loanwords in Ejagham is not in any way complete in itself. Neither is it perfect. We accept its weaknesses and readily welcome all criticism that can help improve on the work. Nevertheless, the important aspects have been discussed.

The researcher also wishes that this work should serve as a stepping stone to further research works on this language. For instance much could still be done on the mechanisms of lexical expansion in which loanwords is just an aspect.

The pages that follow are a wordlist of loanwords and native words used for illustration in this work. We must precise here that

if at all some of these loanwords must be avoided then the native speakers will resort to phrasal expressions because, most often, there is no word-for-word equivalence for the loanwords as shown in (4).

(4) English	Ejagham	other form of expression	
trousers	tr̀sâ	ŋ̀kúɣ àtâ dress laps	dress for the laps
thousand	tɔ́sìn	ŋ̀gwir ǹjúp book big	big book
kitchen	é-kìčìn	ǹjúk òyâ house cooking	house for cooking

3.5 APPENDIX

List of words used for illustration

5.3.1 Borrowed nouns from English with ∅ prefix

pâŋ	pound
sójà	soldier
rédyô	radio
kátàkis	catechist
pípà	paper
kólês	college
pláŋ	plank
áwà	hour
aŋkačif	handkerchief
aβúsá	house
ámà	hammer
ɔ́ndrèr	hundred
kâm	camp
bâŋ	bank
kân	kind
ziŋ	zinc
tɔ́sìn	thousand
táwèl	towel
kándl	candle
fláwà	flour/flower
ɔ̀flɛ̀	French
klɔ̂k	clock
byâ	beer

kâr	card
tî	tea
mítà	meter
pɛ́nɛ̂	penny
sà	sir
fívà	fever
ɔ́krɔ̀	okra
pànápò	parable
kwáyà	choir
áyân	iron
pyâ	pear
ɔ́nyɔ̂s	onion
wáyà	wire
lébrà	labour
oβàsíyà	overseer
lɔ́yà	lawyer
njìníyâ	engineer
trɔ́sâ	trousers
másà	master
màkánìk	mechanic
súkà	sugar
mànyɔ̂	manure
àdáŋtítì	identity
kàká	cocoa
siká	cigarette
bísìn	basin
mílík	milk
sérɛ̂ŋ	shilling
bɔ́kɛ̂r	bucket
kɔ̀lɛ̂s	college

kràsín	kerosene
fótò	photograph
kwátà	quarter
fádâ	father(priest)
mísínjà	messenger
tíčâ	teacher

5.3.2 Borrowed nouns from English with prefix

ŋk^{h}ɔ̂p	cup
ŋk^{h}ɔ̀k	cock(fowl)
mmég	mug
ŋgwáβà	guava
ŋkén	can
ŋgàlí	garri
ntâɪn	time
nsɔ̂p	soap
étébl	table
ékétl	kettle
ɔ̀kɔ̀βɔ̂r	cupboard
èrísì	rice
ékíčìn	kitchen
èrànó	Rhinoceros

5.3.3 Borrowed nouns from other languages

Ejagham	Borrowed form	Gloss	Source
màkrà	màkàlà	puff-puff	Duala
ɔβàsì	òbàsè	God	Balundu
èsànjà	sànjà	loin	Duala
ŋkárâŋ	akaraŋ	a type of scissors	German
táflè	tafel	arm board	German
ófarŋkpó	ɔ́fráŋkpó	scissors	Efik
àjìgìjá	jigida	waist chain	Hausa
ŋkláŋká	ŋkànìŋká	bell	Efik
èkàβà	kàbà	traditional gown	Duala
èkàndá	kanda	belt	Pidgin
à-káŋwá	kaŋwa	limestone	Pidgin
èkùčá	kuča	sponge	Pidgin
èlòŋgá	mùlòŋgá	bucket	Duala
nì-nɔ́	ìnɔ́n	bird	Duala
mbásá	mbásá	cross	Duala
órúkáŋ	uténékáŋ	match	Efik
ɔŋɔ̀né	ɔŋɔ́ŋ	tobacco	Efik
asûmčê	asûmčê	a kind of bird	Efik
àŋwâ	aŋwa	cat	Efik
àkúg	akúg	pig	Efik

5.4 Borrowed Verbs From English

sân	sign	
pî	pay	
pɔm	pump	
trâ	try	
wê	weigh	
trûs	trust	
fir	fit	(from Pidgin, to be able)
pɔ́nê	punish	
bɛ́nê	bend	
sɔ́mɔ̂s	summon	

5.5 Native words used for illustration

5.5.1	Nouns	Gloss
	nì	man
	mbik	goat
	ŋgbè	tiger
	èlém	a kind of yam
	ò kùm	juju (society)
	èzɔ́k	noise
	okpìɣí	canoe
	ènùŋ	bed
	ŋkûk	dress
	ŋ̀kwìk	corn
	ŋ̀gwák	cockroach
	eblâ	medicine
	ezɔ̀ŋɔ̀	bone of fish
	óbló	tomorrow

à mɪ̀ɔ̀t	medicine
m̀blô	dog
esɔ́ŋɔ́	spoon
a fɔ́ɣô	urine
ɔ̀wɔ̀rɔ̀nɔ́	working class
èbliɣí	kola
élèrê	tongue
mpâ	flute
ńsí	father
ndɛ́k	rope
ŋ̀gàr	knife
ekɔ̃	song
àsɔ̃	fat
nyã	meat
mʃũ	wild vine vegetable
ɛč^{w}i	load
èg^{w}í	comb
ns^{w}í	a type of ant
èk^{h}ùp	bundle
èt^{h}ùm	work
ŋ̀k^{h}ɔ̀p	box
ɔk^{h}ɔ̃	bees
ŋ̀kó	snail
ntík	money
ésèβê	sand
m̀bá	road
àyíp	water

5.5.2	VERBS	Gloss
	sɔ̀ɓ	boil
	làŋ	touch
	nyànɛ̂	melt
	báɣlɛ̂	peel off
	mlãã	scatter
	kàŋlɛ̂	fry
	feɓlɛ̂	fly
	tɔ̂p	follow
	kîk	keep
	tûp	throw
	bɛ̂p	ask
	fúɓɛ̂	warm
	bìɣɛ̂	cover
	nyàɓɛ̂	straighten
	nyàɣɛ̂	dirty something
	séŋ	write
	fɛ́mɛ̂	burn
	wûk	drink
	jùŋ	lift up
	zɛm	sow / pierce
	kã	answer
	kô	take
	sâŋ	select
	blɔ̃k	rub
	gwà	break
	kùmɛ̂	sit
	kɛ̀lɛ̂	give

tûm	send
sûm	hit
tùk	pull
sùk	wash
wùlê	sell
kámê	stoop

REFERENCES

Breton R and B. Fohtung (1991). *Atlas Administratif des langues Nationales du Cameroun* CERDOTOLA, CREA, ISH MESIRES.

Burquest, Donald (1978). *Phonological Analysis: A functional Approach.* SIL

Chomsky, Noam (1957). Syntactic Structures. The Hague: Mouton.

Chomsky, Noam & Morris Halle (1968). Sound Pattern of English. New York: Harper and Row.

Chumbow B.S and P.N.Tamanji (1994). "Development of Terminology in African Languages: Mechanism of lexical expansion". Ms. University of Yaounde.

Crystal, David (1985). *A dictionary of linguistics and phonetics.* Oxford: Basil Blackwell

Edmodnson Tom and Elieen Edmondson (1971). "Some dialect shifts in Ejagham" CAMELANG No 3. Université Féderale du Cameroun.

Greenberg, Joseph. (1963). *The languages of Africa.* The Hague: Mouton. Publication 25 of the Indiana University Research Center in Anthropology, Folklore and Linguistics. Bloomington: Indiana University Press.

Guthrie, Malcolm. (1962). Bantu origins: a tentative new hypothesis. *Journal of African Languages* 1:9-21.

Guthrie, Malcolm. (1971). *Comparative Bantu. 4vols.* Farnborough: Gregg International Publishers.

Herbert, K. Robert (Ed) 1992). *Language and Society in Africa.* Cape Town, Creda Press. pp 181-193

Hornby A. S (1985). *Oxford advanced Learners Dictionary of Current English.* Oxford: Oxford University Press.

Katamba, Francis (1989). *An introduction to Phonology.* London: Longmans.

Kenmogne M. and B.S. Chumbow (2000). "Structures Syllabiques et Phonologie des Emprunts en Ghomala," in *AJAL, pp.* 102 –134, NACALCO- Yaounde.

Kenstowicz, M (1994). *Phonology in Generative Grammar.* Cambridge USA: Blackwell.

Kenstowicz, M. and Kisseberth Charles (1988). *Generative Phonology: Description and Theory.* University of Illinois: Academic Press.

Knappert, Jan (1976). "The Study of Loanwords in African Languages." Berlin: Afrika and Ubersee.

Leeding J. Velma (1986). "Loanwords: Ours and Theirs" in *READ* Vol 21 SIL New Guinea.

Marantz, A (1982). "Re-reduplication" in *Linguistic Inquiry* 13:. 83-145.

Mutaka N. (1994). "Tone Assignment in Duala Noun Reduplication", *Journal of West African Languages XXIV.2* (PP.65-76)

Mutaka, N. and Tamanji P (2000). *An Introduction to African Languistics.* Munich: LINCOM EUROPA

Pike K.L (1956). *Tone Languages.* Michigan: Edward Brothers.

Pulleyblank, D (1986). *Tone in Lexical Phonology.* Dordrecht: Reidel.

Rocca, Iggy and Wyn Johnson (1999) *A Course in Phonology* Oxford U.K: Blackwell

Swiri, Roseta (1998) *Lexical expansion in the Mankon Language.* M.A Dissertation University of Yaounde I

Tadadjeu, Maurice and Etienne Sadembouo (eds.) (1984). "General Alphabet of Cameroonian Languages" *PROPELCA* series No 1

Vernyuy, Francis (1997) *Reduplication in Lamnso.* Maitrise M.A. Dissertation University of Yaounde I

Watters, John R (1981). *A Phonology and Morphology of Ejagham with notes on dialect variation*. Ph.D. Dissertation, University of California, Los Angeles.

Watters, John R (1994). "Some Phonological characteristics of Ejagham (Etung)" *Research Mate in African Linguistics: Focus on Cameroon. A fieldworker's tool for deciphering the stories Cameroonian languages have to tell. In Honor of Professor Larry M. Hyman*. Mutaka, N. & S.B. Chumbow (eds.) Cologne: Rudiger Koppe Verlag, (pp. 55-77)

Watters, *John R (1997) "Éjághá Ejeré I" Translated as Eastern Ejagham Primer I. SIL Cam*eroon

Watters, John R (1990). "Reduplication and the Origin of High Tone on Noun Prefixes in Ejagham", *Journal of West African Languages* 20: 105-117 SIL Yaounde

Watters, John R (2000) "Tones in Western Ejagham (Etung)" in *Proceedings of 2nd World Congress of African Linguistics*. Leipzig, pp. 411-424.

Williamson, Kay. (1971). The Benue-Congo languages and Ijo.*CTL* 7: 245-306